



DEPARTMENT OF  
HEALTH AND FAMILY WELFARE  
GOVERNMENT OF KERALA

May 2026



FESTIVAL DISASTER  
PREPAREDNESS PLAN

# ALAPPUZHA



DEPARTMENT OF HEALTH AND FAMILY WELFARE

KERALA.HEALTH

# FOREWORD

Kerala has long stood as a model for responsive, resilient, and people-centred public health systems. Our collective experiences during public health emergencies, infectious disease outbreaks, natural disasters, and mass gathering events have repeatedly reaffirmed one fundamental truth, preparedness at the district level remains the cornerstone of an effective health security framework. It is in this context that the District Festival Preparedness Plan – Kerala assumes profound relevance and strategic importance.

Festivals in Kerala are not merely cultural celebrations; they represent large-scale social congregations involving dynamic population movement, heightened healthcare demands, increased risks of communicable disease transmission, trauma, crowd-related emergencies, environmental hazards, and public health vulnerabilities. A scientifically structured district-level preparedness mechanism therefore becomes indispensable to ensure timely prevention, coordinated response, efficient surveillance, emergency medical readiness, and continuity of essential healthcare services during such events.

This document has been conceived as a practical and operational extension of the State Pandemic Preparedness Framework and the Standard Treatment Guidelines developed by the Health & Family Welfare Department, Government of Kerala. By contextualising preparedness into district-specific operational strategies, the document seeks to strengthen decentralised health governance, interdepartmental coordination, emergency response systems, surveillance architecture, risk communication pathways, referral mechanisms, and rapid mobilisation protocols across all districts of the State.

Thrissur district team prepared scientific Thrissur Pooram management Plan. They were asked to prepare a generic framework for preparing Festivals Management Plans. The framework was shared with the district teams and they worked on preparation of Festival Management Plans.

The preparation of this comprehensive framework reflects the spirit of collaborative public health leadership and multidisciplinary teamwork that defines Kerala's healthcare system. I place on record my sincere appreciation to all District Medical Officers (DMOs) for their committed contributions and field-level insights in shaping this important initiative. These tasks would not have been possible without the constant support of the state resource officers team of Dr Mahesh, Dr Ajan, Dr Dileep, Dr Hari and many others. I appreciate their untiring efforts.

I wish to particularly acknowledge the valuable efforts of Dr. Ravindran C for the compilation and academic consolidation of this document. The dedication and intellectual contribution of the entire supportive editorial team, including the enthusiastic participation of medical students from Government Medical College Thrissur, deserve special commendation. Their collective efforts reflect the evolving culture of academic public health engagement and participatory healthcare planning in Kerala.

I sincerely appreciate the efforts of one and all and I am confident that Kerala Health team is having capability and will to take up any challenges and excel in their endeavours.

I am confident that this document will serve not merely as a preparedness manual, but as a dynamic operational guide capable of strengthening district-level resilience, improving emergency responsiveness, and safeguarding public health during major festivals and mass gathering events across the State. With continued coordination, vigilance, scientific planning, and community participation, Kerala shall continue to advance its commitment towards a safer, healthier, and more prepared society.

Dr. Rajan N Kobragade IAS  
Additional Chief Secretary  
Health & Family Welfare Department

## LIST OF CONTRIBUTORS

Dr Mahesh N	Assistant Director	DHS
Dr Ravindran C	Prof of surgery	MCHTSR
Dr Ajan M. J	Assistant Director	DHS
Dr Dileep	Assistant Director	DHS
Dr Harikumar S	Assistant Director	DHS
Dr Suman V Sulaiman	Assistant Professor	MCHTSR
Mr. Adithya Chandran	Medical student	MCHTSR
Dr Soorya Gayathry P	Medical student	MCHTSR
Miss Urmil Vyshna	Medical student	MCHTSR
Miss Gopika I B	Medical student	MCHTSR
Miss Diya Thomas	Medical student	MCHTSR
Miss Gayathri A K	Medical student	MCHTSR
Miss Cristine Sara Joe	Medical student	MCHTSR
Dr Akhtar Zamil Sirajuddin	Research Associate	MCHTSR
Mr Krishna prasad	IT Support cell	CSDTTCR

# INDEX

1. Introduction .....	1
2. Goal of the plan .....	2
3. Key components of preparedness and response .....	2
4. Summary of temporal events of gathering (timeline) .....	5
5. Command system and system collaboration .....	6
6. New Year Celebrations.....	8
7. Arthunkal ST. Andrew's Basilica Festival .....	56
8. Kanichukulangara Devi Temple festival.....	120
9. Chengannur festival.....	179
10. Eid Ul Fitr.....	197
11. Chettikulangara Bharani .....	219
12. Ambalapuzha Sri Krishna Temple Festival .....	298
13. Edathua Perunnal .....	317
14. Champakulam boat race.....	343
15. Chakkulathukavu Pongala .....	377
16. Nehru Trophy Boat Race.....	411
17. Payippad Boat Race .....	483
18. Mannarshala ayilyam .....	506
19. Christmas .....	541

# INTRODUCTION

Alappuzha district hosts numerous large-scale festivals and mass gatherings throughout the year, ranging from iconic boat races and temple festivals to church feasts and seasonal cultural events. These gatherings draw thousands to lakhs of participants, including residents, domestic tourists, and international visitors. While such events are vital to the district's cultural identity and economy, they also present significant public health and safety challenges that require meticulous planning and coordinated response.

## MASS GATHERINGS INHERENTLY INCREASE THE RISK OF THE FOLLOWING

**Medical emergencies:** dehydration, heat stroke, cardiac events, injuries, and exacerbation of chronic illnesses

**Communicable disease transmission:** respiratory infections, food- and water-borne diseases, and vector-borne illnesses, especially in densely packed settings

**Accidents and injuries:** stampedes, falls, boat crashes, fire hazards, and structural failures of temporary installations

**Water-related incidents:** drowning and near-drowning cases, particularly during boat races and waterfront events

**Environmental health risks:** poor sanitation, unsafe drinking water, and waste accumulation

**Logistical challenges:** traffic congestion, delayed emergency response, communication gaps, and crowd control issues

Given Alappuzha's unique geography—intersecting waterways, backwaters, and densely populated settlements—these risks are further amplified and demand context-specific preparedness strategies. A well-structured preparedness and response plan is critical for safeguarding public health during mass gatherings in Alappuzha. By integrating risk assessment, medical preparedness, surveillance, infrastructure planning, and interdepartmental coordination, the district can ensure that all major events are conducted safely and efficiently. Continuous learning, capacity building, and adaptive planning will further strengthen resilience and enhance the district's ability to manage large-scale gatherings with minimal risk and maximum preparedness.

## GOAL OF THE PLAN

To establish a robust, multisectoral preparedness and response framework that ensures the following:

- Timely and effective medical care during mass gatherings
- Prevention and early detection of disease outbreaks
- Safe crowd management and risk mitigation
- Seamless coordination between departments and stakeholders

## KEY COMPONENTS OF THE PREPAREDNESS AND RESPONSE FRAMEWORK

### 1. Pre-Event Preparedness

**Risk Assessment & Mapping:** Identification of high-risk zones (water bodies, narrow pathways, high-density congregation points), estimation of crowd size, and hazard vulnerability analysis

**Microplanning:** Event-specific action plans detailing roles, resource allocation, emergency pathways, and referral linkages

**Capacity Building:** Training of medical officers, paramedics, volunteers, and field staff in emergency care, triage, CPR, and disaster response

**Interdepartmental Coordination:** Joint planning with Police, Fire & Rescue, Transport, Local Self-Government, Health, Irrigation, Tourism, and Disaster Management authorities

**Public Awareness:** IEC campaigns on safety measures, hygiene practices, and emergency contacts.

### 2. Medical Preparedness

**First Aid & Medical Camps:** Establishment of strategically located medical aid posts with trained staff and essential medicines

**Ambulance Deployment:** Positioning of Basic and Advanced Life Support ambulances with clear evacuation routes to nearby hospitals

**Referral System:** Identification and preparedness of referral hospitals (public and private), including emergency beds and specialist availability

**Water Safety Measures:** Deployment of rescue teams, lifeguards, boats, and life-saving equipment during water-based events

### **3. Surveillance & Public Health Measures**

**Event-Based Surveillance:** Real-time monitoring for unusual health events using systems like IDSP/IHIP

**Food & Water Safety:** Inspection of food vendors, ensuring a safe drinking water supply, and chlorination of water sources

**Sanitation & Waste Management:** Provision of adequate toilets, handwashing facilities, and scientific waste disposal systems

**Vector Control:** Pre-event and during-event measures to prevent mosquito breeding and vector-borne diseases

#### 4. Crowd Management & Safety

**Crowd Flow Planning:** Entry and exit regulation, barricading, signage, and one-way movement systems, along with a separate plan for vehicle parking, which may otherwise hinder rescue measures in the event of calamities.

**Security & Surveillance:** Deployment of police personnel, CCTV monitoring, and control rooms

**Emergency Response Protocols:** Preparedness for stampede control, fire incidents, and evacuation procedures

#### 5. Communication & Command System

**Control Room Establishment:** Centralized command center for coordination, monitoring, and decision-making

**Communication Network:** Use of wireless systems, mobile communication, and public announcement systems

**Clear Chain of Command:** Defined leadership roles with nodal officers for each sector

#### 6. During Event Response

**On-site Triage & Stabilization:** Rapid assessment and prioritization of patients at medical posts

**Rapid Response Teams (RRTs):** Mobile teams for immediate intervention in emergencies

**Continuous Surveillance:** Monitoring of health events, crowd density, and environmental conditions

#### 7. Post-Event Activities

**Debriefing & Review:** Assessment of response effectiveness and identification of gaps

**Reporting & Documentation:** Compilation of data on medical cases, incidents, and response actions

**Follow-up Surveillance:** Monitoring for any delayed outbreaks or health issues

## SUMMARY OF TEMPORAL EVENTS OF GATHERINGS (TIMELINE)

MONTH	EVENTS
January-February	New Year Celebrations Arthunkal Perunnal Kanichukulangara Temple Festival
March–April	Chengannur Festival Eid Ul Fitr Chettikulangara Bharani Ambalappuzha Festival
April–May	Edathua Perunnal
June–July	Chambakkulam Boat Race
August	Nehru Trophy Boat Race
Aug–Sept	Onam Celebrations
September	Payippad Boat Race
October	Mannarasala Ayilyam
December	Christmas

## **COMMAND SYSTEM AND SYSTEM COLLABORATION**

### **Incident Command System (ICS):**

- District Collector – Overall Incident Commander
- District Medical Officer (DMO) – Health Incident Lead
- Police Superintendent – Law & Order
- Fire & Rescue – Emergency Response
- Local Self-Government – Logistics & sanitation

### **Coordination Platforms:**

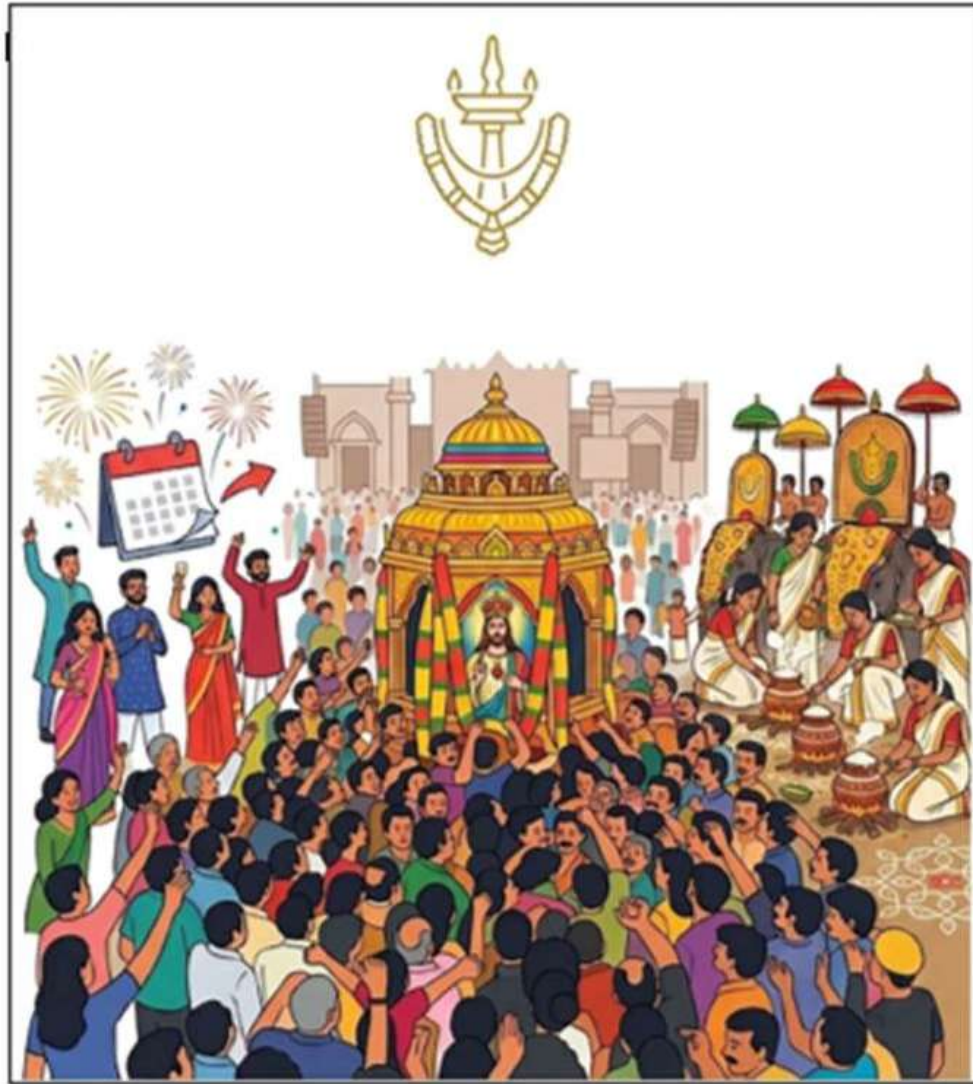
- District Control Room (24x7 during events)
- Local specific coordination committees
- WhatsApp communication groups
- Daily briefing meetings during events

## **LIST OF KEY PEOPLE AND CONTACTS**

- District Collector
- Police Superintendent
- District Medical Officer
- RTO / Transport Officer
- Fire & Rescue Officer
- Food safety officer
- Officers from PWD & KWA
- District Programme Manager NHM
- Event Coordinators (per festival)
- Panchayat/Municipality Chairs and Secretaries

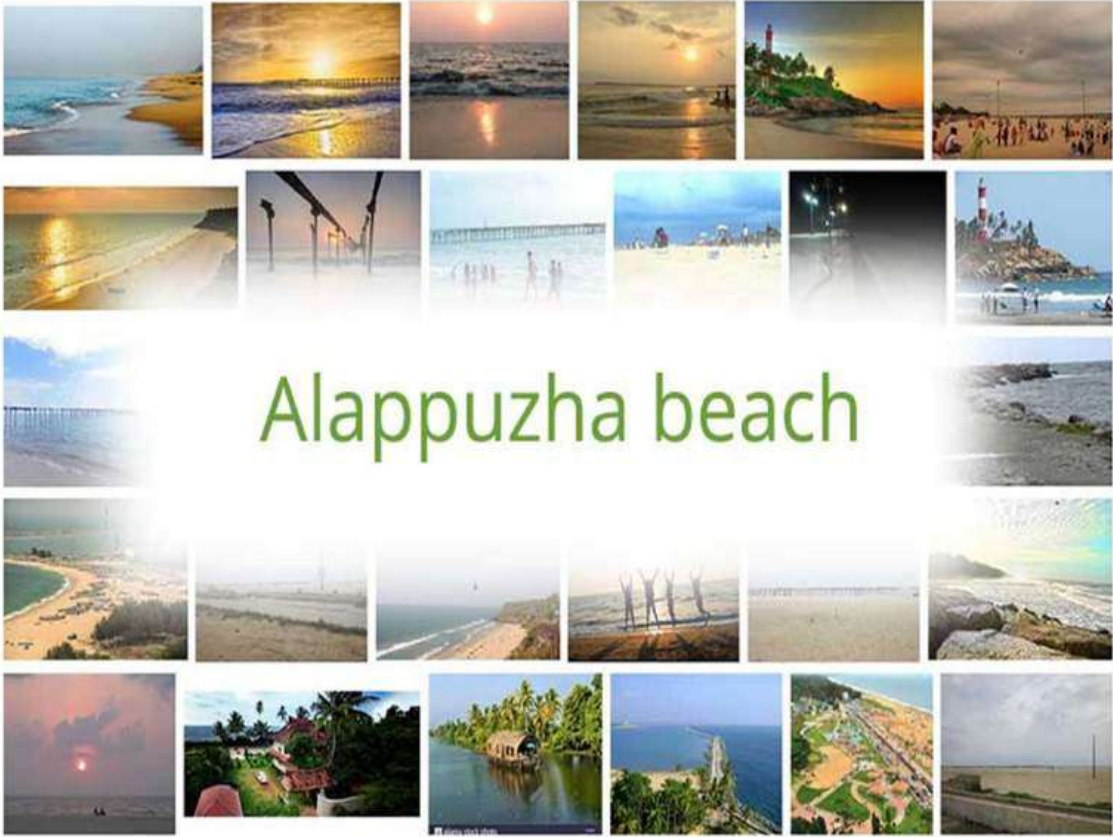
**MAJOR FESTIVALS & EVENTS**

# **JANUARY- FEBRUARY**



**New Year Celebrations | Arthunkal Perunnal | Kanichukulangara  
Temple Festival**

# NEW YEAR CELEBRATIONS



## PREAMBLE

The New Year celebrations in Alappuzha district, particularly at the iconic Alappuzha Beach, have become one of the most anticipated events in Kerala's cultural calendar. Attracting an estimated crowd of 50,000 to 100,000 people, the festival has grown into a vibrant gathering that celebrates the spirit of the New Year with cultural performances, traditional music, international art exhibitions, and more. The event draws not only locals but tourists from across the state, country, and even abroad, making it a significant cultural and tourism highlight of the region.

Given the scale and diversity of this event, the safety, security, and well-being of all attendees must be a top priority. With the mass influx of visitors to high-density areas, the potential for emergencies, whether natural or human-made, increases. As such, a comprehensive and proactive approach to disaster management is essential.

This preparedness plan has been developed with the dual objectives of safeguarding public health and ensuring effective emergency response. It aims to address potential risks by outlining clear procedures, resource allocation, and coordination efforts among various stakeholders, including local authorities, event organizers, medical teams, law enforcement, and disaster management professionals. The plan also focuses on fostering community awareness and promoting safety practices among attendees, ensuring that they play an active role in maintaining a secure environment.

The primary goal of this plan is to mitigate potential risks, whether related to crowd management, health emergencies, natural hazards, or other unforeseen circumstances, and to ensure the rapid and efficient handling of any incidents that may arise. By establishing a unified framework for response and prevention, this plan strives to provide a safe, secure, and enjoyable experience for all participants. Ultimately, it is designed to enhance the overall success of the event, solidifying Alappuzha Beach Festival's reputation as a well-organized, responsible, and memorable celebration for everyone involved.

## MAJOR EVENT OF ALAPPUZHA



The Alappuzha Beach Festival is a major cultural and tourism event that holds a special place in the hearts of both locals and tourists. The festival, which takes place annually at the picturesque Alappuzha Beach, celebrates the vibrant traditions, art forms, and natural beauty of Kerala. It is one of the most awaited events of the year, drawing a large crowd from across Kerala and beyond.

The festival's history dates back to its inception in 2015, when the International Sand Art Festival was introduced as a key highlight. This event, the first of its kind in Kerala, was a game-changer for the region, with renowned national and international sand artists showcasing their unique creations on the golden sands of Alappuzha Beach. The success of this event quickly made it a recurring feature of the beach festival, earning it global recognition.

Over the years, the festival has evolved into a grand celebration featuring a variety of cultural activities, including music performances, traditional dances, water sports competitions, and handicraft exhibitions. These activities not only highlight Kerala's rich cultural heritage but also attract a diverse audience, fostering a sense of community and unity.

In addition to the cultural events, the Alappuzha Beach Festival plays a significant role in promoting Kerala's tourism industry. The Kerala Tourism Department, in collaboration with various local organizations such as the Alleppey Foundation, has worked tirelessly to ensure the festival is an unforgettable experience for visitors. This joint effort has helped showcase Alappuzha's stunning coastal beauty and its potential as a top tourist destination.

The festival is also an opportunity for local businesses, artisans, and the hospitality sector to showcase their products and services, giving them exposure to a larger audience. The festival has seen collaborations with international artists, musicians, and influencers, which further strengthen its global appeal.

As the festival continues to grow, it has become more than just a celebration; it serves as a platform to promote sustainability and environmental consciousness. Initiatives such as waste management programs, the promotion of eco-friendly materials, and the encouragement of sustainable tourism practices have become integral parts of the festival's agenda.

With the increasing number of attendees and expanding activities each year, the Alappuzha Beach Festival is poised to remain one of Kerala's most significant and impactful cultural events

## THE NEW YEAR BEACH FESTIVAL

The Alappuzha Beach Fest is a popular annual event that attracts a significant number of visitors, making it a prime example of a mass gathering in Kerala. Held along the scenic Alappuzha Beach, the festival celebrates the region's rich cultural heritage, featuring a variety of activities, including traditional dance performances, music concerts, art exhibitions, and water sports, that attract people from all over the world. As for tourist flow to Kerala, many visit Alappuzha for its cultural and environmental features.

The festival's local community involvement is crucial, as it defines local businesses, especially food vendors and artisans, creating an authentic Kerala experience. And this is also one of the causes of mass gatherings that lead to serious calamities during the festivals.

Given the large crowd it draws, effective crowd management is essential to ensure attendees' safety and enjoyment. The event organizers focus on providing adequate security, medical services, and logistical support, including transport, sanitation, and hydration stations. With its popularity continuing to grow, the Alappuzha Beach Fest requires meticulous planning for crowd control, emergency preparedness, and local community engagement to create a safe and vibrant atmosphere for both locals and tourists alike.

This mass gathering is planned as a multi-day beach festival and celebration at Alappuzha Beach—one of the most popular coastal attractions in Kerala's Alappuzha district. The festival will include the following:

1. New year and holiday celebrations
2. Cultural performances and live entertainment
3. Beach sports and activities
4. Music shows and public gatherings
5. Fireworks display at midnight
6. Food and craft stalls and recreational activities

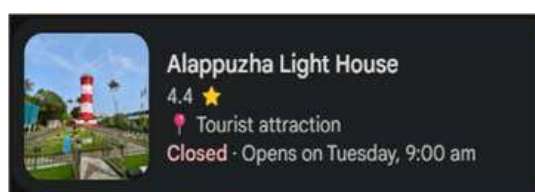
## 7. Tourist engagement programs

These kinds of activities have traditionally drawn large crowds and are part of the seasonal local calendar. The Alappuzha Beach Festival / New Year celebrations regularly attract thousands of visitors from across Kerala and beyond. So, due to the high footfall and dynamic crowd movement, the event requires comprehensive health preparedness and disaster management planning.

### *Local Attractions Around Alappuzha Beach*

Several important attractions surround the beach area, drawing large crowds during the festival period.

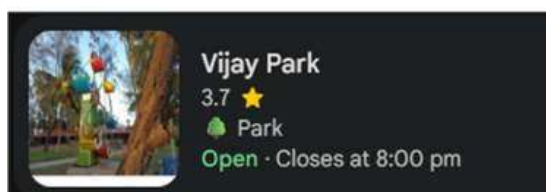
#### **A. Alappuzha Lighthouse – A historic landmark offering panoramic coastal views**



Alappuzha Lighthouse is an iconic red-and-white-striped tower built in 1862. It is historically significant as the first lighthouse of its kind on the Arabian Sea coast of Kerala.

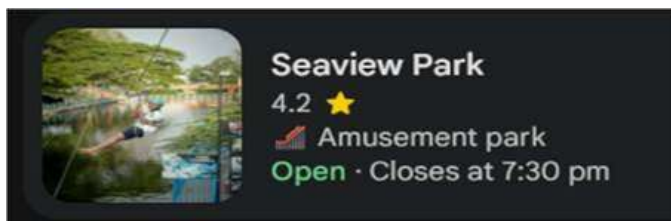
- Offers panoramic views of the coastline from the top for a small admission fee.
- Features a teak spiral staircase inside the 27-meter tower.
- Includes a small museum detailing its transition from coconut oil lamps to modern metal halide lamps

#### **a. Vijay Park – A recreational park suitable for families**



Vijay Park is a family-oriented park situated right on the beach, designed primarily for children's entertainment.

- Features a toy train that travels around the park grounds.
  - Includes a play area with slides, swings, and merry-go-rounds.
  - Houses "Amaze World," which offers electronic games and a 9-D theatre.
- **Sea View Park** – A popular leisure spot adjacent to the beach



Seaview Park offers a wider range of recreational activities, slightly farther south along the coast.

- Provides boating facilities, including pedal boats and row boats.
- Features an amusement park with over 50 different rides.
  - Includes a swimming pool and virtual reality cinema experiences.
- **Alappuzha Bypass**—A major roadway aiding traffic movement during events

The **Alappuzha Bypass** is a 6.8-kilometer stretch of National Highway 66 designed to alleviate heavy traffic congestion in Alappuzha's city center. It is notable for featuring the first and longest elevated beach highway in India, offering travelers a unique coastal driving experience.

- **Jain Temple Alappuzha** – A place of cultural and religious significance



Swetamber Jain Temple is a serene place of worship located on Gujarati Street, reflecting the heritage of the Jain community that migrated from Gujarat over a century ago.

- Constructed using white marble and Rajasthan stones with intricate artwork.
- Notably built without iron supports or a traditional dome in its original design.
- Maintains a peaceful atmosphere with well-kept garden surroundings.

Festivals, especially large-scale ones like the Alappuzha Beach Festival, can sometimes lead to accidents or disasters due to various hazards. These events usually involve large crowds, outdoor activities, and performances, all of which come with their own set of potential risks. Here's a breakdown of common festival-based hazards and the types of accidents or disasters they can cause, along with ways to manage them:



*Summary of temporal events with timeline*

TIME	ACTIVITY	RISK LEVEL
4:00 PM – 7:00 PM	Crowd inflow begins	Moderate
7:00 PM – 10:00 PM	Cultural programs	High
10:00 PM – 12:30 AM	Peak crowd (countdown)	Very High

12:00 AM – 2:00 AM	Dispersal	High
Next Day Morning	Residual crowd & cleanup	Low

## Festival-Based Hazards and Accidents

- **Crowd-Related Accidents:**
  - **Hazard:** Large crowds can create chaos, especially when people are moving in different directions, during peak event times, or in restricted spaces.
  - **Accidents/Disasters:** Stampedes, trample injuries, or even fatalities can occur if the crowd is not managed properly.
  - **Examples:** Overcrowded pathways, blocked exits, panic situations, or security failures.
  - **Management:** Implement crowd control measures like barriers, staggered entry times, proper signage, trained security personnel, and clear emergency evacuation plans.
- **Water-Related Accidents:**
  - **Hazard:** Water-based activities, such as boating, swimming, or water sports, can be dangerous if safety measures are not enforced.
  - **Accidents/Disasters:** Drownings, boating accidents, injuries from watercraft, or poor water quality can pose serious threats.
  - **Examples:** A person falling off a boat or getting swept away by currents, accidental collisions, or exposure to contaminated water.
  - **Management:** Having professional lifeguards, safety equipment (life jackets, ropes), and clear safety instructions. Avoid water sports in bad weather and ensure the water is safe for the activity.
- **Fire Hazards:**
  - **Hazard:** Fireworks, bonfires, food stalls with open flames, or electrical equipment can increase the risk of fire.
  - **Accidents/Disasters:** Fire outbreaks that spread uncontrollably, leading to burns, injuries, or property damage.
  - **Examples:** Fireworks malfunctioning, food stalls catching fire, electrical equipment overheating, or sparks igniting dry materials.
  - **Management:** Ensuring that fireworks are handled by certified professionals, providing fire extinguishers, keeping flammable materials away from heat sources, and having emergency evacuation routes.
- **Health-Related Emergencies:**

- **Hazard:** Festivals often involve long hours of physical activity in hot or crowded environments, which can cause health issues.
  - **Accidents/Disasters:** Heat strokes, dehydration, fainting, allergic reactions, or cardiovascular emergencies, communicable disease outbreaks
  - **Examples:** A person collapsing due to heat or exhaustion, or individuals suffering from allergic reactions to food or substances.
  - **Management:** Providing shaded areas, hydration stations, medical assistance, and first aid kits. Having trained medical staff on-site and quick access to hospitals for severe emergencies.
  - **Vehicle-Related Accidents:**
    - **Hazard:** Traffic congestion, inadequate parking, and unregulated transportation can lead to accidents.
    - **Accidents/Disasters:** Traffic collisions, pedestrian accidents, or accidents involving festival-related vehicles.
    - **Examples:** Visitors being hit by cars or motorbikes in overcrowded parking lots or during rush hours.
    - **Management:** Ensuring proper traffic management, designating clear parking areas, providing shuttle buses, and having designated pedestrian pathways.
  - **Structural Failures:**
    - **Hazard:** Temporary structures like stages, tents, or booths can fail if they are not built to proper standards.
    - **Accidents/Disasters:** Collapsing stages or tents can result in injuries or fatalities, especially if the structures are overcrowded.
    - **Examples:** Tent or stage collapse during heavy winds or if they are not properly secured.
    - **Management:** Conducting thorough safety checks on all structures, hiring professionals to erect tents and stages, and ensuring the structures can handle the weight and weather conditions.
  - **Weather-Related Risks:**
    - **Hazard:** Festivals often take place outdoors, and adverse weather conditions can pose serious risks.
    - **Accidents/Disasters:** Heavy rain, storms, or extreme heat can lead to accidents, flooding, hypothermia, and even tsunamis.
    - **Examples:** Slip-and-fall accidents due to wet surfaces, heat-related illnesses, or flooding.
    - **Management:** Monitoring weather forecasts, implementing evacuation plans, providing cover from rain or heat, and adjusting the schedule if necessary.
  - **Food Poisoning or Allergic Reactions:**
    - **Hazard:** Food vendors can cause health problems if hygiene is not maintained or ingredients are not properly labelled.
-

- **Accidents/Disasters:** Foodborne illnesses, allergic reactions to ingredients, or contaminated food causing widespread illness.
- **Examples:** A group of people getting food poisoning from improperly stored food, or someone having a severe allergic reaction to a dish.
- **Management:** Ensuring food vendors adhere to strict hygiene standards, labelling food items with clear allergen information, and providing access to medical help in case of reactions.
- **Pollution and Environmental Damage:**
  - **Hazard:** Festivals can generate a lot of waste and pollution, especially in outdoor settings like beaches or parks.
  - **Accidents/Disasters:** Environmental damage due to plastic waste, contamination of water bodies, or harm to local wildlife.
  - **Examples:** Littering on the beach, plastic waste clogging waterways, or destruction of natural habitats.
  - **Management:** Encouraging eco-friendly practices, providing waste disposal facilities, using biodegradable products, and educating attendees on sustainability.
- **Violence or Security Threats:**
  - **Hazard:** Large crowds can sometimes lead to violence, either due to crowd dynamics or intentional malicious actions.
  - **Accidents/Disasters:** Fights, terrorist attacks, or theft can cause harm and disrupt the festival.
  - **Examples:** Fights breaking out in the crowd or a security breach leading to a dangerous situation.
  - **Management:** Implementing thorough security checks, hiring professional security personnel, installing surveillance cameras, and having emergency response teams on standby.

## Managing Festival Disasters

- **Pre-event Risk Assessment:** Identify potential risks and hazards before the festival starts.
- **Communication:** Use clear communication through signage, announcements, and social media to inform people about safety measures and emergency protocols.
- **Training Volunteers and Staff:** Ensure that staff, security, and medical teams are well-trained in disaster response and emergency management.
- **Medical Assistance:** Have first aid stations, emergency medical teams, and evacuation plans in place.
- **Monitoring Weather and Crowd:** Use real-time monitoring systems for weather conditions and crowd density to react to potential risks quickly.

- **Clear Emergency Protocols:** Develop detailed emergency evacuation plans and communicate them to staff and attendees.

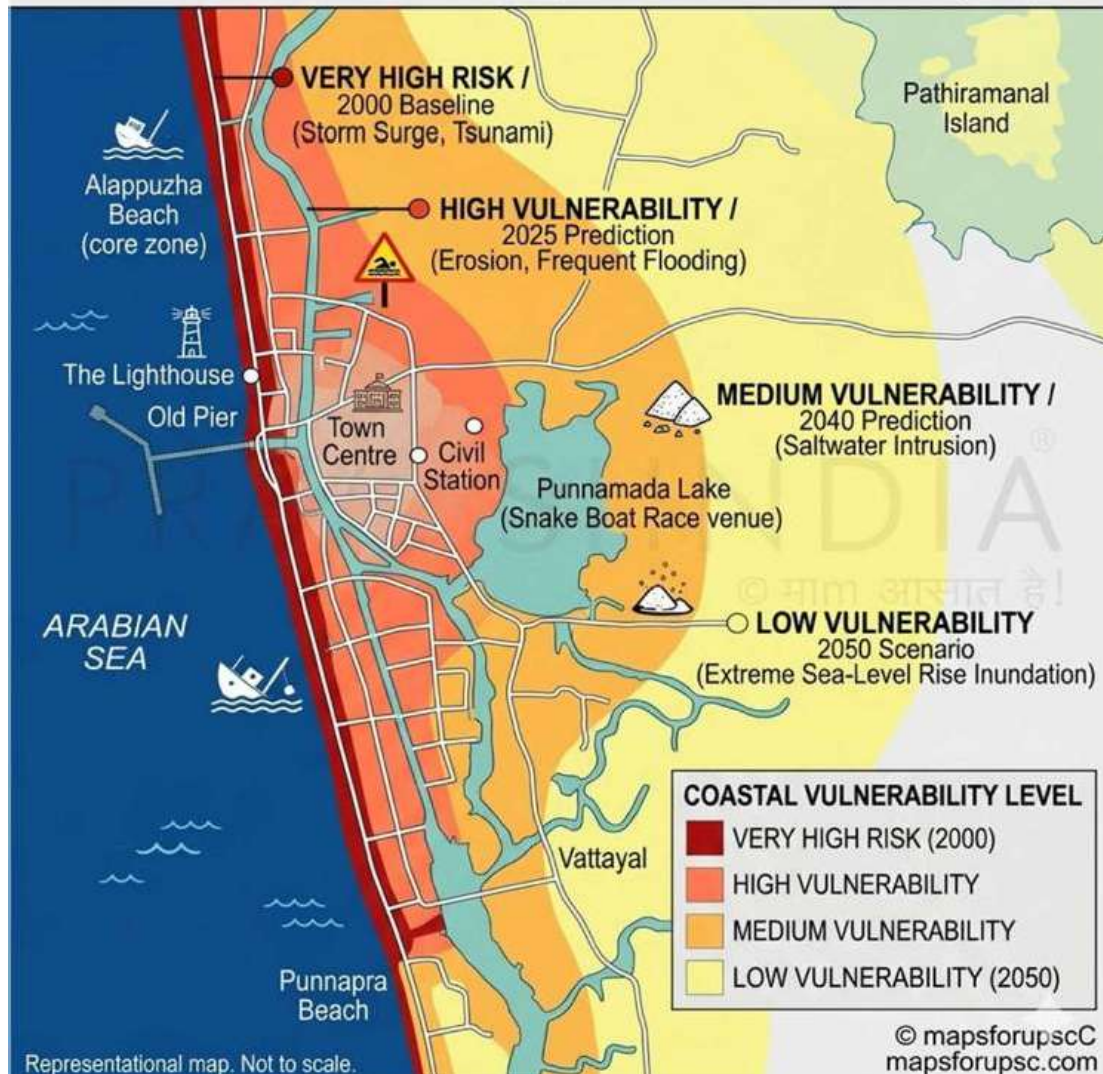
By addressing these hazards proactively and ensuring comprehensive management strategies, the festival can minimize the chances of disasters and ensure the safety and enjoyment of all attendees.

### Coastal Vulnerability - Alappuzha Beach

The heatmap illustrates the coastal vulnerability of Alappuzha Beach & Town, highlighting disaster risks based on historical data (2000) and future projections (2050). The map is divided into color-coded zones, each representing different levels of vulnerability to hazards such as storm surges, tsunamis, erosion, flooding, and saltwater intrusion. The **very high-risk areas** along the coastline are most vulnerable to immediate threats such as tsunamis and storm surges. At the same time, **high-vulnerability zones** are expected to experience frequent flooding and erosion by 2025. The **medium-vulnerability areas are predicted to be affected by saltwater intrusion by 2040, with the low-vulnerability zones** experiencing the least impact from extreme sea-level rise by 2050. This heatmap provides essential information for planning disaster response and ensuring safety during events like the New Year festival in Alappuzha.

# ALAPPUZHA BEACH & TOWN: COASTAL VULNERABILITY HEATMAP

BASED ON HISTORICAL DATA (2000) AND FUTURE PROJECTIONS (2050)



 **Very High Risk (Dark Red)**

 **What it means:**

- This area is at the greatest danger of disasters.
- Historically (around the year 2000), this zone faced strong **storm surge and tsunami impacts**.

 **Where it is:**

- Right along the **core beach zone of Alappuzha**—by the sea, including the Old Pier and near the Lighthouse.

**During the New Year:**

This area is most dangerous, especially if the sea gets rough. Strong waves, flooding, or sudden surges can happen here. Crowds should stay well back from the shoreline.

 **High Vulnerability (Orange)**

 **What it means:**

- This zone is expected to face **frequent flooding and erosion by 2025**.
- Water can come in from the sea during bad weather and strong tides.

 **Where it is:**

- Just inland from the very high-risk zone—includes parts of the **town center** and areas close to the coast.

**During the New Year:**

Moderate to high risk of flooding if the festival is near canals or low-lying streets. Don't camp, loot, or stay in these areas during storms.

 **Medium Vulnerability (Yellow)**

 **What it means:**

- Predicted to be affected by **saltwater intrusion by 2040**—meaning seawater starts entering freshwater zones and wetlands.
- Not as immediate as flooding, but a concern in rainy or storm seasons.

 **Where it is:**

- Around inland areas near **Punnamada Lake** and waterways.

**During the New Year:**

Risk is lower here, but still possible if heavy rains or sea conditions are bad. Safer than coastal edge areas, but still close enough to feel effects.

## Low Vulnerability (Light Yellow / Green-ish)

### What it means:

- Even in *extreme sea-level rise scenarios (2050)*, this zone is least likely to flood.
- Better protected and farther inland.

### Where it is:

- Further away from the beach and major water channels, towards the east.

### During the New Year:

**Safest places** to gather. Much lower chances of floods or storm surge—suitable for festival parking, safe zones, emergency staging areas, etc.

## How This Relates to Disaster Chance During the New Year Fest

Here's a simple logic you can follow for risk planning:

Zone	Disaster Risk Level	What Could Happen	Good / Bad for Fest
Very High (Red)	Extreme	Storm surge, big flooding	<b>Stay away</b>
High (Orange)	Strong	Beach flooding, waves	<b>Caution</b>
Medium (Yellow)	Moderate	Saltwater rising, little floods	<b>Mostly okay</b>
Low (Light)	Low	Rare flooding	<b>Safest</b>

## RISK MITIGATION OF GATHERING

### Mitigation Measures

- **Crowd Control:**
  - Use barriers and establish entry and exit points.
  - Employ security personnel trained in crowd management.
  - Implement a ticketing system to control the number of attendees at one time.
- **Health Safety:**
  - Set up shaded areas for cooling, and provide hydration stations.
  - Deploy medical teams and ensure quick access to the nearest hospitals.
  - Provide first-aid kits and ensure that lifeguards are present at all times.
- **Water Safety:**

- Employ a team of trained lifeguards, coast guards, scuba divers, and boat surveillants.
  - Place safety buoys and ensure that all water activities have clear rules and safety measures in place.
  - **Environmental Protection:**
    - Set up waste collection points, encourage recycling, and ban single-use plastics.
    - Coordinate beach cleaning teams before and after the event.
    - Conduct awareness campaigns to educate the attendees about keeping the beach clean.
  - **Weather Contingencies:**
    - Constant weather monitoring.
    - Set up emergency evacuation plans and temporary shelters in case of storms.
  - **Police & volunteer crowd regulation**
    - Safe flow of attendees, along with trained volunteers, should be strategically deployed at key entry and exit points, critical areas of the festival grounds, and along main roads.
  - **Food safety**
    - All food vendors should comply with the Food Safety and Standards Authority of India (FSSAI) guidelines to prevent foodborne illnesses.
  - **Temporary toilets & safe drinking water**
    - The festival should provide temporary toilets at several locations across the venue, ensuring they are well-maintained throughout the event. Adequate hand-washing stations with soap and water should also be placed near the toilets. And provide a safe drinking water source with adequate water testing and replenishment of water supplies.
  - **Surveillance for outbreaks (IDSP integration)**
    - To monitor and detect potential outbreaks, including foodborne illnesses, waterborne diseases, and vector-borne diseases such as dengue and malaria.
    - Regular health checks and fever screenings should be conducted at the festival's entrances, and healthcare facilities should be equipped to handle any medical emergencies.
  - **Substance abuses**
    - The police are responsible for enforcing local laws related to substance consumption, ensuring that alcohol consumption is regulated and that no illegal substances are brought into the event.
    - To manage substance abuse, the police establish checkpoints for **screening** attendees at entry points, ensuring that prohibited substances are not brought onto the festival grounds. Officers patrol the venue and surrounding areas, observing for any signs of substance abuse or suspicious behavior. They also coordinate with event organizers to ensure that there are designated areas for
-

alcohol consumption, where the sale and use of alcohol are controlled and monitored.

- Also, the police should work closely with medical teams to address any health emergencies related to substance abuse, providing swift interventions if needed. Public awareness campaigns and clear communication about the festival's **no-tolerance policy** toward substance misuse help set expectations for attendees and deter potential violators.

# ALAPPUZHA BEACH FEST: ALL-IN-ONE DISASTER MANAGEMENT & MITIGATION MAP



## COMMAND SYSTEM & SYSTEM COLLABORATION

- **Incident Commander:** District Collector
- **Health Incident Lead:** DMO Alappuzha
- **Field Medical Lead:** District Surveillance Officer, District Program Manager (NHM), Administrative Medical Officer of UHTC Ambalappuzha, Hospital superintendents of General Hospital, and W&C
  - Police Department
  - Fire & Rescue Services
  - National Health Mission
  - Local Self-Government (Panchayat/Municipality)
  - Coastal Police & Lifeguard Units

## LIST OF KEY PEOPLE

Role/capacity
Incident Commander
Health Lead
Disease Surveillance
Superintendent GH Alappuzha
Superintendent W&C Alappuzha
Superintendent Medical College, Alappuzha
District Programme Manager (NHM)
Block Medical Officer
Ambulance Control
Police Control
Fire Control

## LIST OF HOSPITALS FOR EMERGENCY CARE

### Government Hospitals:

- **Government Medical College Hospital, Alappuzha (Tertiary care)** – Approx. 4 km
- **General Hospital Alappuzha** – Approx. 2 km
- **Taluk Headquarters Hospital, Cherthala** – Approx. 15 km
- **Women & Children Hospital (W&C Hospital)** – Approx. 3 km

### Private Hospitals:

- **Providence Hospital, Thumpoly, Alappuzha** – Approx. 3 km
- **Sahrudaya Hospital, Alappuzha** – Approx. 5 km
- **Sanjos Hospital** – Approx. 4 km
- **Pazhaveedu Medical Care—Approx. 8 km**
- **Lith Specialty Medical Center** – Approx. 6 km

## MANDATORY AMBULANCE & MEDICAL AID POSTS ON SITE

- **Medical Aid Posts (MAPs): 4–6 units**
- **Locations:**
  - Beach entry gate
  - Main stage area
  - Food court zone
  - Parking area

The **Medical Aid Posts (MAPs)** are essential facilities equipped to provide immediate medical assistance during emergencies, ensuring a quick response to critical situations. These points are strategically placed to support health interventions during emergencies. Below is a detailed explanation of the equipment available at each MAP:

### 1. Emergency Drugs

- **Purpose:** Emergency drugs are critical medications that are needed to stabilize patients in urgent situations. These drugs are typically used for life-threatening conditions like heart attacks, seizures, or allergic reactions.
- **Examples:**
  - **Epinephrine (Adrenaline):** Used for severe allergic reactions (anaphylaxis) and cardiac arrest.
  - **Aspirin:** Used to treat heart attack symptoms.
  - **Nitroglycerin:** For chest pain (angina).
  - **Antihistamines:** For allergic reactions.
  - **Analgesics:** To relieve pain.
- **Importance:** Having these drugs at hand ensures that MAP personnel can address immediate symptoms and stabilize patients before further medical treatment or transport to a hospital.

### 2. Oxygen Cylinders

- **Purpose:** Oxygen cylinders provide supplemental oxygen to patients who are experiencing difficulty breathing or are in respiratory distress. Oxygen is essential for

maintaining proper oxygen saturation levels in the blood, particularly in cases of respiratory failure, shock, or trauma

- **Usage:**
  - **Respiratory Emergencies:** Such as asthma attacks, pneumonia, or chronic obstructive pulmonary disease (COPD).
  - **Trauma or Blood Loss:** When a patient is bleeding heavily or injured, oxygen helps maintain oxygen delivery to vital organs.
- **Importance:** Oxygen therapy is crucial for preserving life and preventing further complications until the patient can be transferred to a healthcare facility for advanced care.

### 3. First Aid Kits

- **Purpose:** A well-stocked first aid kit is essential for treating minor injuries and providing initial care in emergencies. It helps address immediate needs for cuts, bruises, sprains, and other injuries that do not require advanced medical intervention.
- **Contents:**
  - **Sterile Gauze and Bandages:** For stopping bleeding and covering wounds.
  - **Antiseptic Wipes and Creams:** For cleaning wounds and preventing infections.
  - **Adhesive Plasters:** To cover small cuts and abrasions.
  - **Burn Cream and Dressings:** To treat minor burns.
  - **Cold Packs:** To reduce swelling and inflammation.
  - **Scissors and Tweezers:** For cutting bandages and removing foreign objects like splinters.
- **Importance:** The first aid kit ensures that basic injuries can be treated promptly to prevent infections, minimize pain, and stabilize the patient until they can be transferred to a healthcare provider if necessary.

### 4. Basic Resuscitation Equipment

- **Purpose:** Basic resuscitation equipment is used to revive or stabilize patients who have lost consciousness or are not breathing. This equipment ensures that life-saving procedures can be carried out on-site until professional medical help arrives.
- **Equipment:**
  - **Ambu Bags (Bag-Valve Mask):** Used for manual ventilation to provide oxygen to a patient who is not breathing.
  - **Automated External Defibrillator (AED):** A device that can shock the heart back into a normal rhythm in case of a sudden cardiac arrest.

- **Airway Management Devices:** To secure a patient's airway and prevent suffocation, such as oropharyngeal airways (OPA) and nasopharyngeal airways (NPA).
- **Suction Equipment:** To clear the airways of blood, vomit, or other blockages.
- **Importance:** These tools are essential for stabilizing patients who are in cardiac or respiratory arrest, providing them with a chance of survival until more advanced medical care is available.

## 5. Tagging children and mentally challenged individuals

- The festival atmosphere, especially in crowded places like Alappuzha Beach during festive events, can be overwhelming for children and mentally challenged individuals. To ensure their safety and quick identification if they become separated from their families or caregivers, a clear and organized tagging system should be implemented. This system is crucial for maintaining safety, minimizing panic, and ensuring that everyone, regardless of their condition, can enjoy the festival securely.

### *Key Elements of the Tagging System:*

- **Identification Tags:**
  - **Children and mentally challenged individuals** should be given identification tags upon arrival at the festival.
  - **Tags should include:**
    - **Name** of the individual (both child/mentally challenged person and caregiver if applicable).
    - **Contact details:** The phone number of a parent, guardian, or caregiver.
    - **Special instructions:** Any specific requirements or medical needs (e.g., allergies, emergency contacts, or care needs).
    - **Color-coded system:** Use different colors for children and mentally challenged individuals to differentiate between the two groups easily. For example:
      - **Blue** tags for children
      - **Green** tags for mentally challenged persons
    - **Clear and legible font:** Ensures that any volunteer, security personnel, or staff member can easily read the tags in case of an emergency.
- **Electronic Tags or Bracelets:**
  - Consider using **smart wristbands or bracelets** equipped with RFID or QR codes. These wristbands can store important details about the wearer, which can be scanned by staff or volunteers in an emergency. This could also include:

- Location tracking (if the wristbands are equipped with GPS or linked to a mobile app).
    - Quick access to personal details and medical information.
  - These wristbands are tamper-proof, providing extra security compared to paper-based tags.
  - **Tagging Stations:**
    - Set up **tagging stations** at the entrance and main points of the festival. Ensure that all children and people with mental disabilities are tagged before entering crowded areas.
    - The tagging process should be **quick, efficient, and discreet** to avoid long waiting times.
    - Have volunteers available at the stations to assist families, especially in case the individuals have special needs or require additional support.
  - **Identification Tags for Caregivers:**
    - Caregivers or accompanying adults should also receive **matching identification tags** to ensure that children or mentally challenged individuals can be matched with the correct caregiver if separated.
    - **Special markers or stickers** can be used on caregivers' tags to indicate their relationship to the person they are accompanying.
  - **Emergency Protocols for Lost Individuals:**
    - Establish a clear and **easily accessible protocol** for handling situations where a tagged individual is separated from their caregiver or guardian:
      - **Public announcement systems:** Notify all festival-goers in case of a lost individual, including details of the person (based on their tag color and description).
      - **Designated Safe Zones:** Create specific areas where lost children or mentally challenged individuals can be taken until their guardians are located.
      - **Staff training:** Ensure that all festival volunteers and staff members are aware of the **tagging system**, its purpose, and the process for assisting lost individuals.
  - **Tagging on Temporary Tattoos or Stickers:**
    - **For children** or mentally challenged individuals who may find wearing a physical tag uncomfortable, **temporary tattoos** or **stickers** can be used. These can be printed with the same identifying information and easily attached to arms or faces.
    - These temporary tattoos can be water-resistant and durable enough for the festival's duration.
  - **Family Communication System:**
-

- Provide families with a **festival-specific app or mobile number** that allows them to quickly contact festival organizers or security in case of an emergency or if a child or a mentally challenged person goes missing.
- If possible, implement **real-time location tracking** for individuals wearing smart tags or wristbands to facilitate faster reunification.
- **Public Awareness Campaign:**
  - Before the festival, conduct an **awareness campaign** through social media, flyers, or festival registration to encourage families with children or mentally challenged individuals to take advantage of the tagging system.
  - Provide instructions on where to get tags, how to use them, and how to ensure their loved ones' safety during the event.

#### *Benefits of the Tagging System:*

- **Increased safety:** Minimizes the risk of losing children or mentally challenged individuals during crowded festival events.
- **Quick reunification:** Expedites the process of reuniting lost individuals with their families or caregivers.
- **Peace of mind:** Families can enjoy the festivities with the assurance that a reliable safety mechanism is in place.
- **Efficient handling of emergencies:** Provides event staff with the necessary information to act quickly in case of medical emergencies, ensuring immediate care for those with special needs.

## **NUMBER AND SPLIT OF HUMAN RESOURCES (HR)**

### **Plan for Camp Points in Alappuzha Beach Festival**

The camp points at the Alappuzha Beach Festival are crucial for ensuring the safety, health, and well-being of attendees. These camp points will serve as first-aid stations, information centers, and emergency response hubs. The placement, number of camp points, staffing, and overall control mechanisms are key to managing the large crowds and providing quick assistance when necessary.

#### *Number of Camp Points*

The number of camp points should be determined by the size of the event area, crowd density, and the types of services required. For a festival of this scale, with up to 100,000 attendees, a strategic plan for the placement of these camps is essential. The following camps are proposed:

#### **Primary Camp Points (Main Medical Stations)**

- **Number of Camp Points:** 2 Advanced medical stations

- o **Location:** One at the **main entrance** of the festival (easy access for attendees entering the site), and another near the **stage area/performances** (where crowds tend to gather).
- o **Purpose:** These are the main hubs for critical medical care, staffed with doctors, nurses, and ambulance staff to handle severe cases.

### **Secondary Camp Points (First-Aid Stations)**

- **Number of Camp Points:** 3 mini first-aid stations
  - o **Location:**
    1. Near **water activity zones** (beach area) to handle water-related emergencies.
    2. Close to **food stalls** to assist with food-related issues (e.g., allergies, food poisoning).
    3. Near **high-traffic areas**, such as the **main pathways** leading to the festival grounds.

**Purpose:** Provide basic first aid and quick response to minor injuries, fatigue, dehydration, etc.

### **Information and Coordination Camp Points**

- **Number of Camp Points:** 2-3 information and coordination points
  - o **Location:** One at the **main entrance** for general event information and one near the **performance area** for easy access to assistance.
  - o **Purpose:** These camps will also assist with lost and found, general inquiries, and directions. These will also serve as check-in points for volunteers and staff coordination.

### **Roles and Responsibilities**

#### **Doctors (12):**

- **Roles:** Doctors will be responsible for overseeing the overall medical response, diagnosing more severe health issues, and making critical decisions regarding patient care.
- **Responsibilities:**
  - o Conducting medical examinations, diagnosing, and providing treatment for critical cases.
  - o Supervising staff nurses and ambulance staff in patient care.

- o Coordinating with health inspectors and volunteers to ensure medical protocols are being followed.
- o Advising on emergency medical procedures and making decisions about evacuations if necessary.

**Staff Nurses (24):**

- **Roles:** Staff nurses will assist in primary healthcare services at various first-aid stations throughout the venue, providing immediate care to attendees and helping with triage during emergencies.
- **Responsibilities:**
  - o First-aid administration and triage management.
  - o Assisting doctors during treatment.
  - o Monitoring and stabilizing patients until they are transferred to medical facilities if needed.
  - o Managing minor injuries and illnesses.

**Health Inspectors (10):**

- **Roles:** Health inspectors will oversee the sanitation and hygiene of the event, ensure that health and safety standards are adhered to, and monitor for any public health concerns.
- **Responsibilities:**
  - o Conducting health and safety inspections on food vendors, restrooms, and first-aid stations.
  - o Ensuring compliance with public health regulations.
  - o Monitoring crowd behavior to prevent outbreaks of infectious diseases.
  - o Collaborating with staff nurses and doctors on health inspections.

**Ambulance Staff (30):**

- **Roles:** The ambulance staff will be responsible for providing immediate medical attention on-site, transporting patients to hospitals when necessary, and managing medical emergencies during the event. Their main duty is to ensure a prompt response to medical incidents in high-density areas such as beaches.
- **Responsibilities:**
  - o Emergency response and medical transportation.
  - o Coordination with doctors and nurses for patient management.
  - o Ensuring safety protocols for medical evacuations.
  - o Regular checks on ambulances for readiness.

**Volunteers (50):**

- **Roles:** Volunteers will assist in non-medical duties such as crowd control, guiding visitors, distributing emergency information, and helping with logistical support.
- **Responsibilities:**
  - o Assisting in crowd management and ensuring the smooth flow of people.
  - o Providing basic support for medical personnel in emergencies.
  - o Helping in the distribution of safety materials, including health advisories.

- o Ensuring event participants are aware of safety exits, first-aid locations, and medical assistance.

### *Placement of Camp Points*

- **Main Medical Stations:**
  - o **The Main Entrance Camp Point** should be located near the event entrance where large crowds enter and exit. This location will allow for immediate response in case of emergencies during entry or exit.
  - o **The Performance Stage Camp Point** should be placed at a central location close to the stage where large crowds gather, ensuring immediate access to medical care if necessary.
- **First-Aid Stations:**
  - o **Water Activity Zone:** Located on the beach side near the water-based activities, this ensures swift access in case of drowning, dehydration, or heat stroke.
  - o **Food Stalls:** Placed close to the food court area to deal with food allergies, foodborne illnesses, or any other health concerns related to food consumption.
  - o **High-Traffic Pathways:** These stations should be positioned at the key entry and exit points of the festival, ensuring accessibility for quick response to any incidents involving attendees.
- **Information & Coordination Points:**
  - o **Main Entrance:** This is the most strategic location for providing event details, medical support information, and assisting attendees with any queries about the event.
  - o **Performance Area:** Serving as another centralized point for event-related queries, lost and found, and quick access to emergency support if necessary.

### *Human Resources (HR) Requirements*

To adequately staff each camp point, we need to determine the number of personnel required for each camp, considering the high volume of attendees and the range of services required. This HR management plan is designed to ensure that the right number of personnel are available at the right locations, with clear roles and responsibilities. Staff will be strategically assigned to key areas, including medical stations, first-aid points, and information/coordination hubs, to provide seamless service, rapid emergency response, and a safe overall experience for all attendees.

The staff assignment is divided into **Advanced Medical Stations**, **Mini First-Aid Stations**, and **Information & Coordination Points**, with a precise breakdown of the human resources required for each station. These staff members will work on rotating shifts, ensuring continuous coverage throughout the festival. Additionally, each team will have

designated leaders to oversee their respective areas, ensuring efficient operations and quick decision-making in emergencies.

Category	Role	Per Station	Total
Advanced Medical Station	Doctors	2	4
	Nurses	4	8
	Health Inspector	4	8
	Ambulance Staff	4	8
	Support Staff	2	4
<b>Total for Advanced Medical Station</b>		<b>14</b>	<b>28</b>
Mini First-Aid Stations	Nurses	2	8
	Ambulance Staff	2	8
	Support Volunteers	1	4
<b>Total for mini First-Aid Stations</b>		<b>5</b>	<b>25</b>
Information & Coordination Points	Volunteers/Staff	4	12

### Shifts-Based HR Arrangements

- **Doctors and Nurses:**

To ensure continuous medical coverage, the doctors and nurses will be split into **3 shifts**:

- **Day Shift:** 6 AM to 12 PM & 12 PM to 6 PM
- **Night Shift:** 6 PM to 6 AM

During the shifts, there should be a senior doctor available on-site at all times, along with a minimum of 6 nurses. Staff members will rotate shifts to avoid fatigue, ensuring there's always sufficient medical attention.

- **Ambulance Staff:**

The ambulance team will operate **round-the-clock**. Staff will be split into **3 shifts**:

- **Morning Shift:** 6 AM to 2 PM
- **Afternoon Shift:** 2 PM to 10 PM
- **Night Shift:** 10 PM to 6 AM

Ambulance staff will be stationed at strategic points, ensuring quick access to emergency medical services.

- **Health Inspectors:**

Health inspectors will work in **3 shifts**:

- **Day Shift:** 6 AM to 12 PM & 12 PM to 6 PM
- **Night Shift:** 6 PM to 6 AM

Given the nature of their work, inspectors will rotate in pairs to cover key

inspection points, including food stalls, sanitation facilities, and medical posts.

- **Volunteers:**

Volunteers will be assigned based on the **event schedule**, with flexible hours. They will work in 4-hour shifts, ensuring proper rest periods and maintaining their ability to assist effectively throughout the day.

### Facilities to be arranged

- Temporary medical camps
- Drinking water kiosks
- Mobile toilets
- Waste disposal units
- Lighting & illuminated signages

### Support accessories

- Stretchers & wheelchairs, PPE kits, Emergency drug kits
- Communication devices (walkie-talkies)

### Ambulance plan

- Total ambulances: 5–8
- Static positioning + mobile patrolling
- GPS-enabled tracking system

### List of impaneled ambulances available

- 108 Ambulance Service
- Private hospital ambulances – Providence hospital, Sagara hospital,
- NHM emergency vehicles

### ALS & BLS List

- ALS: 3 units
- BLS: 5 units

### Ambulance staff pattern

- **ALS:** Doctor + Nurse + Driver
- **BLS:** Nurse + Driver

### Strategic Plan for Assigning the Staff

- **Medical Coverage:**

The main medical post will be located centrally with immediate access to ambulances. Additional smaller first-aid stations will be set up at key locations around the event area, such as entrances, near water-based activities, and food courts.

- Doctors will be assigned to the main medical post, while nurses will be split across first-aid stations.

- o Ambulance Staff will be stationed strategically around the venue, ready for quick access to any emergency.
- o Health Inspectors will monitor food stalls, water facilities, and hygiene standards at different points around the venue.
- **Crowd Management:**
  - o Volunteers will be tasked with crowd management, including guiding attendees to first-aid stations, ensuring emergency exits are clear, and assisting with crowd flow during peak hours.
  - o Volunteers will also assist in spreading awareness about safety measures, helping reduce risk in crowded areas.
- **Emergency Response Team:**

In the event of an emergency, ambulance staff will immediately transfer patients to the central medical post or, if needed, to a nearby hospital. The doctors and nurses will be ready to manage any incoming cases, with the health inspectors overseeing hygiene measures to prevent further complications.

### Control and Coordination

The success of the event's preparedness plan depends on effective coordination among HR teams at the camp points.

- **Event Control Center:** A central control team will oversee the overall functioning of the camp points. The Event Control Center should be centrally located and maintain real-time communication with all medical and information stations. This center will ensure that medical staff, volunteers, and coordinators are informed about incidents and that resources are rapidly deployed when required.
  - o **Head of Medical Operations:** DMO or Deputy DMO should be in charge of medical staff across the entire event, ensuring timely communication and resolution of medical emergencies.
  - o **Coordination Manager:** This individual/ Program officers will be responsible for overseeing the operations of all information and coordination points, ensuring smooth communication between the staff and medical teams.
- **Staff Supervision:**
  - o Each camp point will have a designated **Camp Leader** (doctor or senior nurse), who will manage the daily operations and staffing needs at that particular point.
  - o Volunteers will report to the **Volunteer Coordinator**, ensuring they understand their roles and responsibilities for crowd management, assisting medical teams, and supporting event logistics.

### Involvement and Coordination

- **Regular Meetings:**

Before the event, all staff members should attend a briefing to discuss the event's layout, safety protocols, and individual roles. The emergency medical teams should review the venue's map and ensure staff are familiar with their designated stations.

- **Communication Channels:**

A dedicated communication system will be set up to enable real-time coordination among doctors, nurses, and ambulance staff. In the event of a medical emergency, direct communication between the main medical team and volunteers will ensure that help is delivered promptly.

- **Contingency Plans:**

Contingency plans should be in place for additional medical staff if attendance exceeds expectations. Extra volunteers should be stationed in high-density areas and ready to step into medical roles if needed.

This strategic HR plan ensures the festival runs smoothly, minimizes risks, and safeguards all attendees while fostering a positive, well-organized environment for participants and staff. The proposed camp points and HR arrangement plan will ensure that the Alappuzha Beach Festival is well-prepared to handle any medical emergencies, safety concerns, and general attendee assistance needs. The strategic placement of camp points, coupled with an effective HR allocation and central coordination, will help manage large crowds and ensure that the event runs smoothly and safely for all participants.

## **EVACUATION ROUTE BRIEFING & TRAINING**



The **evacuation route briefing** and **staff training** are critical to ensuring the safety of all participants in the event of an emergency. All staff members, volunteers, and emergency services personnel must be well prepared and familiar with the evacuation procedures to minimize confusion and maximize efficiency.

### Evacuation Route Briefing:

- **Objective:** Ensure that every individual attending the festival, including festival-goers, staff, and volunteers, understands the emergency procedures and knows how to exit the area during an emergency safely.
- **Audience:** All festival staff, volunteers, and emergency response personnel (medical teams, security staff, etc.).
- **Methods:**
  - **Pre-event briefing sessions:** Hold sessions before the festival to explain the evacuation routes, emergency exits, and procedures.
  - **Printed materials and maps:** Distribute handouts that outline the evacuation routes, emergency contact numbers, and safe zones.

- **Real-time communication tools:** Use mobile apps, social media, and public address systems to keep attendees informed during the event.

## 1. PRIMARY EVACUATION ROUTE

- **Route: Beach → General Hospital / W&C Hospital Alappuzha**
  - This primary route serves as the **main evacuation path** for attendees requiring immediate medical attention or evacuation during an emergency.
  - **Access:** The General Hospital and Women & Children (W&C) Hospital are well-equipped for handling emergency medical cases and are located within a reasonable distance from Alappuzha Beach. This enables the rapid transport of injured or affected individuals.
  - **Route Details:**
    - **Start point:** Festival area at the beach (main entry point or safe zones).
    - **Route Description:** Direct routes from the beach to the **General Hospital** and **W&C Alappuzha**, which are among the closest medical facilities. The roadways and pathways to these hospitals must remain clear and unobstructed for quick emergency vehicle access, including ambulances.
    - **Clear Signage:** Clear signs and markers will direct festival-goers and emergency personnel to follow this route towards the **General Hospital** or **W&C Hospital**.
    - **Distance:** Approx. 2-3 km, ensuring quick access to healthcare facilities.

### Staff Responsibilities for Primary Route:

- **Monitoring crowd movement:** Festival staff and volunteers will be stationed along the route to help guide people.
- **Ensuring crowd flow:** Volunteers will assist with keeping the route clear, ensuring that emergency vehicles can pass without delays.
- **Pre-positioned medical teams:** Medical teams will be stationed at strategic points along the primary route to provide immediate care before evacuation.

## 2. ALTERNATE EVACUATION ROUTE

- **Route: Beach → Medical College Alappuzha**
  - This **alternate route** provides an additional evacuation path in case the primary route is blocked or congested due to emergencies or heavy crowding.

- o **Access: Alappuzha Medical College** is another reliable medical facility equipped to handle a large number of casualties, especially in the case of mass injuries or emergencies.
- o **Route Details:**
  - **Start point:** Same starting point at the beach area (designated emergency assembly area).
  - **Route Description:** A clearly marked route leading from the beach towards the **Medical College**, Alappuzha.
  - **Distance:** Approx. 4-5 km from the beach, offering an alternative route to another medical facility if the primary route is unavailable.
  - **Signage:** Clear directional signs will be placed at key points along the beach area to direct people towards this alternate route.

#### **Staff Responsibilities for Alternate Route:**

- **Crowd management:** Volunteers will ensure people are directed to this alternate route in an organized manner if the primary route becomes congested.
- **Communication:** Volunteers will communicate the shift to this route via PA systems or mobile alerts, ensuring attendees understand the change in plan.
- **Backup medical teams:** Additional medical teams will be on standby to provide support at the Medical College or along the alternate route.

### **3. TRAFFIC DIVERSION PLAN**

In the event of large crowds or a major emergency, it is essential to manage traffic around the beach area and along evacuation routes to prevent congestion, avoid accidents, and ensure emergency vehicles can access the scene.

- **Traffic Control Points:**
  - o Establish designated **traffic diversion points** near key access roads leading to the beach and hospitals.
  - o **Police and traffic wardens** will be positioned at critical junctions to redirect traffic away from the festival area and clear pathways for emergency vehicles.
- **Diversion Routes:**
  - o Temporary **traffic diversion routes** will be established along major roads to reduce congestion. These routes will guide normal traffic around the festival and evacuation routes, ensuring no interference with emergency operations.
  - o Ensure all vehicles, including **emergency response teams (ambulances, fire trucks, etc.)**, can pass without delay.
- **Signage and Communication:**

- Use **road signs, barricades, and flashing lights** to indicate **traffic diversions**. These should be visible from a distance and updated in real-time via digital communication tools (such as social media or a dedicated mobile app).
- Announce the traffic diversion plan through the festival's PA system, giving clear instructions for both attendees and external traffic to follow the alternative routes.
- **Staff at Traffic Control Points:**
  - Trained volunteers or security personnel will be stationed at key traffic control points to assist with diversions and guide vehicles away from the evacuation routes.
  - Ensure that **emergency vehicles** are given **priority access** at all times.

#### 4. STAFF TRAINING ON TRIAGE & RAPID EVACUATION

Proper training of all staff and volunteers is essential for effectively managing the evacuation process and handling emergencies. The training should focus on triage and rapid evacuation techniques to help ensure the safety of all attendees.

##### Triage Training:

- **Objective:** Equip staff with the knowledge and skills needed to assess the severity of injuries and prioritize care for those in urgent need.
- **Training Content:**
  - **Basic triage principles:** identifying **life-threatening** conditions (e.g., severe bleeding, difficulty breathing, unconsciousness) and prioritizing them for evacuation.
  - **Use of triage tags:** Color-coded tags to mark the severity of each case (e.g., red for immediate, yellow for delayed, green for minor injuries, black for deceased).
  - **Transporting casualties:** Ensuring that the most critical patients are prioritized for transportation to medical facilities.

##### Rapid Evacuation Training:

- **Objective:** Prepare staff for the swift and orderly evacuation of large numbers of festival-goers during emergencies.
- **Training Content:**
  - **Crowd control:** Techniques to maintain a calm atmosphere and ensure efficient crowd movement without panic.
  - **Evacuation route knowledge:** All staff will be trained on the primary and alternate evacuation routes and their roles in guiding people to safety.

- **Use of equipment:** Training on using **emergency communication tools, first aid kits, and evacuation-related equipment** (e.g., stretchers, wheelchairs for disabled individuals).

### Simulation Drills:

- **Mock evacuation drills** will be conducted before the festival to familiarize staff with real-time procedures and identify any gaps in the plan.
- **Role-playing exercises:** Staff will be assigned specific roles (e.g., triage, crowd management, medical assistance) during the drill to simulate various emergency scenarios.

## 5. COMMUNICATION AND COORDINATION

Effective communication during an evacuation is essential to ensure everyone is informed and knows what to do.

- **Internal Communication:**
  - Festival staff will use **two-way radios** or **walkie-talkies** for instant communication between teams.
  - Regular **check-ins** and status updates from all staff and volunteers will be communicated to the event control room.
- **Public Communication:**
  - Use the **public address system** to provide real-time evacuation instructions.
  - **Mobile app notifications** and **SMS alerts** will provide attendees with evacuation updates and route changes.
- **Coordination with Emergency Services:**
  - Direct communication with local **police, fire, and medical teams** will be established to ensure quick response times and coordination during evacuations.

# ALAPPUZHA BEACH: EMERGENCY OPERATIONS MAP



## HOSPITAL PREPAREDNESS

- Emergency wards on alert—Government Medical College Hospital, Alappuzha (Tertiary care); General Hospital Alappuzha; Taluk Headquarters Hospital, Cherthala; Women & Children Hospital (W&C Hospital)
- Additional beds reserved (10–20%)
- Blood bank readiness
- ICU beds kept available

## List of hospitals with incident commanders

Hospital	Incident Lead
Medical College	Superintendent
General Hospital	Superintendent/RMO
THQH	Superintendent

## Protocol preparation

- Mass casualty triage protocol
- Referral protocol
- Dead body management protocol

## Crisis team (red alert)

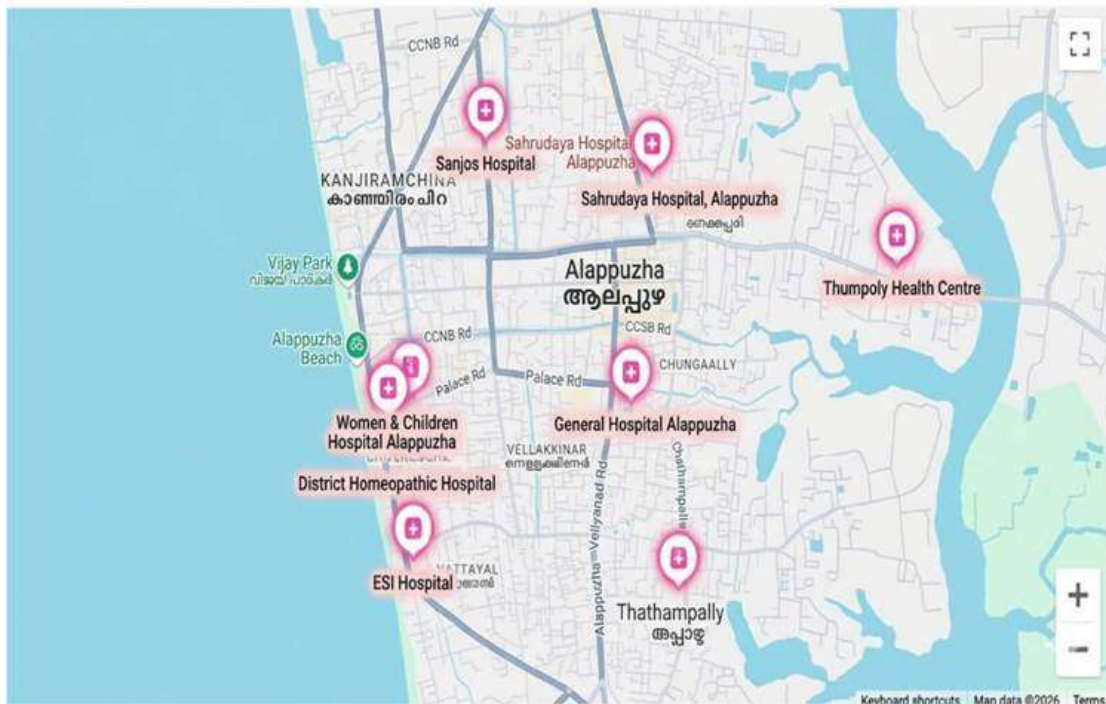
Each hospital should ensure:

- Emergency physician
- Surgeon
- Anaesthetist
- Nursing team

## Base referral hospital detail plan

- Primary: Government Medical College, Alappuzha
- Secondary: General Hospital / W&C Alappuzha
- Tertiary backup: Nearby private hospitals such as Providence Hospital, Sagara Hospital

## HEALTH INFRASTRUCTURE NEAR ALAPPUZHA BEACH



### Temporal dynamic plans

- Peak hours: Increase ambulance deployment
- Midnight surge: double staff strength
- Post-event: sanitation & surveillance

### Evacuation routes & base hospital plan

- Clearly mapped routes
- Display boards installed
- Ambulance priority lanes

### Alert mechanism for secondary referrals

- WhatsApp emergency group formation
- Control room 24\*7 working
- Real-time bed availability sharing

### Capacity building & meetings

#### Meetings Conducted:

1. District Level Planning Meeting

2. Interdepartmental Coordination Meeting
3. Health Staff Briefing

Meeting	Stakeholders
Planning	Collector, DMO, Food safety officer, LSGD, Police superintendent,
Coordination	Police, Fire
Final Review	All departments

### **Surge capacity: institution-based mapping for handling emergencies**

The map shows key schools, colleges, and government administrative offices near Alappuzha Beach, a key area for public services in Alappuzha that can be used for emergency surge management. It marks important government offices, including the District Educational Office, the District Collector’s Office, and the Civil Station in Alappuzha, which are central to administrative functions. Critical emergency services are also depicted, including the Alappuzha West Police Station, Alappuzha Fire Station, and General Hospital, ensuring access to healthcare and safety. With several key locations close to the beach, this map offers a useful overview of the area's infrastructure and services, which are critical for managing events like the Alappuzha Beach Festival.



## Key Public Health Risks Anticipated During New Year Celebrations

RISK TYPE	CONTEXT-SPECIFIC CAUSES (NEW YEAR EVENT)	TARGETED PREVENTIVE MEASURES
Respiratory Infections	Dense crowding during countdown events, close contact in cultural programs, shouting/singing in gatherings	Promote mask use in high-density zones, encourage vaccination (influenza/COVID), ensure ventilation in enclosed spaces, and deploy health awareness teams.
Food & Water-borne Diseases	Temporary food stalls, unhygienic handling, and consumption of unsafe drinking water by tourists	Strict food safety inspections, licensing of vendors, provision of safe drinking water kiosks, chlorination of water, and IEC on hand hygiene
Vector-borne Diseases	Stagnant water in nearby backwaters, increased waste accumulation post-event	Pre-event source reduction, fogging in surrounding areas, larvicidal measures, and public awareness on mosquito prevention
Alcohol-related Incidents	High alcohol consumption during celebrations, drunk driving, and interpersonal violence	Strengthened police surveillance, breath analyzer checks, awareness campaigns, and designated safe transport arrangements

Accidents & Injuries	Fireworks display, overcrowding, slippery beach areas, and traffic congestion during dispersal	Fire safety protocols, controlled fireworks zones, crowd control barriers, emergency lighting, traffic diversion, and regulation
Drowning Incidents	Entry into the sea during night hours, high tides, and a lack of supervision	Deployment of trained lifeguards, restriction of sea access at night, warning signage, and public announcements
Heat Exhaustion / Dehydration	Long hours of stay in crowded areas, limited access to fluids	Establish hydration points, ORS distribution, and shaded rest areas
Communicable Disease Surveillance Risks	Mass gatherings with inter-district visitors increase outbreak potential	Strengthen the Integrated Disease Surveillance Program (IDSP) reporting and rapid response teams on standby

## TRAINING & MOCK DRILLS

Effective preparation for large-scale events such as the Alappuzha Beach Festival requires rigorous training and mock drills to ensure that all personnel can handle emergencies professionally and efficiently. These drills and training sessions will help reinforce the response strategies, improve coordination among different teams, and ensure that each staff member is well-equipped to manage any crisis that may arise. Below are key aspects of training and mock drills that are essential for this event:

- **Mass casualty simulation**

Large public events, particularly those held in high-density areas like Alappuzha Beach, pose a significant risk of mass-casualty incidents due to factors such as medical emergencies, accidents, or even natural disasters. A mass-casualty simulation provides a practical, hands-on approach to training first responders, medical staff, and volunteers to handle multiple casualties simultaneously, ensuring efficient resource use and a swift response.

**Purpose:**

- To simulate real-life emergencies where multiple individuals are injured or affected at the same time.
- To evaluate the preparedness of medical teams, including **doctors, nurses, ambulance staff**, and volunteers, in handling a high volume of patients.
- To assess and improve communication, resource management, and triage systems, ensuring that the most critically injured are treated first.

**Plan:**

- A **mock scenario** will be created where actors play the roles of injured attendees, simulating a large-scale accident or attack.

- Teams will practice triage, treatment, and patient transport under **stressful conditions**, testing the speed and accuracy of their response.
- Ambulance staff and **first-aid teams** will also practice **evacuating patients** to nearby medical stations or hospitals.

**Outcome:** The training will help ensure that all medical staff, volunteers, and emergency teams are confident in handling high-stress situations with clear decision-making and coordination. It also helps identify weaknesses in emergency protocols, ensuring that corrections can be made before the event.

- **CPR training sessions**

Cardiopulmonary resuscitation (CPR) is a critical skill that can save lives in the event of a cardiac arrest or other medical emergencies. During large events like the Alappuzha Beach Festival, where attendees are exposed to various risks (e.g., heatstroke, drowning, accidents), there is a higher likelihood of witnessing health emergencies requiring immediate intervention. Offering **CPR training sessions** ensures that both medical staff and volunteers are prepared to respond effectively.

**Purpose:**

- To equip **medical personnel, staff nurses, and volunteers** with the skills necessary to perform CPR on individuals experiencing sudden cardiac arrest or other life-threatening conditions.
- To raise awareness about the **importance of early intervention** in medical emergencies, specifically during critical moments when every second counts.

**Plan:**

- **CPR certification** will be provided to all relevant personnel, including **doctors, nurses, ambulance staff, and volunteers**.
- The sessions will cover both **adult and child CPR**, as well as the use of an **automated external defibrillator (AED)**.
- A **hands-on training** approach will be used, with multiple simulation scenarios to ensure the staff is confident and efficient in performing CPR.

**Outcome:** This training will ensure that all trained individuals can quickly and effectively provide life-saving assistance during a cardiac emergency, significantly increasing the chances of survival for affected individuals.

- **Evacuation drills at the beach**

The beach environment, with large crowds and limited access points, presents unique challenges in the event of a disaster or emergency. These challenges can include crowd control, restricted mobility, and the need for rapid evacuation. **Evacuation drills** are essential to ensure that in the event of a fire, natural disaster, or security threat, all

attendees can be evacuated swiftly and safely to designated safe zones or medical stations.

**Purpose:**

- To practice the **safe and efficient evacuation** of festival attendees from the beach and surrounding areas in case of emergencies such as natural disasters, accidents, or security threats.
- To ensure that **volunteers, security staff, and medical personnel** are prepared to guide large crowds safely through predetermined evacuation routes.
- To test communication systems and ensure that **emergency teams** can coordinate effectively under pressure.

**Plan:**

- The evacuation drills will be conducted in phases, involving **volunteers, medical teams, security personnel**, and a **control center** to manage the process.
- **Evacuation routes** will be mapped out, and teams will be assigned specific zones to manage. These drills will focus on **crowd control**, guiding people toward **emergency exits**, and using **emergency vehicles** for evacuation when necessary.
- **Simulated scenarios** will include different types of emergencies, such as **fire hazards, terrorist threats, and natural disasters** (e.g., tsunamis, earthquakes).

**Outcome:** These drills will ensure that all involved personnel are familiar with evacuation protocols and that any bottlenecks or weaknesses in the evacuation plan are identified and addressed. The goal is to have a smooth, well-organized evacuation process with minimal panic or injury.

Training and mock drills are essential for ensuring that all staff, volunteers, and emergency teams are prepared to handle any emergencies that may occur during the Alappuzha Beach Festival. By concentrating on mass casualty simulations, CPR training, and evacuation drills, the event organizers aim to establish a safe environment where attendees can enjoy the festival without worry. These training sessions not only provide personnel with vital skills but also promote coordination and teamwork, ensuring a thorough and effective response during crises.

## **Standard Operating Procedure (SOP) – Common Health Hazards**

The following Standard Operating Procedure (SOP) outlines the management of common health hazards that may occur during the Alappuzha Beach Festival. These conditions are critical to public safety and require quick and effective responses. The SOP is designed to guide medical personnel, including doctors, nurses, ambulance staff, and volunteers, in managing these emergencies efficiently. The procedure is structured to ensure that each step is followed systematically to provide optimal care for the affected individual.

### **1. Drowning**

---

Condition: Drowning occurs when an individual is unable to breathe due to submersion in water. It is a medical emergency that requires immediate attention.

Management:

- Immediate Actions:
  - Rescue the victim from the water as quickly and safely as possible. Ensure safety to avoid secondary drowning or further injury.
  - Check the airway to ensure it is clear. If there is difficulty breathing, begin CPR.
- CPR:
  - Begin Chest Compressions: 30 compressions (at least 2 inches deep, at a rate of 100-120 compressions per minute).
  - Perform Rescue Breaths: 2 breaths after every 30 compressions if the victim is not breathing.
  - AED (if available): Apply AED to determine if a shock is needed.
- Oxygen Administration:
  - After successful resuscitation or if the victim is conscious but struggling to breathe, provide oxygen via a face mask or nasal cannula.
- Referral:
  - Transport the patient to a medical station or hospital immediately for further evaluation and treatment, even if the patient appears to recover. There may be risks of complications like aspiration pneumonia or secondary drowning.

Additional Considerations:

- If the drowning victim was submerged for a long time, ensure advanced life support (ALS) is administered on-site by doctors and paramedics.
- Keep the victim warm using blankets, as hypothermia may be a risk, even in warm weather.

## 2. Trauma

Condition: Trauma includes any physical injury to the body, such as fractures, lacerations, or contusions, which may occur due to accidents, falls, or violent events during the festival.

Management:

- Immediate Actions:
  - Assess the patient: Check for signs of shock, bleeding, fractures, or head injuries.
  - Stop Bleeding: Apply direct pressure on open wounds. Use sterile dressings and bandages to control bleeding.
- Stabilization:
  - Immobilize any suspected fractures using splints or other materials. Ensure that no movement is made until the patient is assessed and treated by a medical professional.

- o If there are signs of head, neck, or spinal injury, do not move the victim unless in immediate danger (e.g., fire, water).
- Pain Management:
  - o Administer pain relief medications as appropriate and under the supervision of a doctor or trained personnel.
- Transport:
  - o Once stabilized, transport the victim to a medical station for further assessment and treatment. If the injury is severe, transport the patient to the nearest hospital by ambulance.

Additional Considerations:

- For head trauma: Monitor for signs of concussion or more serious head injury (e.g., loss of consciousness, nausea, confusion).
- For internal injuries: Keep the patient still and transport immediately, as internal bleeding may be life-threatening.

### 3. Alcohol Intoxication

Condition: Alcohol intoxication can occur due to excessive consumption, leading to confusion, altered behavior, and impaired physical coordination. If left unchecked, severe intoxication can result in respiratory depression, unconsciousness, or other health issues.

Management:

- Immediate Actions:
  - o Assess the patient's level of consciousness. If the patient is conscious and responsive, ensure they are kept hydrated and in a comfortable position.
  - o Monitor vital signs: Check pulse, respiration, and blood pressure.
  - o Keep the patient in a safe position (e.g., lying on their side) to prevent aspiration if vomiting occurs.
- Observation:
  - o Monitor the patient closely for any signs of deterioration in their condition, including confusion, lethargy, or breathing difficulties.
  - o Ensure the patient remains awake and alert. If they lose consciousness or show signs of severe intoxication (e.g., inability to speak, slow breathing), move them to the medical station for further care.
- IV Fluids:
  - o Administer intravenous (IV) fluids for hydration if the patient is severely intoxicated or dehydrated. This will help to rehydrate and support liver and kidney function in clearing the alcohol from the bloodstream.
- Referral:
  - o Monitor for severe symptoms like hypothermia, respiratory depression, or seizures. If any of these symptoms are present, refer to a medical facility for observation and further treatment.

Additional Considerations:

- Alcohol poisoning may lead to respiratory arrest, so watch for slow, irregular breathing.
- Avoid stimulating the patient with caffeine or cold showers, as this can worsen symptoms.

#### 4. Heat Exhaustion

Condition: Heat exhaustion is caused by prolonged exposure to high temperatures, resulting in dehydration, electrolyte imbalance, and exhaustion. It can lead to heat stroke if not treated promptly.

Management:

- Immediate Actions:
  - Move the patient to a cooler area or provide shade.
  - Remove excess clothing to help cool down the body.
  - Cool the body by applying cool, damp cloths to the skin or using fans.
- Hydration:
  - Oral Rehydration: Offer the patient cool, non-alcoholic, non-caffeinated drinks (water or sports drinks). If the person is unable to drink, IV fluids may be necessary.
- Observation:
  - Monitor vital signs: Check pulse, respiration, and temperature. If the temperature remains high (above 104°F / 40°C), further medical intervention is needed.
- Referral:
  - Transport to medical station: If the person does not improve with cooling and hydration or shows signs of heat stroke (confusion, dizziness, nausea, seizures), immediate transport to a hospital is necessary for advanced care.

Additional Considerations:

- Prevent further heat exposure and hydrate regularly. Educate attendees on the importance of staying hydrated, especially in high-temperature environments.
- Heat stroke is a medical emergency that requires immediate cooling and hospitalization, as it can lead to organ failure or death.

#### Conclusion

The Alappuzha Beach Festival is a prominent event that attracts many attendees from across the country and abroad. As with any large gathering, the safety and well-being of participants are very important. This preparedness plan creates a strong, multi-sectoral response system to handle health emergencies effectively during the festival. By ensuring a well-coordinated effort among medical teams, volunteers, security staff, and local authorities, we aim to provide quick and efficient care in emergencies.

With comprehensive training programs, including CPR sessions, mass casualty simulations, and evacuation drills, all personnel will be well-equipped to handle a variety of health hazards, from drowning and trauma to alcohol poisoning and heat exhaustion. Using clear protocols for each condition ensures quick response and increases the likelihood of positive outcomes.

Additionally, the festival's readiness plan emphasizes training a workforce capable of quickly responding to emergencies and establishing strong referral connections to nearby hospitals and medical centers. Strategic placement of medical stations, first-aid points, and evacuation routes will further support emergency management and provide quick access to care.

Ultimately, the main goal of this plan is to eliminate preventable injuries and deaths during the New Year celebrations in Alappuzha. Through organized planning, clear procedures, and a coordinated response system, the district aims to create a safe and enjoyable environment for all participants. The combined efforts of all stakeholders involved will ensure that the festival is not only a memorable cultural event but also one that prioritizes the health, safety, and security of everyone.

# ARTHUNKAL ST. ANDREW'S BASILICA FESTIVAL

Muhamma Block

---



## PREAMBLE

The Arthunkal St. Andrew's Basilica Feast is one of the largest Christian pilgrimage events in Kerala, attracting hundreds of thousands of devotees from different faiths, with the crowd peaking during major rituals such as the Perunnal Mass, processions, and votive offerings. The festival concludes on the feast day of St. Sebastian during the Malayalam month of Makaram (January–February). Considering the high crowd density and the coastal setting of Arthunkal, this SOP provides a public-health framework to ensure rapid medical response, prevent communicable disease outbreaks, and maintain safety during the 11-day peak festival period.

---

## FESTIVAL PROFILE

**Name of Festival:** Arthunkal St. Andrew's Basilica Feast (Arthunkal Perunnal)

**Location:** Arthunkal, Cherthala South Panchayat.

---

**Festival Duration:** It is a 10–11-day-long festival. The festival concludes on the feast day of St Sebastian during the Malayalam month of *Makaram* (January–February)

**Major Event Days:** *Kodiyettam* (Flag Hoisting), the Main Feast Days (Peak Crowd), and *Ettamperunnal* (8th Day Feast – Conclusion).

**Estimated Crowd:** 1–2 lakh devotees during peak days

**Nearest Health Facility:** FHC Arthunkal (~500 m)

**Block Level:** CHC Muhamma (~6 km)

**Secondary Referral:** THQH Cherthala (~8 km)

**Tertiary Referral:** Govt. Medical College, Vandanam (~25 km)

---

## **GEOGRAPHICAL VULNERABILITY**

The St. Andrew's Basilica is situated in the coastal village of Arthunkal in the Cherthala South Grama Panchayat. The geography presents unique challenges for public health logistics:

**Coastal Proximity:** The church is located less than 300 meters from the Arabian Sea. The beach area serves as a primary transit and congregation point for pilgrims. This proximity requires specific environmental health surveillance and sand-rescue medical protocols.

**Narrow Arterial Roads:** Access routes from the Coastal Highway and the State Highway (SH 66) are narrow and prone to severe bottlenecks. During peak days, these arteries become highly congested.



## KEY RITUALS AND MASS GATHERING POINTS

The Arthunkal Perunnal involves massive, non-stationary gatherings across the Basilica premises, the coastal strip, and the primary approach roads. To ensure medical preparedness, the following rituals are identified as high-risk, high-density windows:

**The "Urulal" (Prostration Ritual):** A signature votive offering where hundreds of devotees prostrate and roll on the ground from the beach to the Basilica altar. This ritual requires dedicated medical surveillance due to the risk of physical exhaustion, dehydration etc.

**Opening of the St. Sebastian Statue:** The ceremonial unveiling of the saint's statue leads to a sudden surge in crowd density inside the Basilica, creating a high-risk period for fainting and crowd-related incidents.

**The Grand Procession (Pradhana Prathikshanam):** On the main feast day, the statue of St. Sebastian is carried through the narrow streets around the Basilica, resulting in the peak crowd density and requiring mobile medical teams along the procession route.

**Beach Congregation & Sacred Bath:** Thousands of pilgrims gather at Arthunkal Beach for a symbolic sea bath, making this area a priority zone for drowning prevention, water-safety monitoring, and heat-related illness response.

**Ettamperunnal (The Octave):** The concluding feast on the 8th day brings another surge of devotees.



*Devotees performing the "Urulal"*





*Mass Gatherings at the Basilica*



*Pradhana Prathikshanam (Grand Procession)*

## **RISK MITIGATION OF GATHERING**

Mass gatherings during the Arthunkal Perunnal pose multiple public health risks due to overcrowding, prolonged standing during prayers, the continuous influx of devotees from different districts, temporary food distribution, and increased nighttime gatherings. Considering the coastal location, narrow access roads, and large congregation inside and around the church premises, a structured risk-mitigation approach is essential.

### ***Possible Health Risks***

For effective planning and response, risks are categorised based on their nature. This allows the health department to coordinate effectively with the specific sister departments (Police, KSEB, Fire Force).

- 1. Physical & Structural Risks:** Drowning in the beach area, stampedes at the church entrance during the *Altar Kissing* ritual, and injuries during the *Urulyarcha* (crawling on knees) on sandy/abrasive surfaces.
- 2. Fire & Electrical Risks:** Short circuits in temporary illumination along the coastal road and fire hazards in open-air kitchens on the beach.
- 3. Biological & Public Health Risks:** Outbreaks of food poisoning, water-borne diseases (cholera, typhoid), and vector-borne diseases (mosquito-related) due to overcrowding and poor waste management.
- 4. Environmental Risks:** Severe heat stress and dehydration intensified by the reflective coastal sand and the risk of lightning strikes during unseasonal coastal storms.

- 5. Chemical/Food Safety Risks:** Use of artificial colours, ice-based drinks, unsafe cooking oil, and improper food storage in temporary food stalls, leading to food poisoning.



***Phase-wise Risk Identification***

The health risks associated with the festival are not uniform throughout the festival period. Therefore, the risks have been analysed in three phases: before the festival, during the festival, and after the festival. Each phase presents different public health challenges and requires specific preparedness and response measures to ensure the safety of devotees and the surrounding community. Based on field observations, previous festival experiences in the block, and standard public-health risk assessment for mass gatherings, the following phase-wise risk assessment and response framework has been developed.

Phase	Identified Risk	Potential Impact	Primary Department Responsible	Health Dept Role
-------	-----------------	------------------	--------------------------------	------------------

<b>Pre-Festival</b>	Coastal Sanitation	Vector breeding (Mosquitoes)	Local Self Govt. (Panchayat)	Source Reduction & Larviciding
	Unsafe Water Source	Water-borne outbreak	Kerala Water Authority (KWA)	Super-chlorination & RC Testing
	Electrical Hazards	Fire / Electrocutation	KSEB / Fire & Rescue	Safety Audit Participation
	Absence of ambulance arrangements	Delay in referral of emergency cases	Health Department / Emergency Medical Services	Coordination and preparedness
	Lifeguard Deficit	Drowning risk during early arrivals	Coastal Police	Coordination for 24/7 Lifeguard presence
<b>During the festival</b>	Crowd Surge / Stampede	Mass Casualty Incident	Kerala Police	Triage & Emergency Response
	Food Contamination	Mass Food Poisoning	Food Safety Dept, Health Dept	Medical Aid Post Readiness, Regular Inspections

	Heat Exhaustion	Syncope (Fainting), Heat Stroke	Health Department	ORS Corners & Cooling Zones, Referrals
	Communicable Diseases	Localised disease spread	Health Department	Monitoring of fever and diarrhoeal cases, rapid response if needed
	Fire accidents due to lamps, fireworks, electrical faults	Burns and mass casualty	Fire and Rescue Services, Police	Emergency medical support
	Fainting and collapse among elderly pilgrims	Medical emergencies	Health Department	Immediate medical care
	Beach Drowning	Fatality due to rough sea/high tide	Coastal Police / Fire Force	Emergency Medical Support & Resuscitation
<b>Post-Festival</b>	Accumulated Waste/Beach Litter	Risk of communicable diseases	LSGD / Sanitation Workers	Fever Surveillance & Disinfection
	Mosquito breeding due to stagnant water	Risk of vector-borne diseases	Panchayat / Health Department	Source reduction and anti-larval activities

	Contaminated water sources due to heavy crowd use	Water-borne diseases	Kerala Water Authority / Panchayat	Chlorination and water quality monitoring
--	---	----------------------	------------------------------------	---

This phase-wise framework enables targeted, coordinated action across departments, ensuring timely prevention, early detection, and effective response to health risks throughout the festival period. It strengthens overall public health preparedness and minimizes morbidity and mortality during mass gatherings.

## TEMPORAL EVENTS AND TIMELINE

Mass gatherings at the Arthunkal Basilica do not pose a uniform risk throughout the festival period. The level of public health risk varies depending on the type of ritual, expected crowd size, and the participation of vulnerable groups. The festival is conducted during the Malayalam month of Makaram (January), beginning with Kodiyettam and concluding with the Ettamperunnal (Octave).

Since peak crowds occur only on selected ritual days, a temporal, event-wise plan is essential to ensure timely deployment of ambulances and health personnel, zero-hour preparedness before major rituals, and effective coordination among the Health, Police, and other departments.

### *PHASE 1 – PRE-FESTIVAL PREPAREDNESS PHASE*

This is the "Window of Opportunity" for the Health Department to ensure the environment is safe before the crowd arrives.

**Period:** 7–15 days before Kodiyettam

**Nature of Crowd:** Gradual increase due to pilgrim shed construction, stall preparation, and early arrivals from distant districts.

**Overall Risk Level:** Low to Moderate

Component	Details
Major Activities	Setting up of temporary stalls, Pandal construction, lighting installation, and arrival of temporary residents/workers.

<p>Key Risks</p>	<ol style="list-style-type: none"> <li>1. Food-borne illness from unregulated vendors</li> <li>2. Electrical accidents from temporary wiring</li> <li>3. Mosquito breeding due to stagnant water</li> <li>4. Unsafe drinking water sources</li> <li>5. Poor sanitation arrangements</li> </ol>
<p><b>PREPAREDNESS MEASURES</b></p>	
<p>Food Safety Measures</p>	<p><b>Hotel Inspections:</b> Intensive sanitation audit of all permanent and temporary hotels/eateries within a 2 km radius.</p> <p><b>Water Sample Testing:</b> Collection of water samples from major hotels, food establishments, and the temple premises for bacteriological testing.</p> <p><b>Health Cards for Food Handlers:</b> Mandatory issuance of health cards to all temporary food handlers.</p> <p><b>Safe Food Practices:</b> Ensuring safe food storage and the use of clean water for cooking in all food stalls.</p> <p><b>Waste Disposal from Food Stalls:</b> Ensuring proper waste disposal and maintenance of sanitation around food stalls.</p> <p><b>Certification-Based Sanctioning:</b> The health authority may insist that licenses for temporary shops within the Basilica premises be granted only upon the production of a valid Food Safety Certificate.</p>

<p>Sanitation &amp; Waste Management</p>	<p><b>Beach Sanitation:</b> Special cleaning drives at the Arthunkal beach area to remove pre-existing debris.</p> <p><b>Waste Segregation:</b> Installation of colour-coded bins at source in collaboration with Haritha Karma Sena.</p> <p><b>Mobile Toilet Arrangements:</b> Identification of suitable locations for mobile toilets in coordination with the Panchayat.</p> <p><b>Faecal Sludge Management:</b> Pre-registration of authorised vacuum tankers for scheduled faecal waste collection from temporary toilets to prevent open dumping.</p>
<p>Water Safety Measures</p>	<p><b>Super-chlorination:</b> Super-chlorination of water storage tanks, Basilica premises and other major water sources in the Cherthala South coastal belt.</p> <p><b>Safe Drinking Water Arrangements:</b> Advance coordination with drinking water suppliers to ensure availability of safe potable water during the festival.</p> <p><b>Pre-festival Water Testing:</b> Periodic water-quality testing during the pre-festival period.</p> <p><b>Enforcement of Water Safety Standards:</b> Strict monitoring and enforcement to ensure all water sources meet safety standards, including immediate corrective actions such as re-chlorination or restriction of unsafe sources.</p>
<p>Vector Control Measures</p>	<p><b>Pre-festival Source Reduction:</b> Source reduction activities to be carried out 7–10 days before the festival.</p> <p><b>Anti-larval Measures:</b> Anti-larval activities in water-logging areas around the Basilica, the cemetery area, and the beach parking zones</p> <p><b>High-risk Area Monitoring:</b> Special attention to temple ponds, drainage areas, and nearby construction sites.</p>

Medical Preparedness	<p><b>Strategic Positioning of Medical Aid Posts:</b> Medical aid posts to be placed near high-risk zones, with first-aid supplies for burn injuries and electrical shock kept ready.</p> <p><b>Training of Health Staff and Volunteers:</b> Training in the immediate management of drowning, burns, fainting, and electrical shock cases.</p>
Disease Surveillance Preparedness	<p><b>Identification of Reporting Health Facilities:</b> Identification of the nearest reporting health facilities for rapid reporting of fever, diarrhoea, and suspected outbreaks.</p> <p><b>Availability of Essential Supplies:</b> Ensuring availability of ORS, IV fluids, and basic emergency medicines at nearby health centres.</p> <p><b>Orientation of Health Staff:</b> Orientation of health staff for early reporting of unusual health events during the festival period.</p> <p><b>High-Risk Vector Mapping:</b> Identification and mapping of potential mosquito breeding sites, including stagnant water areas, temple ponds, coastal pockets, and temporary waste accumulation zones, to enable targeted vector control measures.</p>
Lead Depts	<p><b>Health, LSGD, food safety, KSEB, KWA, coastal security, police &amp; excise.</b></p>

This phase is mainly a preparation period but is extremely important from a public health perspective because most preventable risks (vector breeding, unsafe food stalls, poor sanitation, and unsafe water sources) originate during this stage.

#### ***Coordination Meeting Before Festival***

A joint coordination meeting will be conducted before the start of the festival with representatives from the Basilica Committee; Health Department; Cherthala South Panchayat; Police; Fire & Rescue Services; Electricity Department (KSEB); KWA, and the Food Safety Department. The purpose of the meeting is to review the overall preparedness plan and identify high-risk areas within and around the basilica premises and finalise the locations of medical aid posts, ambulance positioning, sanitation

facilities, and emergency response mechanisms. This coordination ensures a unified response during the festival period and helps avoid delays in handling public-health emergencies.

### ***Public Health Awareness***

Public-health awareness activities will be carried out in the pre-festival period to reduce preventable illnesses during the festival. Information on safe drinking water, safe food consumption, personal hygiene, and early reporting of symptoms such as fever, diarrhoea, and fainting will be communicated through public announcements and display boards on the temple premises. In addition, temporary food handlers and stall workers will be sensitized on hygienic food preparation, safe water use, and proper waste disposal to prevent food-borne diseases during the festival in multiple languages (Malayalam, Tamil, English) since pilgrims arrive from neighboring states.

### ***Temporary Food Stalls and Street Vendors***

During the Arthunkal St. Andrew's Basilica Feast, a large number of temporary food stalls and commercial shops are established along the Basilica premises, beach areas, and approach roads. These pose significant public health and safety risks, including food-borne illnesses due to unsafe food handling practices, use of contaminated water, improper storage of cooked food, and reuse of cooking oil. In addition, temporary commercial structures may contribute to structural hazards, overcrowding in narrow pathways, and electrical risks due to unregulated wiring.

All temporary food stalls and street vendors shall undergo **mandatory registration and licensing**, with joint inspections by the Health and Food Safety Departments prior to operation. Strict monitoring will ensure safe water use, hygienic food preparation, and restriction of high-risk food items, along with IEC activities for vendors. Additionally, all temporary shops and stalls shall be subject to **structural and electrical safety inspections**, with regulated spacing, removal of unauthorized extensions, and certified electrical installations to prevent congestion, fire hazards, and accidents during the festival period.

### ***Summary Of Mitigation Measures For Street Vendors***

To mitigate the risks of fire, structural collapse, and foodborne outbreaks, the following stringent protocols are mandatory for all temporary establishments operating during the festival period.

# 'ARTHUNKAL ST. ANDREW'S BASILICA FEAST: MITIGATION PROTOCOLS FOR TEMPORARY ESTABLISHMENTS'

## ENSURING PUBLIC HEALTH & SAFETY DURING PEAK FESTIVAL DAYS

### I. TEMPORARY FOOD STALLS & VENDORS (FOOD SAFETY)

1. MANDATORY REGISTRATION & LICENSING
2. JOINT HEALTH & FOOD SAFETY INSPECTIONS (PRIOR TO OPERATION)
3. STRICT OPERATIONAL MONITORING

**POTABLE ONLY**  
SAFE WATER USE  
(COOKING & DRINKING)

HYGIENIC FOOD PREPARATION

PROHIBITED: REUSE OF COOKING OIL

FOOD SAFETY STANDARDS  
VENDOR SENSITIZATION (IEC ACTIVITIES)

### II. TEMPORARY SHOPS & STALLS (STRUCTURAL & ELECTRICAL SAFETY)

1. MANDATORY STRUCTURAL & ELECTRICAL INSPECTIONS
2. SAFE SPACING & CROWD FLOW


MIN. 3M  
ADEQUATE STALL SPACING  
(PREVENTS CONGESTION)

ELCB  
CERTIFIED ELECTRICAL INSTALLATIONS

REMOVAL OF UNAUTHORIZED EXTENSIONS

### III. SUMMARY OF MITIGATION MEASURES FOR STREET VENDORS

HAZARDS	POTENTIAL IMPACT	PREVENTIVE ACTION
Unlicensed Vendors	Outbreak of A/D/Typhoid	Mandatory registrations and joint inspections
Contaminated Ice	Water-borne Hepatitis	Regular RC testing of ice-storage units
Electrical Overload	Short Circuit / Fire	Mandatory circuit breakers (ELCB) for all stalls
Narrow Pathways	Stampede / Crush	Strict enforcement of the "No-Vendor Zone" as arterial roads



## **PHASE 2 – PILGRIM ARRIVAL & RITUAL BUILD-UP PHASE**

This covers the period of the Novena and the commencement of the 11-day feast. Crowd density increases steadily, specifically during evening masses and the arrival of pilgrims. The health system should transition from preparation mode to active monitoring mode during this phase.

**Period:** January 10–January 18 (from *Kodiyettam* to the eve of the Main Feast).

**Nature of Crowd:** Long-distance pilgrims (many from Tamil Nadu and other Kerala districts) and local devotees,

**Overall Risk Level:** Moderate to High (sustained risk due to continuous inflow of devotees).

<b>Component</b>	<b>Details</b>
Major Activities	Daily Holy Novena Masses, "Urulyarcha" penance from beach to altar, and evening processions.
Key Risks	<ol style="list-style-type: none"><li>1. Food-borne illness due to temporary food stalls</li><li>2. Communicable diseases such as fever, diarrhoea, and respiratory infections</li><li>3. Fainting and dehydration due to long waiting hours</li><li>4. Mosquito breeding due to crowd movement and water stagnation</li><li>5. Drowning in the sea/seashore accidents</li><li>6. Electrical accidents from temporary wiring</li></ol>

	7. Sanitation problems due to gradual crowd increase
<b>PREPAREDNESS &amp; RESPONSE MEASURES</b>	
Public Health Surveillance	<p><b>Daily Symptom Monitoring:</b> Daily monitoring of fever, diarrhoea, vomiting, respiratory symptoms, and festival-related illnesses such as dehydration, fainting, heat exhaustion, and minor injuries.</p> <p><b>Wound Surveillance:</b> Special attention to children staying in the temple during Chikkara Kottikkal, as they remain in a closed environment for several days.</p> <p><b>Rapid Reporting of Clusters:</b> Immediate reporting of any cluster of illness to the block level.</p> <p><b>Beach-Front Surveillance:</b> Dedicated monitoring of the temporary shops and residents living on the sandy stretches of the beach.</p>
Food Monitoring Safety	<p><b>Daily Inspection of Food Stalls:</b> Daily inspections of temporary beach-side eateries. Special focus on the quality of ice used in "Sar bath" and the freshness of seafood. A daily night inspection of food stalls is conducted by the Block team.</p>

	<p><b>Food Preparation Monitoring:</b> Monitoring of food preparation areas, water used for cooking, and cleanliness of utensils.</p> <p><b>Enforcement of Hygiene Standards:</b> Immediate closure of unsafe food stalls if hygiene standards are not maintained.</p>
Water Safety & Sanitation	<p><b>Monitoring of mobile toilets</b> and sanitation facilities to prevent overflow and contamination.</p> <p><b>Daily waste collection</b> in coordination with the Panchayat and Haritha Karma Sena.</p>
Medical Preparedness	<p><b>Medical Aid Post:</b> Establishment of at least one medical aid post inside the church premises.</p> <p><b>Availability of Essential Supplies:</b> Ensuring availability of ORS, basic medicines, and first-aid supplies.</p> <p><b>Referral Hospital Identification:</b> Identification of referral hospitals for emergency cases.</p> <p><b>Ambulance Readiness:</b> Ensuring ambulance readiness during peak evening hours.</p>
Public Awareness Activities	<p>Public announcements on safe drinking water and early reporting of illness.</p> <p>Awareness among devotees regarding dehydration, fainting, and overcrowding risks.</p> <p>Health education for food handlers and volunteers working in the temple premises.</p>

Medical Strategy	<p><b>Daily Health Desk:</b> A 24-hour functional first-aid station at the Basilica office.</p> <p><b>Tetanus Prophylaxis:</b> Ensuring adequate stock of TT injections for pilgrims with deep abrasions from the crawling ritual.</p> <p><b>Isolation Protocol:</b> Identifying a room to isolate any pilgrim showing signs of highly infectious diseases (e.g., Mumps, Chickenpox, or Measles).</p>
Surveillance Focus	Respiratory infections, Injuries, Skin rashes, Fever clusters.
Lead Departments	Health Department, LSGD, Food Safety Department, Police, KSEB, KWA, and Haritha Karma Sena.

### ***Surveillance of Migrant Vendors & Seasonal Residents***

The Arthunkal festival attracts a significant number of migrant workers and temporary shopkeepers from other districts and states who set up stalls for the 11-day period and more. This population often stays in makeshift, overcrowded accommodations with limited access to sanitary facilities, making them vulnerable to water-borne diseases and a potential source of imported infections. Periodic screenings will be conducted to identify any cases of Acute Diarrheal Disease (ADD) or fever. By monitoring this group, we ensure that the "Hidden Population" of the festival is included in the district's overall biosurveillance framework, preventing localized outbreaks from spreading to the visiting devotees.

### **Specific Preparedness for Basilica-Beach Corridor**



The stretch from the Basilica to the Arthunkal Beach represents a unique high-density zone where temporary stalls, pilgrim transit, and coastal activities converge. To manage this safely, the following specialized measures will be implemented:

**Life-Saving Deployment:** Coordination with Fire & Rescue and Coastal Police to station lifeguards and scuba divers at bathing zones, equipped with motorized rescue boats and lifebuoys for "Sacred Bath" safety.

**Beach Medical Outpost:** A specialized Response Unit at the beach entrance featuring stretchers and trauma kits for near-drowning, stings, or ritual-related injuries.

**Security & Surveillance:** Deployment of 24/7 police surveillance and high-intensity floodlighting to monitor crowd movement and assist night-time rescue operations.

**Public Safety Zoning:** Demarcation of "Safe Bathing Zones" using buoy lines and red flags, supported by synchronized, multi-lingual public address systems between the Basilica and the shore.

### PHASE 3 – PEAK FESTIVAL PHASE

This phase represents the highest-risk period of the festival. Crowd density peaks as the "Resident" pilgrims are joined by over 2 lakh floating devotees for the main spiritual events. The combination of religious fervor, narrow coastal access, and extreme crowd density during the Saint's Statue Unveiling and the Beach Procession creates a significant risk for mass casualty incidents (MCI) and rapid disease transmission.

---

**Period:** January 19th–20th (Main Feast) and January 26th – 27th (Ettamperunnal/Octave).

**Nature of Crowd:** Massive congregations (2 Lakhs+), diverse interstate pilgrims, high-density processing crowds, and elderly devotees.

**Overall Risk Level:** **CRITICAL**

---

Component	Details
Major Activities	The Main Feast (Jan 20), Grand Procession ( <i>Ezhunnallippu</i> ), Altar Kissing, and Final Day celebrations.
Key Risks	<ol style="list-style-type: none"><li>1. Heat-related illnesses such as heat exhaustion</li><li>2. Crowd Crush/Stampede at Church Gates</li><li>3. Fainting and collapse among elderly devotees</li><li>4. Food-borne illnesses due to large-scale temporary food distribution</li><li>5. Fire accidents due to open flames and fireworks</li><li>6. Communicable diseases such as fever, diarrhoea, and respiratory infections</li></ol>

---

	<p>7. Electrical accidents due to heavy lighting and temporary wiring</p> <p>8. Road traffic accidents due to heavy crowd movement</p> <p>9. Cardiac emergencies</p>
<b>RESPONSE &amp; CONTROL MEASURES</b>	
<p>Crowd-related Medical Emergencies</p>	<p><b>Continuous monitoring of crowd movement</b> in coordination with the Police Department.</p> <p><b>Quick response by health staff</b> in case of fainting, collapse, or minor injuries.</p> <p><b>Functional medical aid posts</b> operating throughout the peak festival days.</p> <p><b>Rapid triage</b> and stabilization of patients before referral.</p>
<p>Management of Medical Emergencies</p>	<p>Availability of emergency medicines, IV fluids, ORS, and first-aid supplies in all medical aid posts.</p> <p>Special preparedness for <b>burn injuries, dehydration, and fainting cases</b>.</p> <p>Ambulances positioned at strategic points for rapid evacuation.</p> <p>Coordination with nearby hospitals for emergency referrals.</p>

<p>Coastal &amp; Marine Emergency Response</p>	<p>Continuous presence of Scuba Divers and Lifeguards during daylight hours.</p> <p>Any pilgrim rescued from the water must be mandatorily transported to FHC Cherthala South for 6-hour observation to prevent delayed pulmonary edema.</p>
<p>Environmental / Heat</p>	<p>Distribution of ORS in high-crowd areas.</p> <p>Advising devotees to stay hydrated through public announcements.</p> <p>Special attention to elderly devotees and children.</p> <p>Medical staff to monitor cases of dizziness, weakness, and fainting.</p> <p><b>Cooling Zones:</b> Shaded areas with pedestal fans and water misting for exhausted pilgrims.</p>
<p>Communicable Disease Surveillance</p>	<p>Daily monitoring of fever, diarrhoea, vomiting, and respiratory symptoms.</p> <p>Immediate reporting of any cluster of illness.</p> <p>Rapid response by the health team in case of suspected outbreaks.</p> <p>Continuous public announcements encouraging early reporting of illness.</p> <p>Regular monitoring of mosquito breeding sites in and around the Basilica premises, beach areas etc with immediate control measures for identified high-risk areas.</p>
<p>Fire &amp; Electrical Safety Response</p>	<p>Close coordination with Fire &amp; Rescue Services</p>

	<p>Immediate medical response in case of burns or fire-related injuries.</p> <p>Health staff positioned near high-risk areas such as cooking zones and crowded ritual locations.</p> <p>Emergency referral support for severe burn cases.</p>
Traffic & Emergency Access	<p>Ensuring ambulance movement through designated emergency routes. Advanced Life Support units stationed at the nearest point.</p> <p>2 dedicated "Ambulance-Only" lanes maintained by Police/Volunteers.</p> <p>Coordination with the Police Department for rapid evacuation of emergency cases.</p>
Sanitation & Environmental Health Monitoring	<p>Continuous monitoring of mobile toilets and sanitation facilities. Tankers on standby for midnight suction of temporary pits.</p> <p>Immediate action in case of overflow or unhygienic conditions.</p> <p>Daily waste removal in coordination with the Panchayat and Haritha Karma Sena.</p> <p>Monitoring of drinking water safety during peak crowd days.</p>
Lead Departments	<p><b>Health Department, LSGD, Food Safety Department, Police, KSEB, KWA, and Haritha Karma Sena.</b></p>

## Mitigation of Stampedes during Processions



### *One-Way Pedestrian Flow:*

**Logic:** Preventing "bi-directional friction". When two crowds meet head-on, movement stops and pressure builds.

**Action:** Implement a strict "North-In, West-Out" flow. Devotees enter through the north side of the basilica and exit through the west/beach-facing doors. Rope barricades must be managed by the Coastal Police and Church Volunteers to ensure no one attempts to "turn back" once they enter the inner courtyard.

### *Barricading & "Crush Zones":*

**Logic:** Breaking the mass of the crowd into smaller, manageable "cells."

**Action:** Install "U-shaped" or "Snake" barricades. If a surge occurs, the barricades absorb the lateral pressure, protecting the people in the center. *Crucial:* High-density areas like the zone must have "Pressure Release Gates" that can be opened instantly by police if the density becomes dangerous.

***Ambulance Corridors (Green Channels):***

**Logic:** Ensuring the "Golden Hour" is not lost in traffic.

**Action:** A 3-meter wide path must be physically barricaded and kept **strictly sterile** (zero pedestrians, zero vendors). This corridor must connect the Medical Aid Post directly to the main road leading to Cherthala THQH or Alappuzha Medical College.

***Mitigation for Fire & Electrical Hazards***

At Arthunkal, the risk is open-flame votive offerings (candles) and marine accidents.

***Strategic Positioning of Fire Tenders:***

At least two Fire Tenders must be stationed: one at the Basilica West Gate and a second Motorized Rescue Boat at the Beach Bathing Zone. Fire-watch towers will be positioned to monitor for smoke in the temporary pilgrim sheds.

1. One near the Basilica Main Entrance.
2. One at the Beach Entry Point (to manage Pandal fires).

***Medical "Burn Kit" Readiness:***

Action: Every Medical Aid Post-peak, 48 hours must be stocked with silver sulfadiazine creams, sterile saline for irrigation, and large quantities of sterile gauze/burn sheets. Specialised oxygen concentrators, Ambu-bags for resuscitation, and blankets for managing hypothermia/near-drowning victims.

## PHASE 4 – POST-EVENT SURVEILLANCE

This phase begins immediately after the Octave (Ettamperunnal) celebrations of the Arthunkal St. Andrew's Basilica Feast. Although the large crowds disperse, the risk of communicable diseases remains moderate due to temporary pilgrim shelters, shared sanitation facilities, and the accumulation of waste in coastal areas.

The primary focus of the Health Department during this phase is disease surveillance, environmental sanitation, and prevention of post-festival outbreaks.

---

**Period:** January 28th – February 5th (7 days post-festival).

**Nature of Crowd:** Rapid dispersal of pilgrims; cleaning workers, local vendors, and Church authorities remain for dismantling structures.

**Overall Risk Level:** Moderate

---

Component	Details
Major Activities	Dismantling of beach-side "Pandals," removal of temporary stalls on the Arthunkal-Cherthala Road, and deep cleaning of the Basilica courtyard.

Key Risks	<ol style="list-style-type: none"> <li>1. Increase in communicable diseases such as fever, diarrhoea, and respiratory infections</li> <li>2. Mosquito breeding due to leftover stagnant water</li> <li>3. Environmental sanitation issues due to accumulated waste</li> <li>4. Delayed reporting of illness among devotees who attended the festival</li> <li>5. Injuries among workers involved in dismantling temporary structures</li> </ol>
<b>RESPONSE &amp; CONTROL MEASURES</b>	
Disease Surveillance	<p>Strengthening of <b>syndromic surveillance</b> for fever, diarrhoea, vomiting, and respiratory infections for at least one week after the festival.</p> <p>Immediate reporting and investigation of any cluster of illness.</p> <p>Follow-up of any suspected communicable disease cases identified during the festival period.</p>
Vector Control Measures	<p>Large-scale "Dry Day" campaign led by the Health Department and Haritha Karma Sena (HKS) to remove discarded food containers, tender coconut shells, and plastic waste from the beach and coastal bushes.</p>
Water & Environmental Sanitation	<p>Proper disposal of leftover waste in coordination with the Panchayat and Haritha Karma Sena.</p> <p>Ensuring complete cleaning of the church premises and surrounding roads.</p>

Public Health Monitoring	<p>Monitoring for delayed cases of food-borne illness.</p> <p>Follow-up of individuals who required medical care during the festival.</p> <p>Health staff to remain alert for any unusual increase in fever or diarrhoea cases in nearby areas.</p>
Occupational Health for Workers	<p>Monitoring for injuries (nails/sharp metal) among workers taking down temporary stages and lighting.</p> <p>Ensuring that sanitation workers involved in heavy waste removal are provided with necessary personal protective equipment (PPE) and screened for any skin infections or respiratory distress.</p>
<b>Lead Departments</b>	<b>Health Department, LSGD, Food Safety Department, Police, KSEB, KWA, and Haritha Karma Sena.</b>

### **POST-EVENT EVALUATION & REPORTING**

A post-festival review meeting shall be conducted with the Rector of St. Andrew's Basilica, Arthunkal, LSGD representatives, and the Police Department to assess the response and document operational gaps.

A consolidated report shall be prepared including:

- Total number of medical cases managed (categorized by age and type)
- Total number of referrals to THQH Cherthala
- Summary of water quality (Residual Chlorine) and food safety samples
- Confirmation of zero mortality
- Documentation of “near-miss” incidents and lessons learned

## COMMAND SYSTEM AND INTER-DEPARTMENTAL COORDINATION

Effective management of the Arthunkal Feast requires a structured **Incident Command System (ICS)**. This ensures that during critical events—such as a coastal emergency, a crowd crush at the Basilica, or a fire in the "Pandals"—there is a unified line of authority and zero duplication of efforts.

### *Functional Hierarchy of Command*

The command structure is divided into three tiers: Strategic (District), Operational (Area/Block), and Tactical (Field).

#### 1. **District Strategic Command (District Level):**

Headed by: District Collector & District Medical Officer (DMO).

Role: Policy decisions, inter-district resource mobilisation (e.g., requesting extra ALS units from neighbouring blocks), and overall administrative oversight.

#### 2. **Area-Level (Festival Site) Command:**

##### *Department-wise Command Responsibilities*

- 1. Health Department:** Lead agency for medical aid at FHC Cherthala South, sanitation, water/food safety audits, and disease surveillance.
- 2. Police Department (Coastal & Civil):** Crowd control, monitoring of beach congregation areas, prevention of drowning incidents, and support for water rescue operations.
- 3. Fire & Rescue:** Fire tenders at kitchens/fireworks and technical rescue for structural safety.
- 4. LSGD (Panchayat):** Waste management (Haritha Karma Sena), mobile toilets, and street lighting.
- 5. Church Authorities (Rector):** Internal crowd management, coordination of rituals, and ensuring compliance with safety guidelines on the premises.

#### 3. **Field Tactical Units (Ground Level):**

This table outlines how to pull resources from the wider network to staff the Medical Aid Posts (MAPs) and field surveillance.

---

<b>Personnel Category</b>	<b>Source / Deployment</b>	<b>Specific Role during Festival</b>
Medical Officers	Deputed from nearby FHCs/PHCs	Clinical lead at medical aid posts: triaging emergencies.
Staff Nurses, JPHNs and MLSPs	NHM & Block Facilities	Wound dressing, IV fluids, and stabilising patients for transfer.
Health Inspectors (HI/JHI)	Block Health Team	Supervising disease surveillance, sanitation, water chlorination, and food stall inspections.
ASHA Workers	Local Ward Circles	Providing first-aid and identifying exhausted devotees.
Volunteers (NCC/NSS/NGOs)	Local Colleges/Youth Clubs	Assisting police with "barricade" flow and guiding people to exit gates.
Data Entry Operators	NHM, LSGD	Real-time "line listing" of all injuries/fever cases at the medical post.
Ambulance Drivers	108 Service & FHCs	Manned standby at the "Green Channel" for immediate THQH/medical college transfer.
Coastal Lifeguards	Fire & Rescue / Coastal Police	24/7 monitoring of the shoreline; immediate resuscitation of water-rescue victims.

## **Information Flow in Command System (Crisis Communication Linkage)**

Effective management of emergencies during the Arthunkal St. Andrew's Basilica Feast depends on a structured and well-coordinated communication system. Ensuring that the right information reaches the right authority at the right time is critical for rapid decision-making and efficient response.

During any emergency, all field-level responders must report essential information in a standardized format to ensure clarity, avoid duplication, and enable coordinated multi-agency action.

### ***The "SOP to State" Referral Chain***

In the event of any emergency—such as crowd surge, fire, coastal incidents, or extreme weather—the On-Site Emergency Operation Center (EOC) acts as the central hub for receiving, processing, and disseminating information.

The flow of information during a festival emergency is structured on a tiered scale (L1, L2, or L3). In the event of a "Crowd Disaster" or specialized "Coastal Incident" (e.g., drowning or a marine flare accident), the command escalates as follows:

---

**Level 1 (Field):** The Medical Aid Post (MAP) is activated by field personnel.

**Level 2 (Command Hub):** If the incident is an MCI (Mass Casualty), the Incident Commander (District Collector) activates the On-Site (EOC) at the Basilica.

**Level 3 (Regional):** For large-scale disasters requiring resources beyond the district, the On-Site EOC notifies the DEOC (District Emergency Operation Centre), which subsequently contacts the State DM Control Room and SEOC (State Emergency Operation Centre).

---

## *Structural Components of the Command System*

### **1. Trigger and Initial Reporting**

Emergencies may be identified through:

- Early warning systems (e.g., weather alerts, disaster warnings)
- Field-level observations (police, health staff, volunteers)
- Public reporting

All incidents are immediately communicated to the **On-Site EOC**, along with essential details such as the nature of emergency, location, and number of persons affected.

### **2. Role of Incident Commander**

The Incident Commander (District Collector/District Magistrate) provides overall leadership and strategic direction. Based on the severity of the incident, decisions regarding resource mobilisation, evacuation, and inter-departmental coordination are taken.

### **3. On-Site Emergency Operation Center (EOC)**

The EOC functions as the coordination and communication nucleus, responsible for:

- Consolidating real-time information from the field
- Activating relevant response teams
- Coordinating between departments
- Maintaining communication with higher control rooms

### **4. Departmental Coordination**

Upon activation, the EOC communicates with:

- **First Responders / Emergency Departments:** Revenue & Disaster Management, Police, Fire & Rescue, Health Department
- **Nodal Departments:** Water Authority, Motor Vehicles Department, Irrigation Department, Public Works Department

The EOC ensures that Nodal Departments (KWA for water, KSEB for power, and PWD for road clearing) work in tandem with First Responders (Health and Police), preventing overlap or resource gaps.

## **5. Escalation Mechanism**

For higher-level emergencies:

- The District Emergency Operation Center (DEOC) is activated for district-level coordination
- Information is escalated to the State Disaster Management Control Room and State Emergency Operation Center (SEOC) if required
- In major crises (L2/L3 level), the State Incident Commander assumes overall control

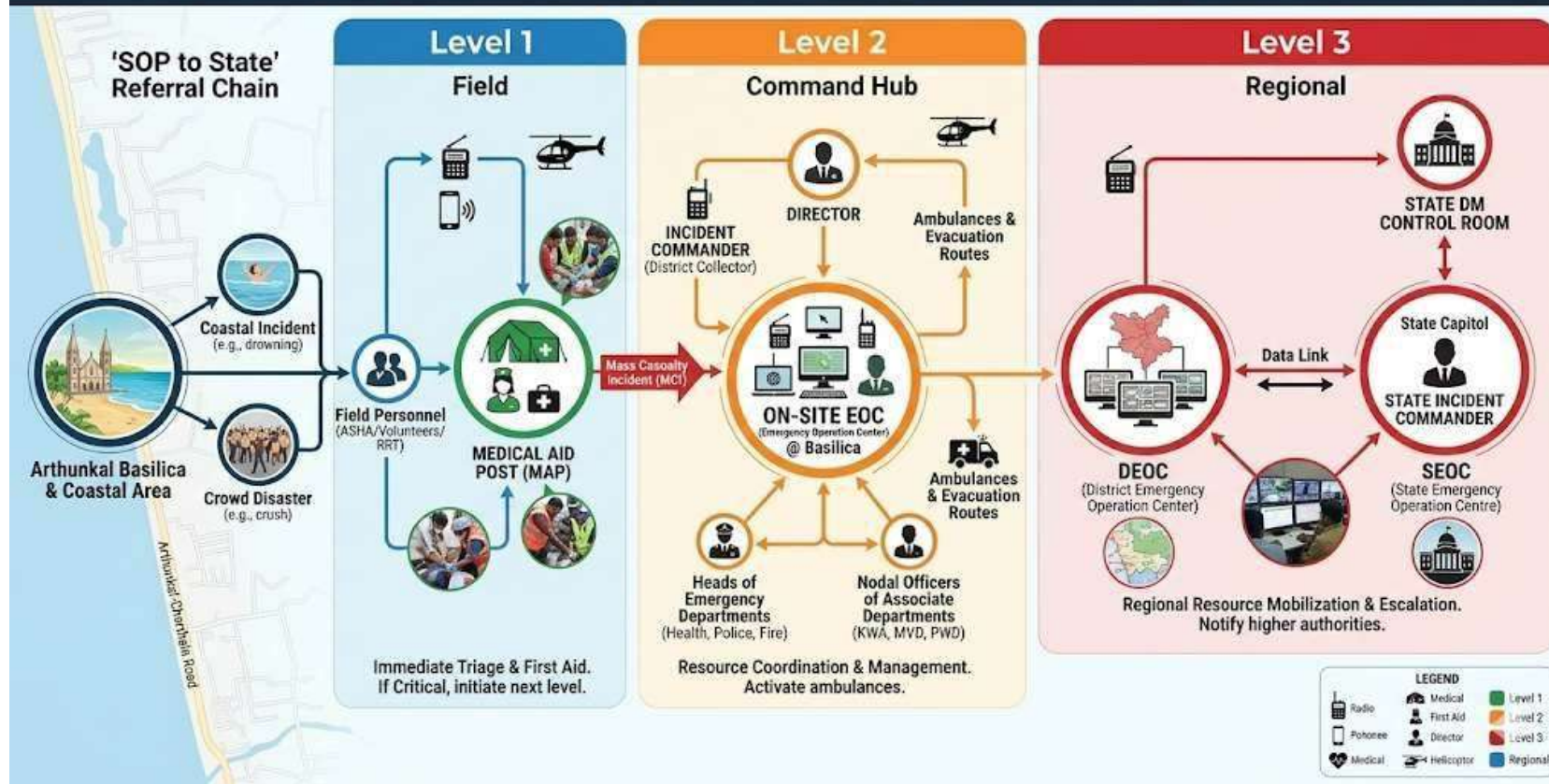
## **6. Two-Way Information Flow**

Communication is never unidirectional. A continuous loop is maintained to ensure field teams are supported by the strategic heights of the administration:

- Upward Flow (Intelligence): Field Personnel → On-Site EOC → DEOC → SEOC.
- Downward Flow (Orders): Strategic Advisories → Resource Allocation → Tactical Field Instructions.

In major crises where L2 or L3 thresholds are crossed, the State Incident Commander assumes overall control, while the On-Site EOC transitions into a local implementation unit for state-level directives.

# ARTHUNKAL FEAST INCIDENT COMMAND & COMMUNICATION NETWORK



## **LIST OF KEY OFFICIALS AND CONTACT DETAILS**

A list of key officials will be prepared and circulated among all departments before the start of the festival. This will ensure rapid communication during emergencies such as stampedes, fire accidents, food-borne outbreaks, or medical emergencies.

### ***Festival & Venue Management***

---

<b>Office / Body</b>	<b>Contact Person</b>
Arthunkal Basilica	Main Office
Festival Committee	General Convener
Cherthala South LSGD	Panchayat Secretary

---

### ***Law Enforcement & Crowd Control***

---

<b>Department</b>	<b>Designation / Station</b>
Coastal Police	Arthunkal Coastal Police Station
Local Police	Arthunkal Police Station
Police (Traffic)	SI Cherthala Traffic
Police (District)	District Police Chief, Alappuzha
Fire & Rescue	Station Officer, Cherthala

---

---

### *Health & Medical Coordination*

---

<b>Office</b>	<b>Designation</b>
DMO (Health)	District Medical Officer, Alappuzha
Block Medical Officer (BMO)	CHC Muhamma
Medical Post Lead	Medical Officer, FHC Cherthala South
Secondary Referral	THQH Cherthala
Tertiary Referral	Casualty, TD Medical College
Health Supervisor (HS)	Muhamma Block (Field Commander)
Health Inspector (HI)	FHC Cherthala South

---

### *Revenue & Civil Administration*

---

<b>Office</b>	<b>Name / Designation</b>
Collectorate	District Collector (Sh. Inbasekhar IAS)
Disaster Mgmt	Deputy Collector (DM)
Emergency Ops	District Emergency Operation Centre
Panchayat	President, Cherthala South

---

## LIST OF HOSPITALS DIRECTLY INVOLVED IN FESTIVAL MEDICAL RESPONSE

For effective medical preparedness during the festival, a network of nearby government and private health facilities will function in a referral chain, beginning from the nearest primary facility to higher-level referral hospitals. The **FHC Cherthala South** and **St. Sebastian’s Visitation Hospital** are the nearest facilities to the Basilica and serve as the primary immediate support layer.

Level	Hospital Name	Distance from Basilica	Role & Responsibility
On-Site	Medical Aid Post	0 Km	Immediate first aid, triage, and stabilisation of minor injuries/exhaustion.
Primary	FHC Cherthala South	~850 m	Primary field support, base for ASHA and JHI surveillance teams; 24x7 emergency stabilization and bed management
Primary	FHC Mararikulam North	~5–6 km	Supportive field base for surveillance teams and secondary stabilisation.
Primary	CHC Muhamma	~13 km	Block Hub: 24/7 emergency stabilisation and coordinating medical staff deputation.
Secondary	THQH Cherthala	~8 km	First Referral Unit (FRU): Management of fractures, moderate burns, and secondary triage.
Tertiary	Govt. MCH Vandanam	~25–30 km	Final referral centre for specialized trauma care, ICU support, advanced burn management, and drowning-related ICU care

## Private Sector Integration

While the government network leads the response, these private facilities are vital for immediate surgical or ortho interventions due to their proximity to the NH 66 corridor.

Level	Hospital Name	Distance from Basilica	Role & Responsibility
Local Private	St. Sebastian's Visitation Hospital	< 500 m	Immediate local referral for trauma and emergency stabilization.
Multi-specialty Hospital	S.N.M.M. Hospital, Cherthala	~7–8 km	Additional emergency referral support during peak crowd days.
Multi-specialty Hospital	KVM Hospital, Cherthala	~9 km	Backup private referral hospital for emergency cases.
Multi-specialty Hospital	Sacred Heart's Green Garden Hospital	~10 km	High-end emergency referral support during peak crowd days.
Multi-specialty	Kinder Hospital, Cherthala	~10 km	Specialized support for maternal and pediatric emergencies

### *Geospatial Mapping of Health Facilities*

To support effective emergency response and referral coordination, all identified government and private health facilities have been mapped in relation to the St. Andrew's Basilica, Arthunkal. This helps visualize proximity, plan optimal ambulance routes, and identify efficient referral pathways during peak crowd periods. The map also highlights the tiered referral structure, enabling quick decision-making based on distance, case severity, and accessibility.

**HEALTHCARE FACILITIES DISTANCE MAP: ARTHUNKAL BASILICA VICINITY**

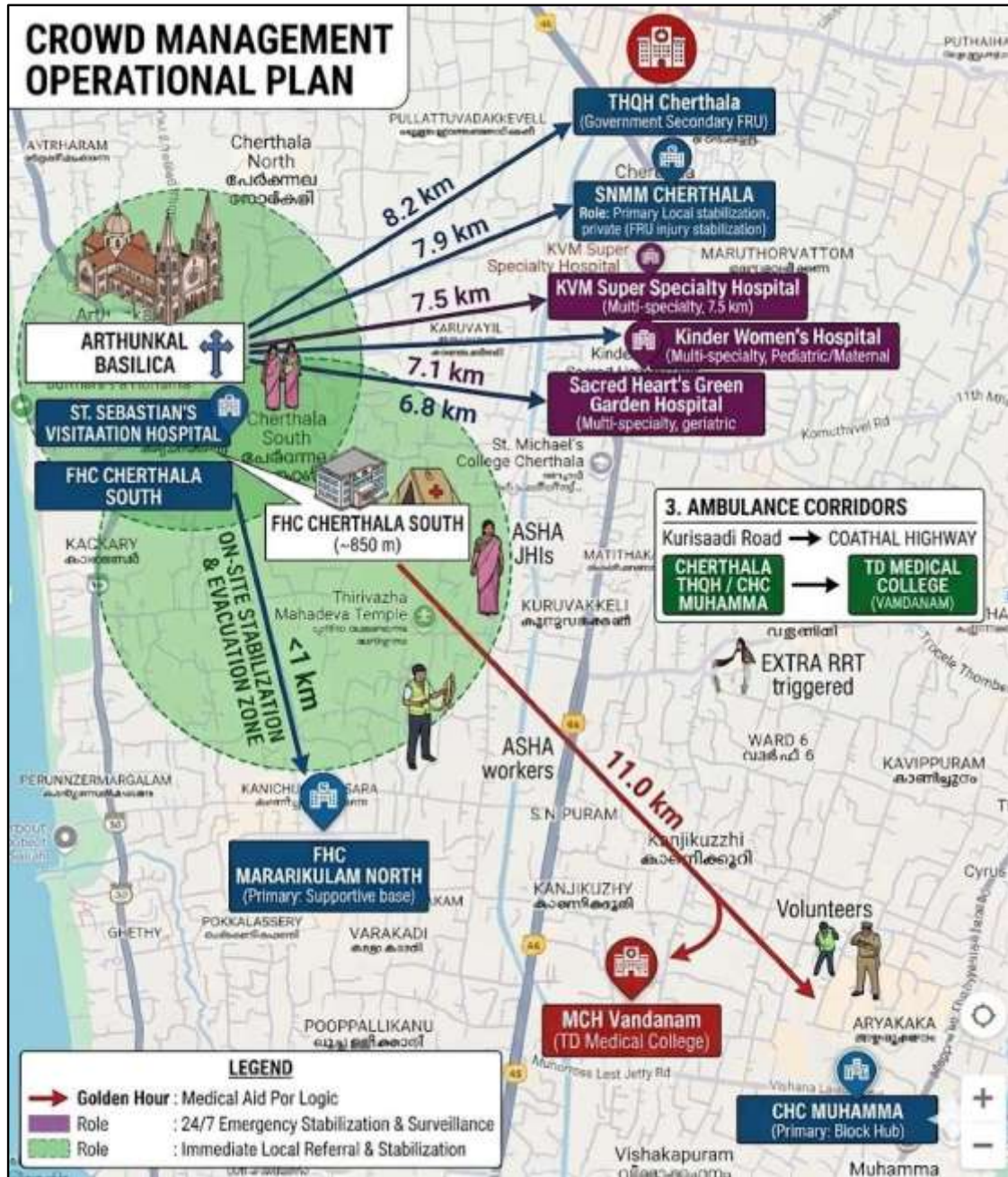


Figure: Geospatial distribution and referral network of health facilities surrounding St. Andrew's Basilica, Arthunkal, during the festival period.

## ON-SITE MEDICAL INFRASTRUCTURE & AMBULANCE DEPLOYMENT

During the Arthunkal St. Andrew's Basilica Feast, emergency medical response will be strengthened through the strategic deployment of ambulances and establishment of Medical Aid Posts (MAPs) at key crowd congregation points within and around the St. Andrew's Basilica, Arthunkal.

### *Geospatial Locations of Ambulances and Medical Aid Posts (MAP)*

**Main Ambulance Hub (Northern Grounds):** Primary standby zone for the ambulance fleet; positioned in the northern part of the church grounds for immediate, unhindered access to the coastal corridor.

**Main Medical Aid Post (Basilica Entrance):** Located at the entry to provide immediate first aid and stabilisation for minor emergencies like exhaustion or fainting.

**Backup Medical Aid Post (Peripheral/Open Ground Area):** A secondary MAP will be established in a nearby open ground/school area to function as an overflow stabilisation centre during peak crowd periods and for pre-referral management.



## **AMBULANCE FLEET: COMPOSITION AND SOURCING**

A total of **5–6 ambulances** will be deployed during peak feast days, sourced from the following units:

### ***Government Ambulances***

Taluk Headquarters Hospital (THQH) Cherthala – 1 ambulance

Community Health Centre Muhamma – 1 ambulance

Community Health Centre Thanneermukkom – 1 ambulance

Family Health Centre Mararikulam North – 1 ambulance

### ***Private Ambulances***

Approximately 2 private ambulances will be arranged for emergencies.

Ambulance Staffing: Every deployed vehicle must be manned by a two-person team: one Trained Driver with localized geographic knowledge and one Emergency Medical Technician (EMT) or Nursing Assistant for en-route patient care.

---

## **PRIMARY EVACUATION ROUTES**

### **The North Exit (Primary):**

Path: Northern Parking Zone → Arthunkal–Cherthala Road → THQH Cherthala

Purpose: Fastest route for emergencies to the Taluk Hospital.

### **Highway Route (Tertiary Referral – MCH):**

Path: Arthunkal Junction → Arthunkal–Cherthala Road → NH 66 → Government Medical College Hospital, Vandanam

Purpose: Dedicated for critical life-support transfers to the Medical College.

### **Local Emergency Diversion Route (Immediate Backup):**

Path: Basilica → Arthunkal–Cherthala Road → St. Sebastian’s Visitation Hospital/FHC Cherthala South

## **MEDICAL AID POST**

---

Each Medical Aid Post established during the festival shall function as a first-line stabilization unit for managing minor illnesses, heat-related conditions, injuries, and emergency cases before referral. The facilities should therefore be arranged in a systematic manner to ensure rapid triage, stabilization, and safe referral.

### ***Number and Deployment of Human Resources***

To maintain 24/7 coverage during the peak 48 hours, staff will be divided into three 8-hour shifts.

#### **Medical Aid Post Staffing (per Post):**

- 1 Medical Officer (Lead)
- 2 Staff Nurses (Triage & Stabilization)
- 2 ASHA Workers / Volunteers (Crowd assistance & ORS distribution)
- 1 JHI/JPHN (Surveillance & Reporting)

### ***Zoning & Infrastructure***

Each Medical Aid Post is designed to function as a high-efficiency stabilization unit. The layout is divided into functional zones:

**Triage Zone:** Color-coded (Red/Yellow/Green) for severity prioritization.

**Stabilization:** Min. 02 folding cots for short-term observation.

**Heat Mitigation:** Dedicated "Cooling Station" with pedestal fans and ice/cold water.

**Sanitation:** Mandatory color-coded biomedical waste bins.

## Inventory: Emergency Support & Diagnostic Kits

To facilitate rapid diagnosis and life-support, each post must maintain the following minimum inventory:

**Diagnostics:** BP Apparatus, Pulse Oximeter, Glucometer, and Thermometers.







**Respiratory Support:** Oxygen Cylinders (B-Type) with flowmeters, Nebulizers, and Ambu-bags (Adult & Pediatric).

**Medication:** Emergency drug kit (Adrenaline, Atropine, Hydrocortisone, Avil, etc.), IV Fluids (NS/RL), and ORS packets.


Each MAP must have colour-coded bins for biomedical waste disposal as per standard infection control protocols. The JHI/JPHN on duty is responsible for maintaining the Patient Line-list, capturing the name, age, diagnosis, and outcome (discharged/referral) for real-time epidemiological tracking.

### Inventory: Emergency Support & Diagnostic Kits

Each post must maintain the following minimum inventory for rapid diagnostics and life-support:


Diagnostics	Respiratory Support	Medication
<ul style="list-style-type: none"><li>BP Apparatus</li></ul>  <p>BP Apparatus    Pulse Oximeter</p>  <p>Glucometer    Thermometers</p>	<ul style="list-style-type: none"><li>Oxygen Cylinders (B-Type)</li></ul>  <p>Flowmeters    Nebulizers</p>  <p>Ambu-bags (Adult &amp; Pediatric)</p>	<ul style="list-style-type: none"><li>Emergency Drug Kit (Adrenaline, Atropine, Hydrocortisone)</li><li>IV Fluids (NS / RL)</li></ul>  <p>IV Fluids (NS / RL)</p>  <p>IV Fluids (NS / RL)</p>

**Biowaste Disposal:** Color-coded bins as per infection control protocols.



**Biowaste Disposal:** Color-coded bins as per infection control protocols.

**Patient Line-list:** JHI/JPHN must log Name, Age, Diagnosis, Outcome



**Patient Line-list:** JHI/JPHN must log Name, Age, Diagnosis, Outcome

## **HOSPITAL PREPAREDNESS & EMERGENCY PROTOCOLS**

During the peak festival period, all health institutions within the Muhamma Block are placed on Red Alert. This transition mandates a shift from standard operating hours to 24-hour emergency readiness for the nearest facility, i.e., FHC Cherthala South.

### ***Base Referral Hospital Detail Plan: FHC Cherthala South***

As the nearest government health facility to the Basilica (approximately 850 metres), FHC Cherthala South is designated as the primary first-line treatment during the Arthunkal Perunnal.

#### ***The following arrangements will be implemented during the festival period:***

**24/7 Functional Status:** The facility will operate round-the-clock throughout the festival period, overriding standard OP hours to manage the constant influx of devotees.

**Shift-Based Staffing:** Duty doctors and staff nurses will be deployed in 8-hour rotations, ensuring continuous clinical coverage and personnel readiness.

**Surge Reinforcement:** Additional staff and nursing staff will be specifically stationed for night-time emergency coverage during peak rituals.

**Dedicated Observation Zone:** Two (02) beds will be exclusively reserved for festival-related patients to facilitate immediate stabilisation and short-term monitoring. Identify a "buffer zone" (like a nearby ward or corridor) that can be converted into a treatment area in case of a mass casualty incident (MCI).

**Strategic Stockpiling:** Emergency medications, IV fluids, oxygen support, and resuscitation kits will be audited and stocked 24 hours in advance. Emergency drug kits and IV fluids will be reviewed daily during the festival period to prevent stock-outs.

**Command & Control:** The **Medical Officer (MO) and Health Inspector (HI)** of Cherthala South will maintain direct administrative and operational supervision over all facility activities.

### ***RAPID RESPONSE TEAM (RRT): FHC CHERTHALA SOUTH***

The Rapid Response Team (RRT) at FHC Cherthala South is a specialized, mobile unit responsible for immediate medical and public health response during emergencies such as mass illness, trauma events, suspected outbreaks, or environmental health threats during the Arthunkal Perunnal.

The RRT will function under the direct supervision of the Medical Officer (MO) and Health Inspector (HI) of FHC Cherthala South and will remain in 24-hour alert mode throughout the festival period.

#### ***Composition of the RRT Team***

The Rapid Response Team will include:

- Medical Officer (Team Lead)
- Staff Nurse
- Junior Health Inspector / Health Inspector
- JPHN / Public Health Nurse
- Field Health Worker / Volunteer (if required)

#### **Response Time & Field Coordination**

The RRT shall ensure a response time of 10–15 minutes to any emergency within the festival zone. Close coordination will be maintained with Medical Aid Posts (MAPs), ambulance teams, Police, and coastal safety units to facilitate rapid access, on-site stabilization, and timely referral. During peak crowd periods, movement of the RRT shall be prioritized through the designated “Green Corridor”, ensuring uninterrupted emergency response across the Basilica premises and beach areas.

### ***Operational Protocol (The "Trigger" Mechanism)***

The RRT at FHC Cherthala South will be activated based on predefined trigger situations reported from the church premises, medical aid posts, or nearby festival areas.

<b>Trigger Category</b>	<b>Specific Indicator (Threshold)</b>	<b>Action Level</b>
Cluster Signal	3+ cases of Acute Diarrhoeal Disease (ADD) from the same food source/ward.	Immediate RRT Launch
Severe Event	A single case of suspected cholera or highly infectious respiratory illness (e.g., H5N1 suspicion).	Immediate Isolation & Investigation
Trauma Surge	5+ major injury cases (e.g., from a crush or fall) arriving at a MAP within a 30-minute window.	Mass Casualty Protocol
Coastal Emergency	Any report of a "near-drowning" or multiple distress alerts from beach congregation zones	Immediate Medical + Coastal Rescue Coordination
Climatic Surge	10+ cases of syncope/heat exhaustion within 1 hour.	Activation of Cooling Zone

### ***Field Responsibilities of the RRT***

Upon activation, the RRT shall:

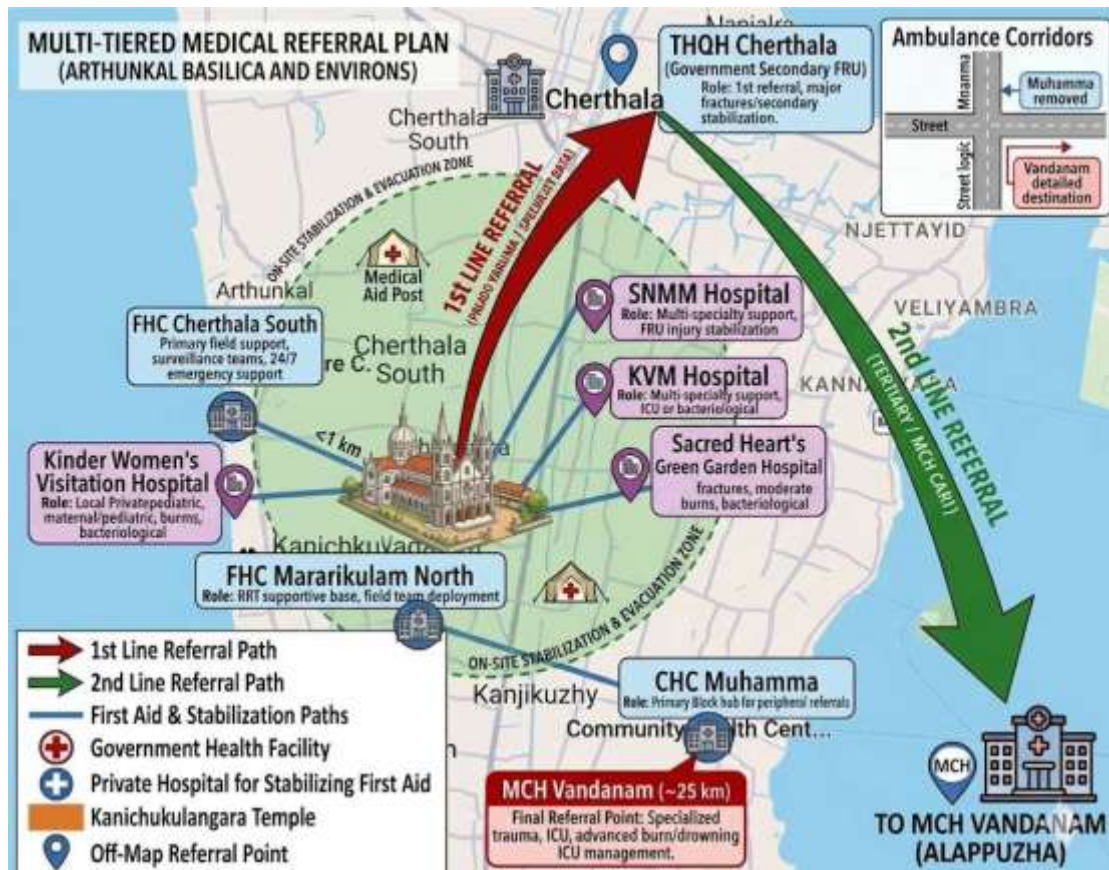
- Conduct on-site clinical assessment and emergency stabilisation.
- Initiate outbreak investigation / syndromic surveillance response and sample
- Coordinate with Medical Aid Posts and ambulance teams for referral
- Ensure sample collection (water/food/clinical) where required
- Implement immediate control measures (chlorination, closure of unsafe stalls, crowd advisories)

### ***Other Hospitals Under Muhamma Block***

While FHC Cherthala South and St. Sebastian's Visitation Hospital serve as the immediate frontline, the entire medical infrastructure of the Muhamma Block is integrated into a secondary support layer. This ensures that the primary facilities are not overwhelmed during mass casualty incidents (MCI). All

government health facilities under Muhamma Block (FHCs, PHCs, and CHCs) will remain in **alert mode**, with the following:

- Increased staff availability
- Readiness to receive referred cases from the festival area
- Coordination with ambulance teams and medical aid posts



**REFERRAL PROTOCOL:** Medical Aid Post → FHC Cherthala South → CHC/THQH → Higher Referral Hospital

## CAPACITY BUILDING & STRATEGIC COORDINATION

Effective disaster preparedness during large religious gatherings depends on timely coordination, capacity building of field staff, and clear communication among all stakeholders. Therefore, a series of coordination meetings and training activities will be conducted at the district level, block level, and facility level prior to the festival.

### *Schedule of Statutory Coordination Meetings*

To ensure a unified command, a three-tier meeting structure is implemented, moving from district-level policy to ground-level execution.

Sl. No	Name of Meeting	Presiding Authority	Key Stakeholders	Proposed Timeline
1	District Level Meeting	District Collector	MLA, DMO (H), Dy. DMO, District Surveillance Officer, Animal Husbandry Department, Police Department (SP), Church Committee President.	30 Days Prior
2	Inter-Sectoral Planning Meeting	Panchayat President	MO, LSGD Secretary, KSEB, KWA, Fire & Rescue, Church Committee.	15 Days Prior
3	Local Health Preparedness Meeting	Medical Officer (FHC Cherthala South)	HI/JHIs, Staff Nurses, MLSPs, ASHA Workers, Ambulance Drivers, Pharmacy Store-keepers.	15 Days Prior
4	Meeting with temple committee	Temple Committee Secretary	Health Inspector, LSGD, Police etc.	15 Days Prior

The primary focus of these sessions is to secure formal SOP approval and inter-district resource mobilization at the Apex level, while the Inter-Sectoral and Local meetings finalize the "Green Corridor" logistics, safety audits (water/electrical), and the strategic deployment of RRT kits and Health Staffs across designated festival area.

## **TRAINING & OPERATIONAL MOCK DRILLS**

Training and mock drills will be conducted to strengthen the preparedness of medical teams and field staff involved in the festival.

The training will include:

- Emergency management of fainting, dehydration, and heat-related illness
- First aid and basic life support (BLS)
- Rapid response during crowd surge or mass casualty incidents
- Communication and referral protocols
- Use of emergency kits and oxygen support
- Roles and responsibilities of RRT members

### **Volunteer and Police Sensitization Programme**

A short sensitization programme will be conducted for temple volunteers and police personnel to improve crowd safety and emergency response during the festival.

The training will include:

- Basic awareness on **crowd psychology** and safe management of high-density areas and choke points.
- **Practical training on stretcher movement** in crowded areas, including safe patient evacuation using a simple “V-shaped” volunteer formation.

This programme will help ensure faster medical response, safer crowd control, and improved coordination during emergencies.

### ***MOCK DRILLS***

A mock drill will be conducted, if feasible, at the temple premises or nearby area to ensure that medical teams, ambulance staff, and volunteers are familiar with evacuation routes, emergency response procedures, and coordination mechanisms.

## **STANDARD OPERATING PROCEDURES (SOP) FOR COMMON POSSIBLE HEALTH HAZARDS**

Large religious gatherings are associated with a higher risk of sudden medical emergencies such as crowd-related injuries, burns, fainting episodes, seizures, and drowning incidents. To ensure rapid and uniform response, the following standardized SOPs will be followed by medical teams, volunteers, and first responders during the festival period.

### ***1. SOP FOR MASS CASUALTY INCIDENTS (MCI) & STAMPEDES***

**Objective:** To ensure rapid and coordinated medical response in the event of crowd congestion, stampede risk, or multiple casualties. In the event of a crowd crush or structural collapse, the goal is "The Greatest Good for the Greatest Number."

#### **IMMEDIATE ACTIONS**

On identification of a crowd crush, stampede risk, or multiple injured persons, the following actions shall be taken immediately:

- Do not run or shout; calm communication shall be maintained through volunteers and public announcement systems.
- Police and volunteers must immediately stop further crowd entry into the affected area.
- Identify injured persons and shift them to a safe zone.
- Create a temporary human corridor for evacuation.
- Inform the nearest medical aid post and ambulance immediately.

#### **MEDICAL MANAGEMENT**

All patients shall be rapidly assessed and classified based on the severity of injury using the **START (Simple Triage and Rapid Treatment) method**. Triage shall be completed within one minute per patient wherever feasible. Priority shall be given to patients with breathing difficulty, severe bleeding, head injury, or unconsciousness. First aid, oxygen support, hemorrhage control, and stabilization shall be initiated immediately before referral.

#### **TRIAGE CATEGORIES**

The triage categories shall be as follows:

---

---

**RED (Immediate):** Critical injuries (airway obstruction, uncontrolled bleeding).

**YELLOW (Delayed):** Serious but non-life-threatening (fractures with stable vitals).

**GREEN (Minor):** "Walking wounded."

**BLACK (Deceased):** No pulse or spontaneous respirations.

---

#### **MANAGEMENT OF HIGH-RISK COMPLICATIONS**

In cases where victims have been trapped for a prolonged period, medical teams shall monitor for features of **crush syndrome**. Early identification and rapid referral shall be ensured. Severe bleeding shall be controlled immediately using pressure dressings or tourniquets wherever required. Oxygen support and IV fluids shall be initiated wherever necessary before referral.

#### **COMMUNICATION AND REFERRAL**

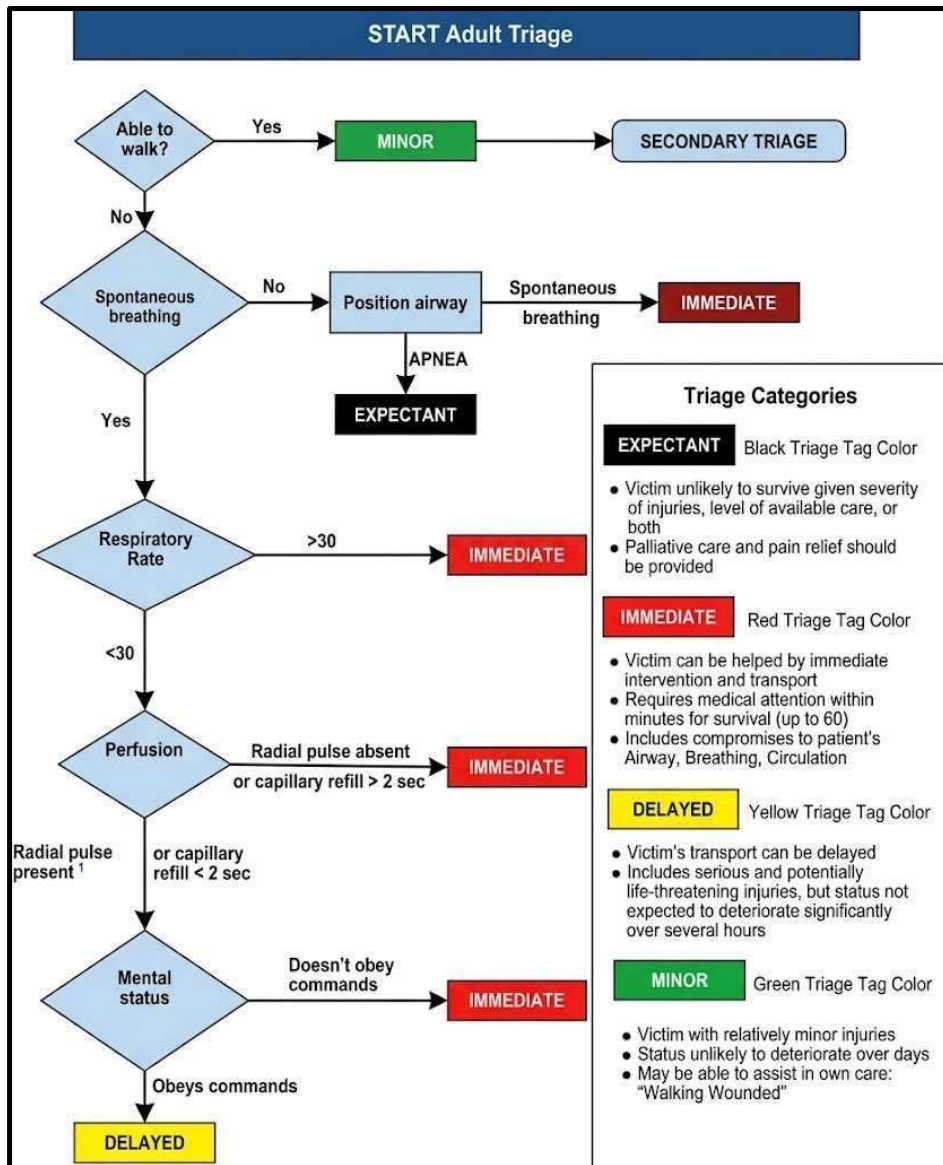
Upon confirmation of a Mass Casualty Incident, a **"Code Red"** alert shall be activated. The Medical Officer in charge of the Medical Aid Post shall immediately inform THQH Cherthala and Medical College Hospital, Vandanam to ensure preparedness at referral centres. Ambulances shall be moved only through the designated green corridor, and patient referral shall be prioritized based on triage category.

#### **DOCUMENTATION AND REPORTING**

All patients managed during the incident shall be recorded in the emergency register at the medical aid post. The number of critical, moderate, and minor cases shall be documented and reported to the Block Medical Officer and District Control Room without delay.

---

STANDARD TRIAGE COLOUR CODING SYSTEM FOR MASS CASUALTY INCIDENTS



## 2. SOP FOR BURNS AND FIRE-RELATED INJURIES

**Objective:** To ensure immediate and correct first-aid management of burn injuries occurring during the festival due to fireworks, oil lamps, cooking areas, or accidental fire exposure, and to ensure timely referral of serious cases.

### IMMEDIATE ACTIONS

- Remove the person from the source of fire.
- Pour **clean running water for 15–20 minutes** over the affected area.
- Do not apply oil, turmeric, toothpaste, or any local remedies.
- Cover the burn area with a clean cloth or sterile dressing.
- Refer immediately if burns are extensive.

### MEDICAL RESPONSE

The patient shall be **assessed for the severity of the burn** and managed accordingly. Pain relief shall be provided and the wound shall be dressed using sterile materials. In cases where the **burn involves more than 10% of the body surface area**, intravenous fluids shall be initiated as early as possible.

IV Ringer's Lactate shall be started in moderate to severe burn cases as per standard burn-management protocols. Vital signs shall be monitored continuously, and the patient shall be prepared for early referral if required.

### ASSESSMENT OF AIRWAY AND BREATHING

All burn patients shall be assessed for signs of **inhalation injury**, especially in cases involving fire, smoke exposure, or burns in enclosed spaces. Warning signs such as singed nasal hair, soot around the mouth or nose, hoarseness of voice, or difficulty in breathing shall be treated as medical emergencies.

If inhalation injury is suspected, high-flow oxygen shall be administered immediately, and the patient shall be referred without delay to a higher centre.

### REFERRAL PROTOCOL

All patients with facial burns, circumferential burns, burns involving the hands, feet, or eyes, and burns covering more than 10% of the body surface area shall be referred immediately to higher centres. The primary referral centre for severe burn cases shall be Medical College Hospital, Vandanam.

Patients with minor burns may be treated at the medical aid post or the nearest health facility after proper assessment.

**DOCUMENTATION AND REPORTING**

All burn cases reported during the festival shall be recorded in the emergency register at the medical aid post. The severity of the burn, treatment provided, and referral details shall be documented and reported to the Block Medical Officer.

**STANDARD BURN FIRST AID GUIDELINES**

 <b>STANDARD 'DO' ACTIONS</b>	 Hold under cool running water for 20 minutes	 Use sterile NON-STICK bandages	 Take an appropriate pain reliever	 Apply burn ointment after 1 hour (as needed)
 <b>STANDARD 'DON'T' ACTIONS</b>	 Don't apply oil or butter	 Don't apply toothpaste	 Don't apply mustard, pickles, or eggs	 Don't use ice directly

### **3. SOP FOR FAINTING & SYNCOPE (VASOVAGAL/HEAT)**

**Objective:** To ensure early recognition and safe management of fainting (syncope) cases, which are common during large gatherings due to prolonged standing, heat exposure, dehydration, and reduced venous return.

#### **IMMEDIATE ACTIONS:**

- Lay the patient flat on their back (supine).
- Elevate the legs 12 inches (30 cm) above the level of the heart. This utilizes gravity to increase venous return to the heart and brain.
- Loosen tight clothing around the neck and waist.
- Ensure adequate ventilation / move to a shaded area.
- Give ORS / water once the person regains consciousness.

#### **MEDICAL RESPONSE**

The patient's pulse and breathing shall be checked immediately. Most patients regain consciousness within a short period once placed in the proper position. After the patient regains consciousness, small quantities of drinking water or ORS may be given, provided the patient is fully conscious and able to swallow.

The patient shall be observed for a few minutes at the medical aid post, especially if the episode occurred in a crowded or hot environment. Vital signs shall be checked before allowing the person to leave.

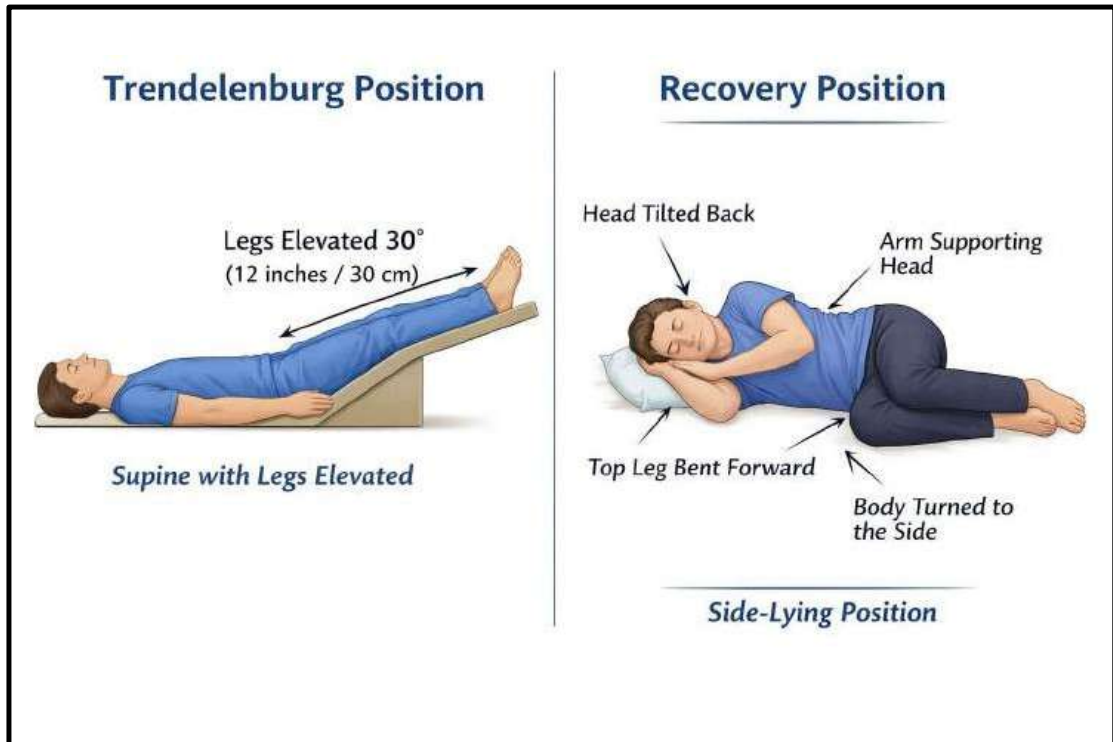
#### ***REFERRAL PROTOCOL***

The patient shall be referred to the nearest health facility if any of the following are present:

- Loss of consciousness lasting more than a few minutes
- Repeated fainting episodes
- Associated injury due to fall
- Abnormal pulse or breathing
- Suspected heat exhaustion or heat stroke

#### **DOCUMENTATION AND REPORTING**

All fainting cases managed at the medical aid post shall be recorded in the emergency register. If multiple fainting cases are reported within a short period, the medical officer shall assess the possibility of heat-related illness and initiate preventive measures such as ORS distribution and crowd ventilation.



Correct Position During Fainting (Supine Position with Legs Elevated) and Recovery

#### 4. SOP FOR SEIZURE / FITS

**Objective:** To ensure safe, prompt, and standardized management of seizure (fit) cases during mass gatherings, while preventing injury and complications such as aspiration and prolonged seizures.

##### COMMON SITUATIONS IN MASS GATHERINGS

Seizures may occur due to:

- Heat exposure / dehydration
- Exhaustion
- Pre-existing epilepsy
- Stress, crowding, or lack of sleep
- Fever or underlying illness

##### IMMEDIATE ACTIONS:

- Ensure the crowd does not panic or gather closely around the patient.
- Lay the person on one side (recovery position).
- Remove nearby objects to prevent injury.
- Do not put anything inside the mouth.
- Do not attempt to hold the tongue or forcefully open the mouth.
- Loosen tight clothing around the neck.
- Do not hold the person tightly.
- Wait until the seizure stops.

##### MEDICAL RESPONSE

Once the seizure stops, the Medical Team at the Medical Aid Post shall take the following actions:

The patient should be kept in the **lateral (side-lying) position** to prevent aspiration of saliva or vomit into the lungs. Airway, breathing, and pulse should be checked immediately. Most patients may remain confused, drowsy, or disoriented for a few minutes after the seizure (post-ictal phase), and this should not be mistaken for another emergency unless symptoms persist.

The patient should be shifted to the **Medical Aid Post** for observation and monitoring. Oral fluids may be given only after the patient has fully regained consciousness and is able to swallow safely.

##### PHARMACOLOGICAL MANAGEMENT (BY MEDICAL OFFICER ONLY)

If the seizure **lasts more than 5 minutes** or repeated seizures occur without recovery of consciousness, the condition shall be treated as **Status Epilepticus**, which is a medical emergency.

In such cases, the Medical Officer shall administer:

- **Inj. Diazepam (0.1 mg/kg IV/IM)**
- **OR**
- **Midazolam** as per emergency kit protocol

Immediate referral to the nearest hospital shall be arranged through the designated ambulance service.

#### **REFERRAL CRITERIA**

The patient must be referred immediately if:

- Seizure lasts more than 5 minutes
- Repeated seizures occur
- Patient does not regain consciousness
- Head injury occurs during the seizure
- First-time seizure
- Pregnant woman / elderly patient
- Breathing difficulty after seizure

## 5. SOP FOR DROWNING / NEAR-DROWNING INCIDENTS

**Objective:** To ensure rapid, safe, and standardized response to drowning and near-drowning incidents during mass gatherings and to prevent death, brain injury, and delayed complications.

### BACKGROUND

Drowning and near-drowning incidents are possible during mass gatherings conducted near Arthunkal beach, rivers, canals, and other water bodies. Such incidents commonly occur due to overcrowding near the water, accidental slipping, panic situations, or attempts by untrained persons to rescue victims. Even when the person appears to have recovered after rescue, there is a significant risk of delayed respiratory complications (secondary drowning / delayed pulmonary edema). Hence, all such cases require immediate medical attention and referral.

### POSSIBLE SCENARIO

Temple ponds (Ambala Kulams), crowd near water bodies, accidental slipping.

### IMMEDIATE ACTIONS

- Use a pole or throw a float; do not enter the water unless trained in water rescue.
- Once the person reaches the edge, remove them safely with the help of available staff.
- If a diving injury is suspected, maintain the head and neck in a neutral position while removing the person from the water.
- Check breathing immediately.
- If the person is unconscious but breathing, place in the recovery position.
- If the person is unresponsive and not breathing, initiate CPR (30:2 ratio) immediately. Unlike standard cardiac arrest, in drowning, start with 5 rescue breaths.
- Remove wet clothes and cover with dry blankets to prevent hypothermia.

### MEDICAL RESPONSE

All drowning / near-drowning victims must be treated as **medical emergencies**, even if the person appears normal after rescue.

The Medical Team shall:

- Check airway, breathing, and circulation.
- Provide **oxygen support** immediately.

- Monitor pulse, breathing, and level of consciousness.
- Observe breathing difficulty, cough, chest discomfort, or altered consciousness.

#### **REFERRAL PROTOCOL**

All drowning / near-drowning cases must be referred to the nearest hospital without delay, even if the patient appears recovered.

This is necessary due to the risk of:

- Delayed pulmonary edema
- Aspiration pneumonia
- Secondary drowning
- Hypoxia-related complications

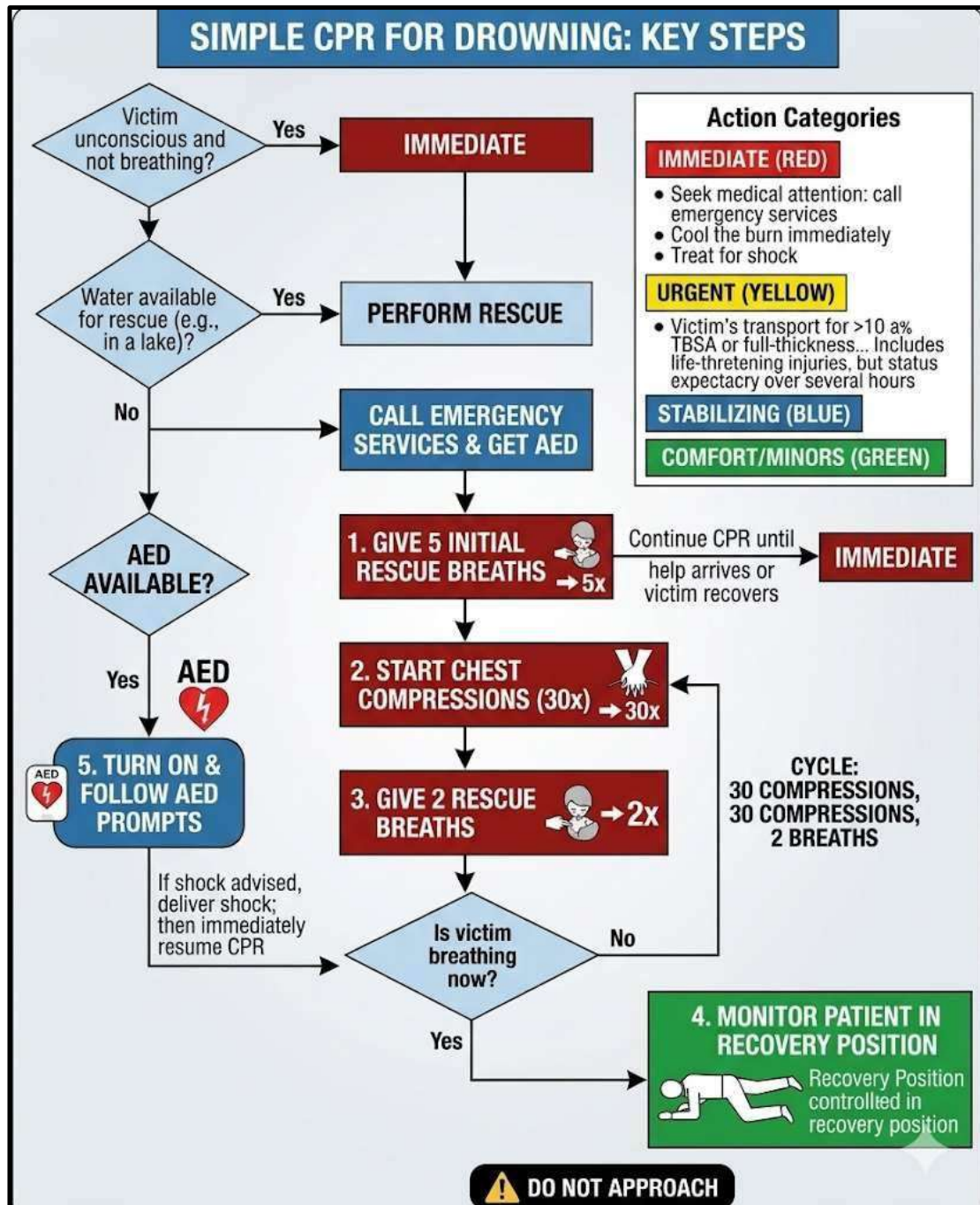
During transport:

- Continue oxygen support
- Monitor breathing and consciousness continuously
- Inform the referral hospital in advance

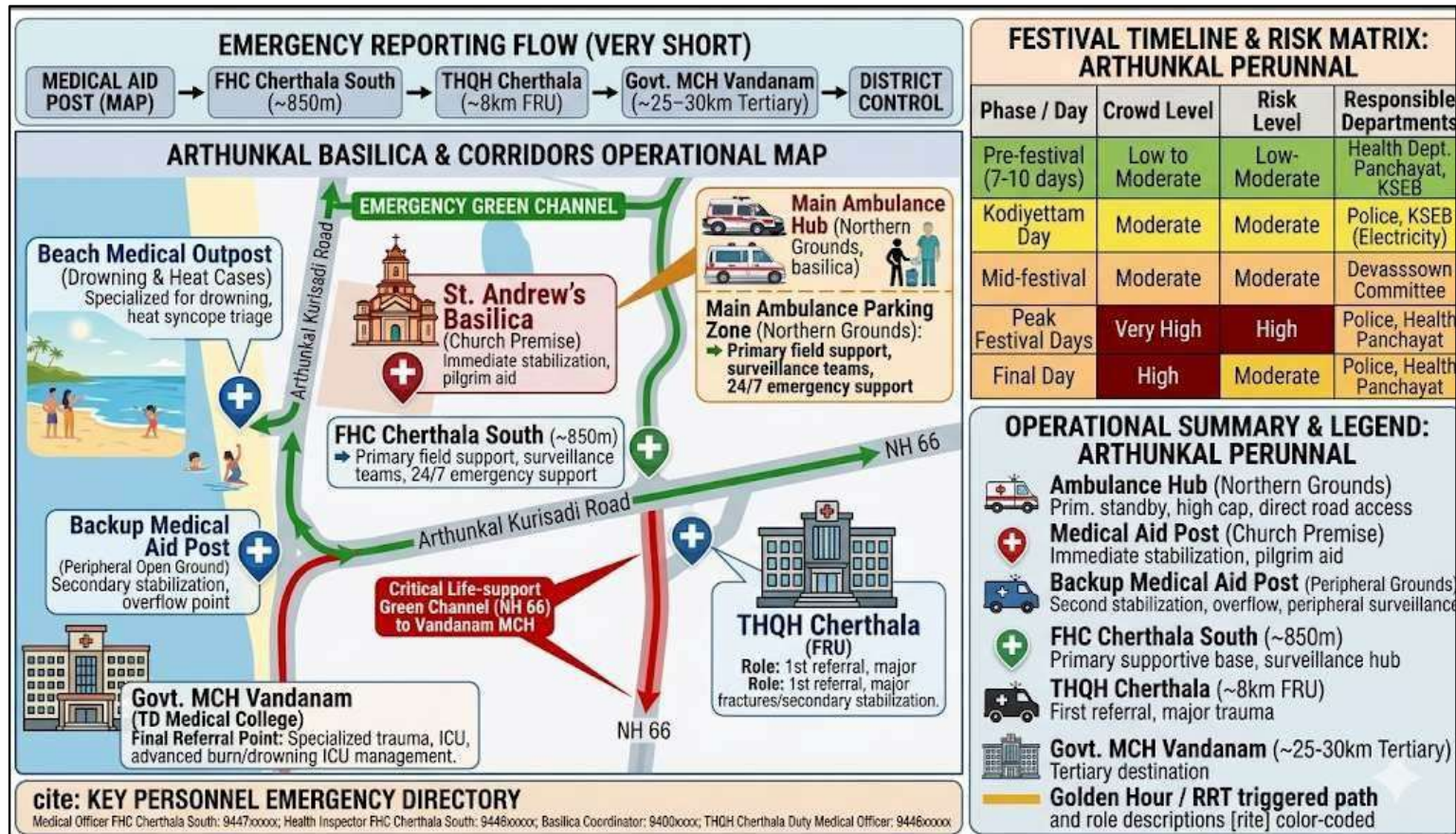
#### **STANDARD REPORTING MANDATE**

Every drowning / near-drowning incident managed during the mass gathering must be entered in the Patient Line-list by the JHI on duty and reported to the Block Medical Officer immediately.

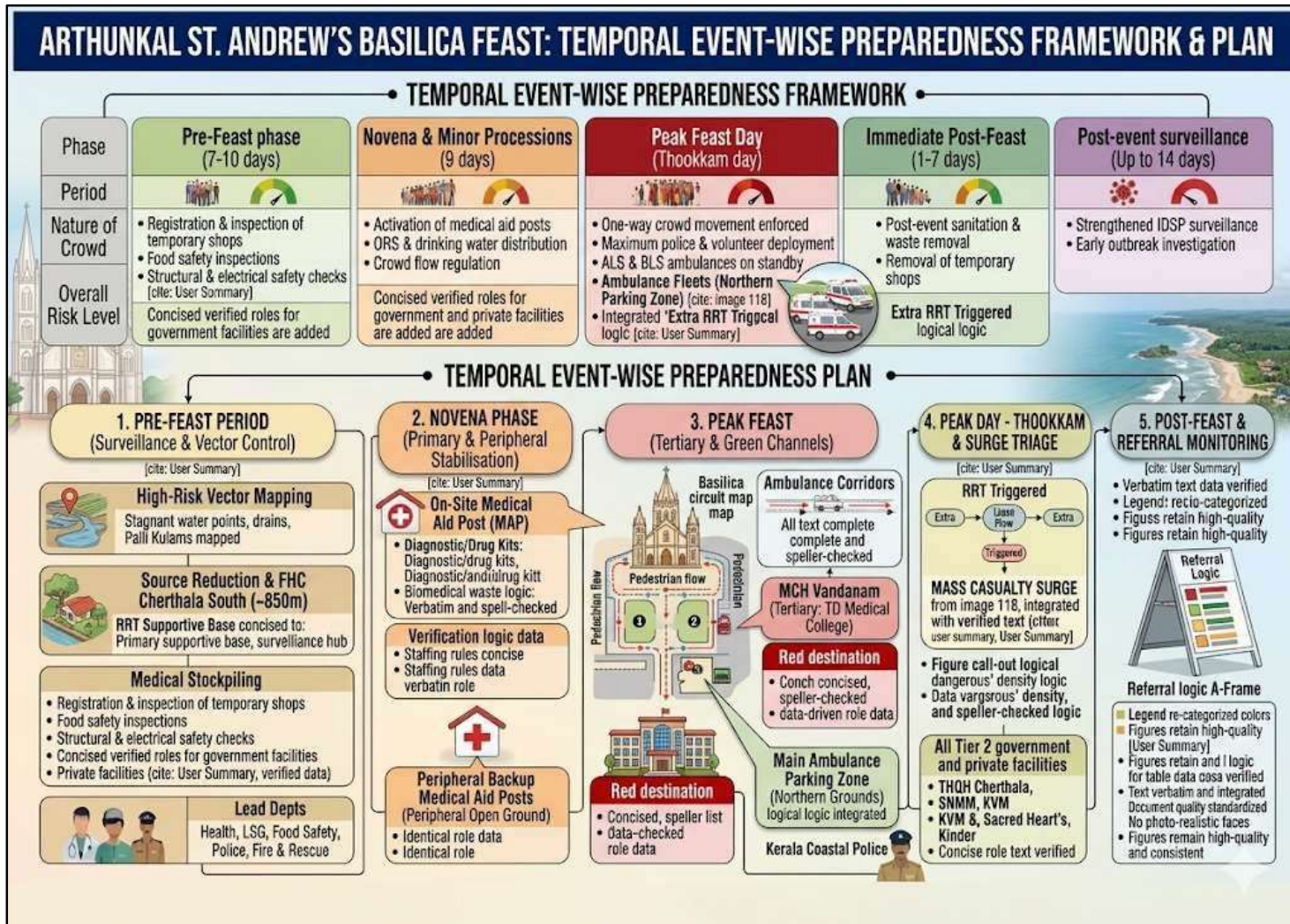
DROWNING RESUSCITATION PROTOCOL



OPERATIONAL CONSOLIDATION & QUICK-REFERENCE SUMMARY



OPERATIONAL CONSOLIDATION & QUICK-REFERENCE SUMMARY



## CONCLUSION

The Arthunkal St. Andrew's Basilica Feast is a major pilgrimage event in the coastal belt of Alappuzha, attracting a large number of devotees from across Kerala and nearby regions. Given the scale and coastal setting, this preparedness plan focuses on risk identification, inter-departmental coordination, strengthening of health facilities, and ensuring timely emergency response during the festival period.

Special emphasis has been placed on public health preparedness through preventive interventions, structured medical aid deployment, disease surveillance, and emergency response systems. The readiness of FHC Cherthala South as the primary first-line treatment centre, and higher referral centres, forms the backbone of the medical response system. The activation of RRT, establishment of Medical Aid Posts (MAPs), coastal safety measures, and ambulance network with designated evacuation routes are critical components ensuring timely management of emergencies. Capacity-building initiatives, inter-departmental coordination meetings, and mock drills further enhance the preparedness and responsiveness of all stakeholders involved.

In addition to immediate response mechanisms, this plan incorporates a proactive public health approach through strengthened disease surveillance, environmental sanitation, and geospatial mapping of healthcare resources. The integration of coastal safety protocols, crowd-risk monitoring during high-density rituals such as the Urulal, Processions, and Beach Congregation, and the establishment of an Emergency Green Channel ensure efficient patient movement and clinical decision-making even during peak congestion periods. This preparedness framework not only addresses the operational needs of the current festival but also serves as a scalable model for managing future large-scale coastal mass gatherings in the district.

Through the coordinated efforts of the Health Department, District Administration, Police, Fire & Rescue Services, Local Self-Government Departments, and Church authorities, this plan aims to ensure a safe, healthy, and well-managed Arthunkal Perunnal.

# KANICHUKULANGARA DEVI TEMPLE FESTIVAL

Muhamma Block

---



## PREAMBLE

The Kanichukulangara Devi Temple Festival attracts thousands of devotees every year, with the crowd peaking during the *Chikkara*, *Pongala*, and *Thookkam Chadu* rituals. The festival concludes on the day of *Thiruvonam* in the Malayalam month of *Kumbham* (February–March). This SOP outlines a multi-tiered public health strategy to ensure zero mortality, food safety, and rapid medical evacuation during the festival period.

---

## FESTIVAL PROFILE

**Name of Festival:** Kanichukulangara Devi Temple Festival

**Location:** Mararikulam North Panchayat / Ward: 5

---

**Festival Period:** It is a 21-day festival. The main festival is celebrated on the day of *Thiruvonam* in the Malayalam month of *Kumbham*, which usually falls in Jan-Feb.

**Major Event Days:** Kodyettam (first day of the festival), Pattum Thali, and the last two days of the festival (including Aarattu).

**Nearest Health Facility:** FHC Mararikulam North (400m)

**Nearest Referral Hospital:** THQH Cherthala (8.2 Km)

---

## **GEOGRAPHICAL CONTEXT**

The Kanichukulangara Devi Temple is located in Mararikulam North Grama Panchayat in Kanjikuzhy Block Panchayat, Alappuzha district. The temple is situated close to the coastal belt and lies approximately 7–8 km from Cherthala town and about 17–18 km from Alappuzha town.

The temple is surrounded by narrow approach roads, residential areas, and temporary gathering spaces that become highly congested during major rituals such as Pongala, Chikkara, and Thookkam.

**Crowd Density:** The temple grounds and the immediate "Temple Road" are the highest risk areas for overcrowding.

**Accessibility:** The site is approximately 3 km west of the National Highway (NH 66), which is the primary artery for emergency medical evacuation.



## KEY RITUALS AND MASS GATHERING POINTS

The Kanichukulangara Temple Festival involves large-scale temporary mass gatherings, both inside the temple premises and along the surrounding roads and residential areas. To plan for medical preparedness, the following rituals are identified as high-density gathering events:

**Chikkara Kottikkal:** A 21-day ritual where children stay at the temple as representatives of the Goddess, requiring sustained public health surveillance for the resident children and their families.

**Thookkam (Garudan Thookkam):** A major ritual performed on the final night, starting at midnight and continuing until the early morning hours, creating a high-risk window for injuries and medical emergencies.

**Pongala & Thalappoli:** Large-scale offerings involving thousands of women, primarily centred around open flames and outdoor cooking, which increase the risk of heat-related illnesses and fire hazards.

**Processions & Fireworks:** The final days feature grand processions and spectacular fireworks displays, which are the peak periods for crowd density.



## RISK MITIGATION OF GATHERING

Mass gatherings pose multiple public health risks due to overcrowding, prolonged exposure to heat, food distribution activities, and movement of people from different locations. Based on previous experiences and public health observations, the following risks have been identified.

### *Possible Health Risks*

For effective planning and response, risks are categorized based on their nature. This allows the Health Department to coordinate with the specific sister departments (Police, KSEB, Fire Force) effectively.

- 1. Physical & Structural Risks:** Stampedes, structural collapse of temporary stages (*pandal*), drowning in temple ponds, and road traffic accidents.
- 2. Fire & Electrical Risks:** Short circuits from heavy decorative lighting, fire in "Annadanam" (mass feeding) kitchens, and firework mishaps.
- 3. Biological & Public Health Risks:** Outbreaks of food poisoning, water-borne diseases (Cholera, Typhoid), and vector-borne diseases (Mosquito-related) due to overcrowding and poor waste management.
- 4. Environmental Risks:** Heat stress, dehydration, heavy unseasonal rain, slippery surfaces due to slush, and increased risk of injuries among elderly devotees.
- 5. Chemical / Food Safety Risks:** Use of artificial colours, unsafe cooking oil, and improper food storage in temporary food stalls leading to food poisoning.

### *Phase-wise Risk Identification*

The health risks associated with the festival are not uniform throughout the festival period. Therefore, the risks have been analyzed in three phases: before the festival, during the festival, and after the festival. Each phase presents different public health challenges and requires specific preparedness and response measures to ensure the safety of devotees and the surrounding community.

### ***Phase-wise Risk Assessment and Response Framework***

Based on field observations, previous festival experiences in the block, and standard public-health risk assessment for mass gatherings, the following phase-wise risk assessment and response framework has been developed. This framework clearly identifies the responsible department for each risk and defines the specific role of the health department in prevention, preparedness, and response.

<b>Phase</b>	<b>Identified Risk</b>	<b>Potential Impact</b>	<b>Primary Department Responsible</b>	<b>Health Dept. Role</b>
<b>Pre-Festival</b>	Poor Sanitation/ Waste	Vector breeding (Mosquitoes)	Local Self Govt. (Panchayat)	Source Reduction & Larviciding
	Unsafe Water Source	Water-borne outbreak	Kerala Water Authority (KWA)	Super-chlorination & RC Testing
	Electrical Hazards	Fire / Electrocution	KSEB / Fire & Rescue	Safety Audit Participation
	Absence of ambulance arrangements	Delay in referral of emergency cases	Health Department / Emergency Medical Services	Coordination and preparedness
<b>During the festival</b>	Crowd Surge / Stampede	Mass Casualty Incident	Kerala Police	Triage & Emergency Response

	Food Contamination	Mass Food Poisoning	Food Safety Dept, Health Dept	Medical Aid Post Readiness, Regular Inspections
	Heat Exhaustion	Syncope (Fainting), Heat Stroke	Health Department	ORS Corners & Cooling Zones, Referrals
	Communicable Diseases (fever, respiratory infections)	Localised disease spread	Health Department	Monitoring of fever and diarrhoeal cases, rapid response if needed
	Fire accidents due to lamps, fireworks, electrical faults	Burns and mass casualty	Fire and Rescue Services, Police	Emergency medical support
	Fainting and collapse among elderly pilgrims	Medical emergencies	Health Department	Immediate medical care
<b>Post-Festival</b>	Accumulated Waste	Risk of communicable diseases	LSGD / Sanitation Workers	Fever Surveillance & Disinfection
	Mosquito breeding due to stagnant water	Risk of vector-borne diseases	Panchayat / Health Department	Source reduction and anti-larval activities

	Contaminated water sources due to heavy crowd use	Water-borne diseases	Kerala Water Authority / Panchayat	Chlorination and water quality monitoring
--	---	----------------------	------------------------------------	---

## TEMPORAL EVENTS AND TIMELINE

Mass gatherings such as the Kanichukulangara Temple Festival do not pose uniform risk throughout the festival period. The level of public health risk varies depending on the type of ritual, expected crowd size, time of the event, location, and the participation of vulnerable groups such as elderly devotees and children. The festival is conducted during the Malayalam month of Kumbham (February–March), beginning with Kodiyettam (flag hoisting) and ending with Aarattu (ritual bath of the deity), with several high-density events taking place over nearly three weeks.

Since peak crowds occur only on selected ritual days, a temporal event-wise plan is essential to ensure timely deployment of ambulances and health personnel, zero-hour preparedness before major rituals, and effective coordination among the Health Department, Police, Fire & Rescue Services, and other departments.

### *PHASE 1 – PRE-FESTIVAL PREPAREDNESS PHASE*

This is the "Window of Opportunity" for the Health Department to ensure the environment is safe before the crowd arrives.

---

**Period:** 7–10 days before Kodiyettam

**Nature of Crowd:** Gradual increase due to temple visits, stall preparation, temporary structure work

**Overall Risk Level:** Low to Moderate

---

Component	Details
-----------	---------

Major Activities	Setting up of temporary stalls, Pandal construction, lighting installation, and arrival of temporary residents/workers.
Key Risks	<ol style="list-style-type: none"> <li>1. Food-borne illness from unregulated vendors</li> <li>2. Electrical accidents from temporary wiring</li> <li>3. Mosquito breeding due to stagnant water</li> <li>4. Unsafe drinking water sources</li> <li>5. Poor sanitation arrangements</li> </ol>
<b>PREPAREDNESS MEASURES</b>	
Food Safety Measures	<p><b>Hotel Inspections:</b> Intensive sanitation audit of all permanent and temporary hotels/eateries within a 2 km radius.</p> <p><b>Water Sample Testing:</b> Collection of water samples from major hotels, food establishments, and the temple premises for bacteriological testing.</p> <p><b>Health Cards for Food Handlers:</b> Mandatory issuance of health cards to all temporary food handlers.</p> <p><b>Safe Food Practices:</b> Ensuring safe food storage and the use of clean water for cooking in all food stalls.</p> <p><b>Waste Disposal from Food Stalls:</b> Ensuring proper waste disposal and maintenance of sanitation around food stalls.</p>

Sanitation & Waste Management	<p><b>Waste Segregation:</b> Installation of color-coded bins at source in collaboration with Haritha Karma Sena.</p> <p><b>Mobile Toilet Arrangements:</b> Identification of suitable locations for mobile toilets in coordination with the Panchayat.</p> <p><b>Fecal Sludge Management:</b> Pre-registration of authorized vacuum tankers for scheduled fecal waste collection from temporary toilets to prevent open dumping.</p>
Water Safety Measures	<p><b>Temple Pond Cleaning:</b> Cleaning and chlorination of temple ponds before the start of the festival.</p> <p><b>Super-chlorination:</b> Super-chlorination of water storage tanks, Oottupura tanks, and other major water sources within the temple premises.</p> <p><b>Safe Drinking Water Arrangements:</b> Advance coordination with drinking water suppliers to ensure availability of safe potable water during the festival.</p> <p><b>Pre-festival Water Testing:</b> Periodic water-quality testing during the pre-festival period.</p>
Vector Control Measures	<p><b>Pre-festival Source Reduction:</b> Source reduction activities to be carried out 7–10 days before the festival.</p> <p><b>Anti-larval Measures:</b> Anti-larval activities in water-logging areas and the surroundings of the temple premises.</p> <p><b>High-risk Area Monitoring:</b> Special attention to temple ponds, drainage areas, and nearby construction sites.</p>

Medical Preparedness	<p><b>Strategic Positioning of Medical Aid Posts:</b> Medical aid posts to be placed near high-risk zones, with first-aid supplies for burn injuries and electrical shock kept ready.</p> <p><b>Training of Health Staff and Volunteers:</b> Training in the immediate management of burns, fainting, and electrical shock cases.</p>
Disease Surveillance Preparedness	<p><b>Identification of Reporting Health Facilities:</b> Identification of the nearest reporting health facilities for rapid reporting of fever, diarrhoea, and suspected outbreaks.</p> <p><b>Availability of Essential Supplies:</b> Ensuring availability of ORS, IV fluids, and basic emergency medicines at nearby health centres.</p> <p><b>Orientation of Health Staff:</b> Orientation of health staff for early reporting of unusual health events during the festival period.</p>
<b>Lead Depts</b>	<b>Health, LSGD, Food Safety, KSEB, KWA.</b>

This phase is mainly a preparation period but is extremely important from a public health perspective because most preventable risks (vector breeding, unsafe food stalls, poor sanitation, and unsafe water sources) originate during this stage.

#### ***Coordination Meeting Before Festival***

A joint coordination meeting will be conducted before the start of the festival with representatives from the temple committee, Health Department, Panchayat, Police, Fire & Rescue Services, Electricity Department (KSEB), Kerala Water Authority (KWA), and the Food Safety Department. The purpose of the meeting is to review the overall preparedness plan, identify high-risk areas within and around the temple premises, and finalise the locations of medical aid posts, ambulance positioning, sanitation facilities, and emergency response mechanisms.

#### ***Public Health Awareness***

Public-health awareness activities will be carried out in the pre-festival period to reduce preventable illnesses during the festival. Information on safe drinking water, safe food consumption, personal hygiene, and early reporting of symptoms such as fever, diarrhoea, and fainting will be communicated through public announcements and display boards in the temple premises. In addition, temporary food handlers and stall workers will be sensitized on hygienic food preparation, safe water use, and proper waste disposal to prevent food-borne diseases during the festival.

**Sample Public Health Awareness Notice:**



**Fig:**

A public-health awareness notice issued by the FHC Mararikulam North for the current year is attached below as a sample. The notice includes instructions to the public on hygiene practices, safe food and water use, prevention of mosquito breeding, and early reporting of illness during the festival period.

**PHASE 2 – RESIDENT & RITUAL BUILD-UP PHASE**

This covers the unique 21-day period where children stay at the temple. Crowd density begins to increase during this period, especially during evening rituals and temple visits. The health system should transition from preparation mode to active monitoring mode during this phase.

**Period:** Jan 27 – Feb 13 (Days 1–18 of the festival)

**Nature of Crowd:** Resident children (*Chikkara*), parents, and daily local devotees.

**Overall Risk Level:** Moderate to High (sustained risk due to continuous inflow of devotees).

---

Component	Details
Major Activities	Chikkara Kottikkal (children staying in the temple), the Pattum Thali ritual, and daily cultural programs.
Key Risks	<ol style="list-style-type: none"><li>1. Food-borne illness due to temporary food stalls</li><li>2. Communicable diseases such as fever, diarrhoea, and respiratory infections</li><li>3. Fainting and dehydration due to long waiting hours</li><li>4. Mosquito breeding due to crowd movement and water stagnation</li><li>5. Minor injuries among children staying in the temple</li><li>6. Electrical accidents from temporary wiring</li><li>7. Sanitation problems due to gradual crowd increase</li></ol>
<b>PREPAREDNESS &amp; RESPONSE MEASURES</b>	

---

<p>Public Health Surveillance</p>	<p><b>Daily Symptom Monitoring:</b> Daily monitoring of fever, diarrhoea, vomiting, respiratory symptoms, and festival-related illnesses such as dehydration, fainting, heat exhaustion, and minor injuries in and around the temple area.</p> <p><b>Monitoring of Chikkara Children:</b> Special attention to children staying in the temple during Chikkara Kottikkal, as they remain in a closed environment for several days.</p> <p><b>Rapid Reporting of Clusters:</b> Immediate reporting of any cluster of illness to the block level.</p>
<p>Food Safety Monitoring</p>	<p><b>Daily Inspection of Food Stalls:</b> Daily inspection of temporary food stalls and nearby hotels in and around the festival area. Daily night inspection of food stalls conducted by the Block team.</p> <p><b>Food Preparation Monitoring:</b> Monitoring of food preparation areas, water used for cooking, and cleanliness of utensils.</p> <p><b>Enforcement of Hygiene Standards:</b> Immediate closure of unsafe food stalls if hygiene standards are not maintained.</p>
<p>Water Safety &amp; Sanitation</p>	<p><b>Monitoring of mobile toilets</b> and sanitation facilities to prevent overflow and contamination.</p> <p><b>Daily waste collection</b> in coordination with the Panchayat and Haritha Karma Sena.</p>
<p>Medical Preparedness</p>	<p><b>Medical Aid Post:</b> Establishment of at least one medical aid post inside the temple premises.</p> <p><b>Availability of Essential Supplies:</b> Ensuring availability of ORS, basic medicines, and first-aid supplies.</p> <p><b>Referral Hospital Identification:</b> Identification of referral hospitals for emergency cases.</p>

	<b>Ambulance Readiness:</b> Ensuring ambulance readiness during peak evening hours.
Public Awareness Activities	<p>Public announcements on safe drinking water and early reporting of illness.</p> <p>Awareness among devotees regarding dehydration, fainting, and overcrowding risks.</p> <p>Health education for food handlers and volunteers working in the temple premises.</p>
Medical Strategy	<p><b>Daily Health Desk:</b> At the temple for morning check-ups of resident children.</p> <p><b>Isolation Protocol:</b> Identifying a room to isolate any child showing fever/rash.</p>
Surveillance Focus	Pediatric infections, Skin rashes, Fever clusters.
Lead Departments	<b>Health Department, LSGD, Food Safety Department, Police, KSEB, KWA, and Haritha Karma Sena.</b>

### ***Health Monitoring of Special Population***

The *Chikkara Kottikkal* ritual involves a high-density, closed-environment stay for several hundred children over 21 days. This congregational living significantly increases the risk of rapid transmission of communicable diseases. The Health Department will implement a **Daily Pediatric Syndromic**

**Surveillance** protocol. A dedicated team (JHI/JPHN) will conduct morning rounds to monitor for fever, respiratory distress, and skin rashes. Special attention will be given to early signs of contagious infections like Varicella (Chickenpox), Hand, Foot, and Mouth Disease (HFMD), and Conjunctivitis. Any child showing symptoms will be immediately moved to a pre-designated **Temporary Isolation Room** within the temple premises for medical evaluation and to prevent a cluster outbreak. Furthermore, a daily log of minor injuries (abrasions/slips) will be maintained to identify any structural hazards within the children's stay area.

### ***Surveillance of Migrant Workers and Temporary Shopkeepers***

The festival attracts a significant number of migrant workers and temporary shopkeepers from other districts and states who set up stalls for the 21-day period. This population often stays in makeshift, overcrowded accommodations with limited access to sanitary facilities, making them vulnerable to water-borne diseases and a potential source of imported infections. Periodic screenings will be conducted to identify any cases of Acute Diarrheal Disease (ADD) or fever. By monitoring this group, we ensure that the "Hidden Population" of the festival is included in the district's overall biosurveillance framework, preventing localized outbreaks from spreading to the visiting devotees.

### PHASE 3 – PEAK FESTIVAL PHASE

This phase represents the highest-risk period of the festival, with a very large number of devotees gathering for major rituals such as Pongala, Thookkam (Garudan Thookkam), and the final-day celebrations such as Arattu. The crowd density is extremely high, and the risk of medical emergencies increases significantly during this period.

---

**Period:** 2–3 days before the main festival day until the final day (Thiruvonam in Kumbham)

**Nature of Crowd:** Massive crowd gatherings (1 -1.5 lakhs) , especially women devotees during Pongala, night-time gatherings during Thookkam, and heavy crowd movement during processions

**Overall Risk Level:** High

---

Component	Details
Major Activities	Garudan Thookkam (starts at midnight), <i>Pongala, Thalappoli.</i>
Key Risks	<ol style="list-style-type: none"><li>1. Heat-related illnesses such as heat exhaustion and dehydration during Pongala</li><li>2. Burns due to open flames and cooking activities</li><li>3. Fainting and collapse among elderly devotees</li><li>4. Injuries due to overcrowding and crowd surge</li><li>5. Food-borne illnesses due to large-scale temporary food distribution</li><li>6. Fire accidents due to open flames and fireworks</li><li>7. Communicable diseases such as fever, diarrhoea, and respiratory infections</li></ol>

---

	<p>8. Electrical accidents due to heavy lighting and temporary wiring</p> <p>9. Road traffic accidents due to heavy crowd movement</p> <p>10. Cardiac emergencies</p>
<p><b>RESPONSE &amp; CONTROL MEASURES</b></p>	
<p>Crowd-related Medical Emergencies</p>	<p><b>Continuous monitoring of crowd movement</b> in coordination with the Police Department.</p> <p><b>Quick response by health staff</b> in case of fainting, collapse, or minor injuries.</p> <p><b>Functional medical aid posts</b> operating throughout the peak festival days.</p> <p><b>Rapid triage</b> and stabilization of patients before referral.</p>
<p>Management of Medical Emergencies</p>	<p>Availability of emergency medicines, IV fluids, ORS, and first-aid supplies in all medical aid posts.</p> <p>Special preparedness for <b>burn injuries, dehydration, and fainting cases</b>.</p> <p>Ambulances positioned at strategic points for rapid evacuation.</p> <p>Coordination with nearby hospitals for emergency referrals.</p>
<p>Environmental / Heat</p>	<p>Distribution of ORS in high-crowd areas.</p>

	<p>Advising devotees to stay hydrated through public announcements.</p> <p>Special attention to elderly devotees and children.</p> <p>Medical staff to monitor cases of dizziness, weakness, and fainting.</p> <p><b>Cooling Zones:</b> Shaded areas with pedestal fans and water misting for exhausted pilgrims.</p>
Communicable Disease Surveillance	<p>Daily monitoring of fever, diarrhoea, vomiting, and respiratory symptoms.</p> <p>Immediate reporting of any cluster of illness.</p> <p>Rapid response by the health team in case of suspected outbreaks.</p> <p>Continuous public announcements encouraging early reporting of illness.</p>
Fire & Electrical Safety Response	<p>Close coordination with Fire &amp; Rescue Services during Pongala and fireworks.</p> <p>Immediate medical response in case of burns or fire-related injuries.</p> <p>Health staff positioned near high-risk areas such as cooking zones and crowded ritual locations.</p> <p>Emergency referral support for severe burn cases.</p>
Traffic & Emergency Access	<p>Ensuring ambulance movement through designated emergency routes. Advanced Life Support units stationed at the nearest point.</p> <p>2 dedicated "Ambulance-Only" lanes maintained by Police/Volunteers.</p>

	<p>Coordination with the Police Department for rapid evacuation of emergency cases.</p> <p>Medical teams remain alert during peak crowd movement hours.</p>
Sanitation & Environmental Health Monitoring	<p>Continuous monitoring of mobile toilets and sanitation facilities. Tankers on standby for midnight suction of temporary pits.</p> <p>Immediate action in case of overflow or unhygienic conditions.</p> <p>Daily waste removal in coordination with the Panchayat and Haritha Karma Sena.</p> <p>Monitoring of drinking water safety during peak crowd days.</p>
<b>Lead Departments</b>	<b>Health Department, LSGD, Food Safety Department, Police, KSEB, KWA, and Haritha Karma Sena.</b>

This phase requires continuous monitoring and rapid response because the combination of massive crowds, open flames, night-time rituals, food preparation, and long waiting hours significantly increases the risk of medical emergencies. Effective response during this phase is essential to prevent serious injuries, disease outbreaks, and mortality.

## Mitigation of Stampedes during Processions



### One-Way Pedestrian Flow:

**Logic:** Preventing "bi-directional friction." When two crowds meet head-on, movement stops and pressure builds.

**Action:** Designate specific "Entry Only" (e.g., North Gate) and "Exit Only" (e.g., South Gate) routes. Use rope barricades and Kerala Police personnel to ensure devotees do not turn back against the flow.

### Barricading & "Crush Zones":

**Logic:** Breaking the mass of the crowd into smaller, manageable "cells."

**Action:** Install "U-shaped" or "Snake" barricades. If a surge occurs, the barricades absorb the lateral pressure, protecting the people in the center. *Crucial:* High-density areas like the *Thookkam* viewing

zone must have "Pressure Release Gates" that can be opened instantly by police if the density becomes dangerous.

#### ***Ambulance Corridors (Green Channels):***

**Logic:** Ensuring the "Golden Hour" is not lost in traffic.

**Action:** A 3-metre-wide path must be physically barricaded and kept **strictly sterile** (zero pedestrians, zero vendors). This corridor must connect the medical aid post directly to the main road leading to Cherthala THQH or Alappuzha Medical College.

#### ***Mitigation of Firework & Pyrotechnic Hazards***

At Kanichukulangara, the fireworks display is a major draw. The risk involves thermal burns, blast injuries, and smoke inhalation.

#### ***The 100-Meter Safety Radius (Fallout Zone):***

**Standard:** A strictly enforced "Danger Zone" radius must be maintained around the firing point. No devotees, temporary stalls, or combustible materials (*pandal* cloth or dry grass) are allowed inside this circle.

#### ***Strategic Positioning of Fire Tenders:***

**Action:** At least two fire tenders must be stationed: one near the fireworks storage (magazine) and one near the largest crowd concentration.

#### ***Medical "Burn Kit" Readiness:***

**Action:** Every medical aid post during the fireworks phase must be equipped with **silver sulfadiazine** creams, sterile saline for irrigation, and large quantities of sterile gauze/burn sheets.

## PHASE 4 – POST-EVENT SURVEILLANCE

This phase begins immediately after the conclusion of the festival. Even though the crowd reduces, the risk of communicable diseases and environmental health problems may continue due to leftover waste, stagnant water, and fatigue-related illnesses among devotees and workers. The focus of the Health Department during this phase is disease surveillance, environmental sanitation, and prevention of post-festival outbreaks.

---

**Period:** 3–7 days after the final day of the festival (after Thiruvonam in Kumbham)

**Nature of Crowd:** Rapid reduction in crowd, but continued movement of devotees and cleaning workers in the temple area

**Overall Risk Level:** Moderate

---

Component	Details
Major Activities	Removal of temporary stalls and pandals, cleaning of temple premises and surrounding roads, waste removal after Pongala and processions, reopening of regular public movement, and return of devotees to different areas.

Key Risks	<ol style="list-style-type: none"> <li>1. Increase in communicable diseases such as fever, diarrhoea, and respiratory infections</li> <li>2. Mosquito breeding due to leftover stagnant water</li> <li>3. Environmental sanitation issues due to accumulated waste</li> <li>4. Water contamination in ponds and nearby water sources</li> <li>5. Delayed reporting of illness among devotees who attended the festival</li> <li>6. Injuries among workers involved in dismantling temporary structures</li> </ol>
<b>RESPONSE &amp; CONTROL MEASURES</b>	
Disease Surveillance	<p>Strengthening of <b>syndromic surveillance</b> for fever, diarrhoea, vomiting, and respiratory infections for at least one week after the festival.</p> <p>Daily monitoring of cases reported from nearby health institutions.</p> <p>Immediate reporting and investigation of any cluster of illness.</p> <p>Follow-up of any suspected communicable disease cases identified during the festival period.</p>
Vector Control Measures	<p>Identification and removal of stagnant water in and around the temple premises.</p> <p>Anti-larval activities in water-logging areas.</p> <p>Monitoring of temple ponds and surrounding drainage areas.</p> <p>Special attention to mosquito breeding sites created after waste removal.</p>

<p>Water &amp; Environmental Sanitation</p>	<p>Cleaning and chlorination of temple ponds after the festival.</p> <p>Inspection of public wells and water sources near the temple.</p> <p>Proper disposal of leftover waste in coordination with the Panchayat and Haritha Karma Sena.</p> <p>Ensuring complete cleaning of the temple premises and surrounding roads.</p>
<p>Public Health Monitoring</p>	<p>Monitoring for delayed cases of food-borne illness.</p> <p>Follow-up of individuals who required medical care during the festival.</p> <p>Health staff to remain alert for any unusual increase in fever or diarrhoea cases in nearby areas.</p>
<p><b>Lead Departments</b></p>	<p><b>Health Department, LSGD, Food Safety Department, Police, KSEB, KWA, and Haritha Karma Sena.</b></p>

## COMMAND SYSTEM AND INTER-DEPARTMENTAL COORDINATION

Effective management of the Kanichukulangara Devi Temple Festival requires a structured Incident Command System (ICS). This ensures that during a crisis—such as a crowd surge or a fire incident—there is a clear line of authority and no duplication of efforts between departments.

### *Functional Hierarchy of Command*

The command structure is divided into three tiers: Strategic (District), Operational (Area/Block), and Tactical (Field).

#### **1. District Strategic Command (District Level):**

Headed by: District Collector (District Magistrate) & District Medical Officer (DMO).

Role: Policy decisions, inter-district resource mobilization (e.g., requesting extra ALS units from neighboring blocks), and overall administrative oversight.

#### **2. Area-Level (Festival Site) Command:**

##### *Department-wise Command Responsibilities*

- 1. Health Department:** Lead agency for medical aid, sanitation, water/food safety audits, and disease surveillance.
- 2. Police Department:** Crowd control, enforcing one-way flow, and keeping "green channels" clear for ambulances.
- 3. Fire & Rescue:** Fire tenders at kitchens/fireworks and technical rescue for structural safety.
- 4. LSGD (Panchayat):** Waste management (Haritha Karma Sena), mobile toilets, and street lighting.
- 5. Devaswom Committee:** Internal venue management and coordination with departments.

#### **3. Field Tactical Units (Ground Level):**

This table outlines how to pull resources from the wider network to staff the Medical Aid Posts (MAP) and field surveillance.

Personnel Category	Source / Deployment	Specific Role during Festival
Medical Officers	Deputed from nearby FHCs/PHCs	Clinical lead at Medical Aid Posts; triaging emergencies.
Staff Nurses, JPHNs and MLSPs	NHM & Block Facilities	Wound dressing, IV fluids, and stabilizing patients for transfer.
Health Inspectors (HI/JHI)	Block Health Team	Supervising disease surveillance, sanitation, water chlorination, and food stall inspections.
ASHA Workers	Local Ward Circles	Providing first-aid and identifying exhausted devotees.
Volunteers (NCC/NSS/NGOs)	Local Colleges/Youth Clubs	Assisting Police with "Barricade" flow and guiding people to exit gates.
Data Entry Operators	NHM, LSGD	Real-time "Line-listing" of all injuries/fever cases at the Medical Post.
Ambulance Drivers	108 Service & FHCs	Manned standby at the "Green Channel" for immediate THQH/Medical College transfer.

## Information Flow in Command System (Crisis Communication Linkage)

Effective management of emergencies during the temple festival depends on a structured and well-coordinated communication system. Ensuring that the right information reaches the right authority at the right time is critical for rapid decision-making and efficient response.

During any emergency, all field-level responders must report essential information in a standardized format to ensure clarity, avoid duplication, and enable coordinated multi-agency action.

### *The "SOP to State" Referral Chain*

In the event of any emergency—such as crowd surge, fire, coastal incidents, or extreme weather—the On-Site Emergency Operation Center (EOC) acts as the central hub for receiving, processing, and disseminating information.

The flow of information during a festival emergency is structured on a tiered scale (L1, L2, or L3). In the event of a "Crowd Disaster" or specialized "Coastal Incident" (e.g., drowning or a marine flare accident), the command escalates as follows:

---

**Level 1 (Field):** The Medical Aid Post (MAP) is activated by field personnel.

**Level 2 (Command Hub):** If the incident is an MCI (Mass Casualty), the Incident Commander (District Collector) activates the On-Site (EOC) at the Temple.

**Level 3 (Regional):** For large-scale disasters requiring resources beyond the district, the On-Site EOC notifies the DEOC (District Emergency Operation Centre), which subsequently contacts the State DM Control Room and SEOC (State Emergency Operation Centre).

---

## *Structural Components of the Command System*

### **1. Trigger and Initial Reporting**

Emergencies may be identified through:

- Early warning systems (e.g., weather alerts, disaster warnings)
- Field-level observations (police, health staff, volunteers)
- Public reporting

All incidents are immediately communicated to the **On-Site EOC**, along with essential details such as nature of emergency, location, and number of persons affected.

### **2. Role of Incident Commander**

The Incident Commander (District Collector/District Magistrate) provides overall leadership and strategic direction. Based on the severity of the incident, decisions regarding resource mobilisation, evacuation, and inter-departmental coordination are taken.

### **3. On-Site Emergency Operation Center (EOC)**

The EOC functions as the coordination and communication nucleus, responsible for:

- Consolidating real-time information from the field
- Activating relevant response teams
- Coordinating between departments
- Maintaining communication with higher control rooms

### **4. Departmental Coordination**

Upon activation, the EOC communicates with:

- **First Responders / Emergency Departments:** Revenue & Disaster Management, Police, Fire & Rescue, Health Department
- **Nodal Departments:** Water Authority, Motor Vehicles Department, Irrigation Department, Public Works Department

The EOC ensures that Nodal Departments (KWA for water, KSEB for power, and PWD for road clearing) work in tandem with First Responders (Health and Police), preventing overlap or resource gaps.

## **5. Escalation Mechanism**

For higher-level emergencies:

- The District Emergency Operation Center (DEOC) is activated for district-level coordination
- Information is escalated to the State Disaster Management Control Room and State Emergency Operation Center (SEOC) if required
- In major crises (L2/L3 level), the State Incident Commander assumes overall control

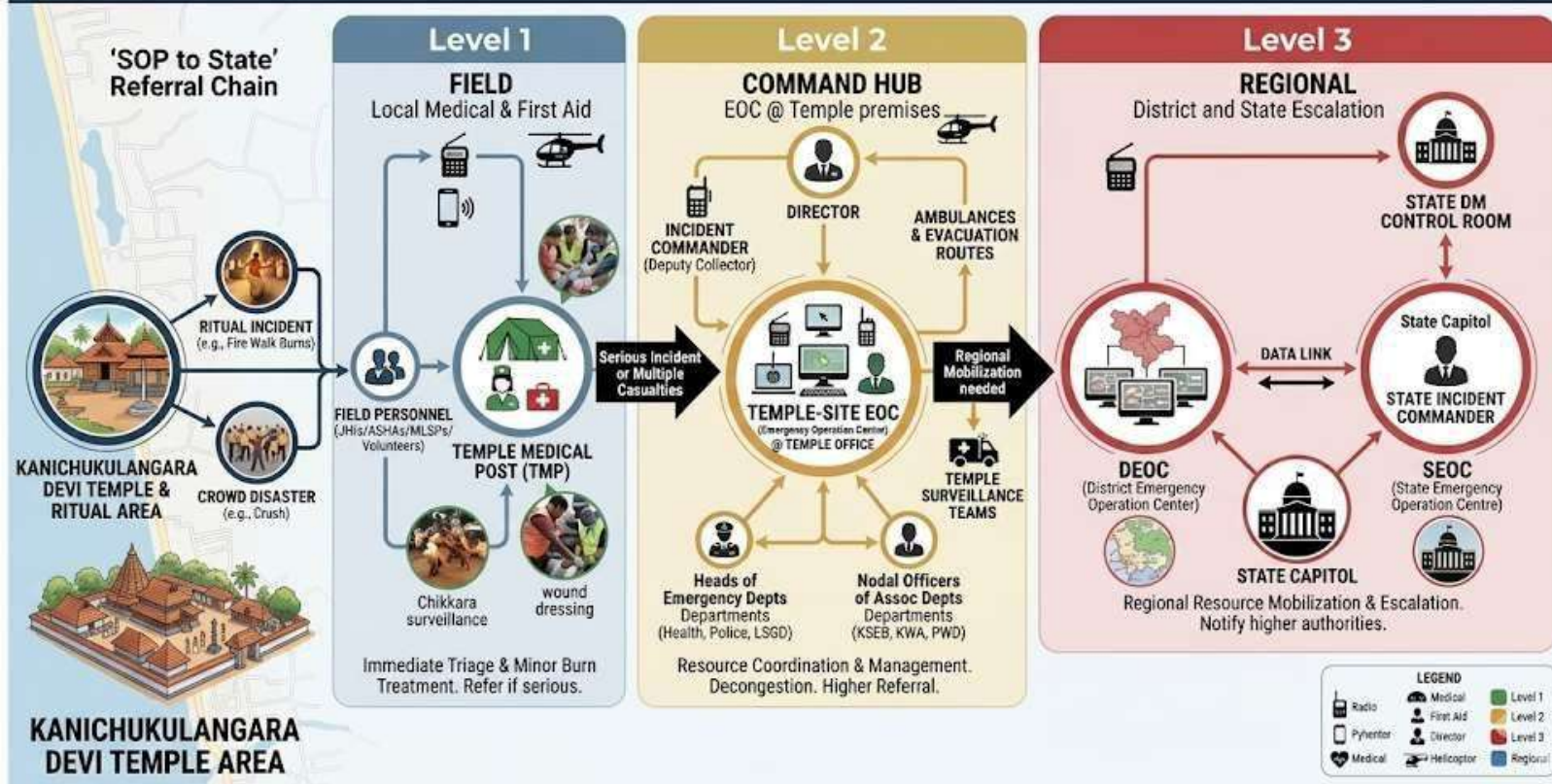
## **6. Two-Way Information Flow**

Communication is never unidirectional. A continuous loop is maintained to ensure field teams are supported by the strategic heights of the administration:

- Upward Flow (Intelligence): Field Personnel → On-Site EOC → DEOC → SEOC.
- Downward Flow (Orders): Strategic Advisories → Resource Allocation → Tactical Field Instructions.

In major crises where L2 or L3 thresholds are crossed, the State Incident Commander assumes overall control, while the On-Site EOC transitions into a local implementation unit for state-level directives.

# KANICHUKULANGARA FESTIVAL INCIDENT COMMAND & COMMUNICATION NETWORK



## LIST OF KEY OFFICIALS DETAILS

A list of key officials will be prepared and circulated among all departments before the start of the festival. This will ensure rapid communication during emergencies such as stampedes, fire accidents, food-borne outbreaks, or medical emergencies.

### *Festival & Venue Management*

---

Office / Body	Contact Person
Kanichukulangara Devaswom	Main Office
Temple Committee	General Convener

---

### *Law Enforcement & Crowd Control*

---

Department	Designation / Station
Police (Station)	Mararikulam North Police Station
Police (Station)	Arthunkal Police Station
Police (Traffic)	SI Cherthala Traffic
Police (District)	District Police Chief, Alappuzha
Fire & Rescue	Station Officer, Cherthala

---

### *Health & Medical Coordination*

---

<b>Office</b>	<b>Designation</b>
DMO (Health)	District Medical Officer, Alappuzha
Block Medical Officer (BMO)	CHC Muhamma
Medical Post Lead	Medical Officer, FHC Mararikulam North
Secondary Referral	THQH Cherthala
Tertiary Referral	Casualty, TD Medical College
Health Supervisor (HS)	Muhamma Block
Health Inspector (HI)	FHC Mararikulam North

---

### *Revenue & Civil Administration*

---

<b>Office</b>	<b>Name / Designation</b>
Collectorate	District Collector (Sh. Inbasekhar IAS)
Disaster Mgmt	Deputy Collector (DM)
Emergency Ops	District Emergency Operation Centre
Panchayat	Secretary, Mararikulam North

---

### **LIST OF HOSPITALS DIRECTLY INVOLVED IN FESTIVAL MEDICAL RESPONSE**

For effective medical preparedness during the festival, a network of nearby government and private health facilities will function in a referral chain, beginning from the nearest primary facility to higher-level referral hospitals. The PHC/FHC Mararikulam North is located very close to the temple (approximately 300–400 m), and therefore will function as the primary support facility.

<b>Level</b>	<b>Hospital Name</b>	<b>Distance from Temple</b>	<b>Role &amp; Responsibility</b>
On-Site	Medical Aid Post	0 Km	Immediate first aid, triage, and stabilization of minor injuries/exhaustion.
Primary	FHC Mararikulam North	~300–400 m	Primary field support; base for ASHA and JHI surveillance teams.
Primary	FHC Cherthala South	~4–5 km	Local stabilization and backup for non-critical festival cases.
Primary	CHC Muhamma	~5–6 km	Block Hub: 24/7 emergency stabilization; coordinating medical staff deputation.
Secondary	THQH Cherthala	~8 km	First Referral Unit (FRU): Management of fractures, moderate burns, and secondary triage.
Tertiary	Govt. MCH Vandanam	~25–26 km	Final Referral Point: Specialized trauma care, ICU support, and advanced burn management.

## Private Sector Integration

While the government network leads the response, these private facilities are vital for immediate surgical or ortho interventions due to their proximity to the NH 66 corridor.

Level	Hospital Name	Distance from Temple	Role & Responsibility
Multi-specialty Hospital	KVM Hospital, Cherthala	~7–8 km	Additional emergency referral support during peak crowd days.
Multi-specialty Hospital	S.N.M.M. Hospital, Cherthala	~7–8 km	Backup private referral hospital for emergency cases.



**ON-SITE MEDICAL INFRASTRUCTURE & AMBULANCE DEPLOYMENT**

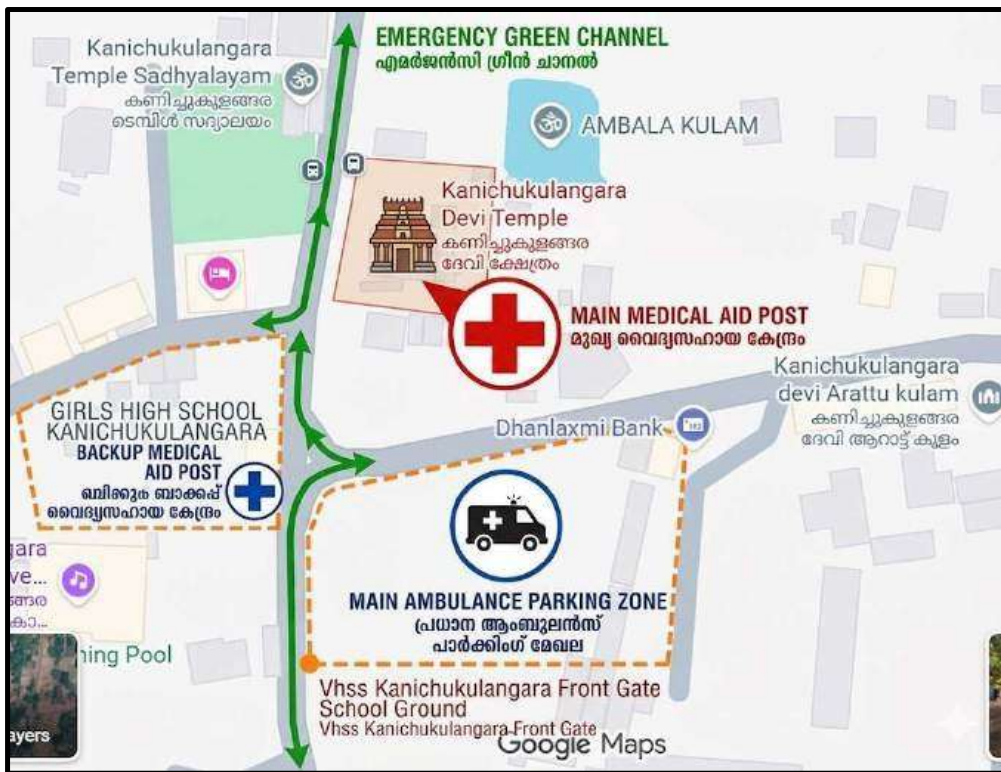
During the festival period, emergency medical response will be strengthened by positioning ambulances and establishing medical aid posts at strategic locations near the temple and major crowd-gathering points.

*Geospatial Locations of Ambulances and Medical Aid Posts (MAP)*

**Main Ambulance Hub (School Ground):** Primary standby zone for the ambulance fleet; selected for its high-capacity space and direct, unhindered access to the main road.

**Main Medical Aid Post (Temple Entry):** Located inside the temple premises to provide immediate first aid and management of minor emergencies (fainting, minor injuries).

**Backup Medical Aid Post (Kanichukulangara High School):** Secondary stabilization point and overflow facility to manage patients before taluk or medical college referral.



## **AMBULANCE FLEET: COMPOSITION AND SOURCING**

The following ambulances will be deployed during the peak festival days:

### ***Government Ambulances***

Taluk Headquarters Hospital (THQH) Cherthala – 1 ambulance

Community Health Centre Muhamma – 1 ambulance

Community Health Centre Thanneermukkom – 1 ambulance

Family Health Centre Mararikulam North – 1 ambulance

### ***Private Ambulances***

Approximately 2 private ambulances will be arranged to support the emergency referral system.

**Total Expected Ambulances:** 5–6 ambulances during peak festival days.

Ambulance Staffing: Every deployed vehicle must be manned by a two-person team: one Trained Driver with localized geographic knowledge of the Alappuzha-Cherthala corridors and one Emergency Medical Technician (EMT) or Nursing Assistant for en-route patient care.

---

## **PRIMARY EVACUATION ROUTES**

The North Exit (Primary):

Path: From School Ground → Kanichukulangara-Cherthala Road → THQH Cherthala.

Purpose: Fastest route for emergencies to the Taluk Hospital.

The South-West Exit (Tertiary/MCH):

Path: From LH Road → Mararikulam North Junction → NH 66 → MCH Vandanam.

Purpose: Dedicated for critical life-support transfers to the Medical College.

---

## **MEDICAL AID POST**

---

Each Medical Aid Post established during the festival shall function as a first-line stabilization unit for managing minor illnesses, heat-related conditions, injuries, and emergency cases before referral. The facilities should therefore be arranged in a systematic manner to ensure rapid triage, stabilization, and safe referral.

### ***Number and Deployment of Human Resources***

To maintain 24/7 coverage during the peak 48 hours, staff will be divided into three 8-hour shifts.

#### **Medical Aid Post Staffing (per Post):**

- 1 Medical Officer (Lead)
- 2 Staff Nurses (Triage & Stabilization)
- 2 ASHA Workers / Volunteers (Crowd assistance & ORS distribution)
- 1 JHI/JPHN (Surveillance & Reporting)

### ***Zoning & Infrastructure***

Each Medical Aid Post is designed to function as a high-efficiency stabilization unit. The layout is divided into functional zones:

**Triage Zone:** Color-coded (Red/Yellow/Green) for severity prioritization.

**Stabilization:** Min. 02 folding cots for short-term observation.

**Heat Mitigation:** Dedicated "Cooling Station" with pedestal fans and ice/cold water.

**Sanitation:** Mandatory color-coded biomedical waste bins.

### Inventory: Emergency Support & Diagnostic Kits

To facilitate rapid diagnosis and life-support, each post must maintain the following minimum inventory:

**Diagnostics:** BP Apparatus, Pulse Oximeter, Glucometer, and Thermometers.





**Respiratory Support:** Oxygen Cylinders (B-Type) with flowmeters, Nebulizers, and Ambu-bags (Adult & Pediatric).

**Medication:** Emergency drug kit (Adrenaline, Atropine, Hydrocortisone, Avil, etc.), IV Fluids (NS/RL), and ORS packets.


Each MAP must have color-coded bins for biomedical waste disposal as per standard infection control protocols. The JHI/JPHN on duty is responsible for maintaining the Patient Line-list, capturing the name, age, diagnosis, and outcome (Discharged/Referral) for real-time epidemiological tracking.

### Inventory: Emergency Support & Diagnostic Kits

Each post must maintain the following minimum inventory for rapid diagnostics and life-support:

Diagnostics	Respiratory Support	Medication
<ul style="list-style-type: none"> <li>● BP Apparatus</li> </ul>  <p style="font-size: small;">BP Apparatus    Pulse Oximeter</p>	<ul style="list-style-type: none"> <li>● Oxygen Cylinders (B-Type)</li> </ul>  <p style="font-size: small;">Flowmeters    Nebulizers</p>	<ul style="list-style-type: none"> <li>● Emergency Drug Kit (Adrenaline, Atropine, Hydrocortisone)</li> <li>● IV Fluids (NS / RL)</li> </ul> 
 <p style="font-size: small;">Glucometer    Thermometers</p>	 <p style="font-size: small;">Ambu-bags (Adult &amp; Pediatric)</p>	<ul style="list-style-type: none"> <li>● IV Fluids (NS / RL)</li> </ul> 

**Biowaste Disposal:** Color-coded bins as per infection control protocols.



**Biowaste Disposal:** Color-coded bins as per infection control protocols.

**Patient Line-list:** JHI/JPHN must log Name, Age, Diagnosis, Outcome



**Patient Line-list:** JHI/JPHN must log Name, Age, Diagnosis, Outcome

## **HOSPITAL PREPAREDNESS & EMERGENCY PROTOCOLS**

During the peak festival period, all health institutions within the Muhamma Block are placed on Red Alert. This transition mandates a shift from standard operating hours to 24-hour emergency readiness for the nearest facility i.e FHC Mararikulam North.

### ***Base Referral Hospital Detail Plan: FHC Mararikulam North***

As the geographically closest permanent health facility to the temple, Family Health Centre (FHC) Mararikulam North is designated as the Primary First-Line Treatment Centre. During the festival, this facility will transition from routine outpatient care to a specialized Emergency Stabilization Unit.

#### ***The following arrangements will be implemented during the festival period:***

**24/7 Functional Status:** The facility will operate round-the-clock throughout the festival period, overriding standard OP hours to manage the constant influx of devotees.

**Shift-Based Staffing:** Duty doctors and staff nurses will be deployed in 8-hour rotations, ensuring continuous clinical coverage and personnel readiness.

**Surge Reinforcement:** Additional staff and nursing staff will be specifically stationed for night-time emergency coverage during peak rituals.

**Dedicated Observation Zone: Two (02) beds** will be exclusively reserved for festival-related patients to facilitate immediate stabilization and short-term monitoring. Identify a "Buffer Zone" (like a nearby ward or corridor) that can be converted into a treatment area in case of a mass casualty incident (MCI).

**Strategic Stockpiling:** Emergency medications, IV fluids, oxygen support, and resuscitation kits will be audited and stocked 24 hours in advance. Emergency drug kits and IV fluids will be reviewed daily during the festival period to prevent stock-outs.

**Command & Control:** The **Medical Officer (MO) and Health Inspector (HI)** of Mararikulam North will maintain direct administrative and operational supervision over all facility activities.

### **RAPID RESPONSE TEAM (RRT): MARARIKULAM NORTH**

The RRT at Mararikulam North is a specialized, mobile unit tasked with immediate medical intervention during life-threatening events (e.g., cardiac arrest, major trauma, or respiratory distress). The RRT will function under the direct supervision of the Medical Officer and Health Inspector of FHC Mararikulam North and will remain in **24-hour alert mode** throughout the festival period.

#### **Composition of the RRT Team**

The Rapid Response Team will include:

- Medical Officer (Team Lead)
- Staff Nurse
- Junior Health Inspector / Health Inspector
- JPHN / Public Health Nurse
- Field Health Worker / Volunteer (if required)

The team will be stationed at FHC Mararikulam North and will be deployed immediately in case of emergencies reported from the temple premises, medical aid posts, or nearby festival areas.

#### **Operational Protocol (The "Trigger" Mechanism)**

The RRT at FHC Mararikulam North will be activated based on predefined trigger situations reported from the temple premises, medical aid posts, or nearby festival areas.

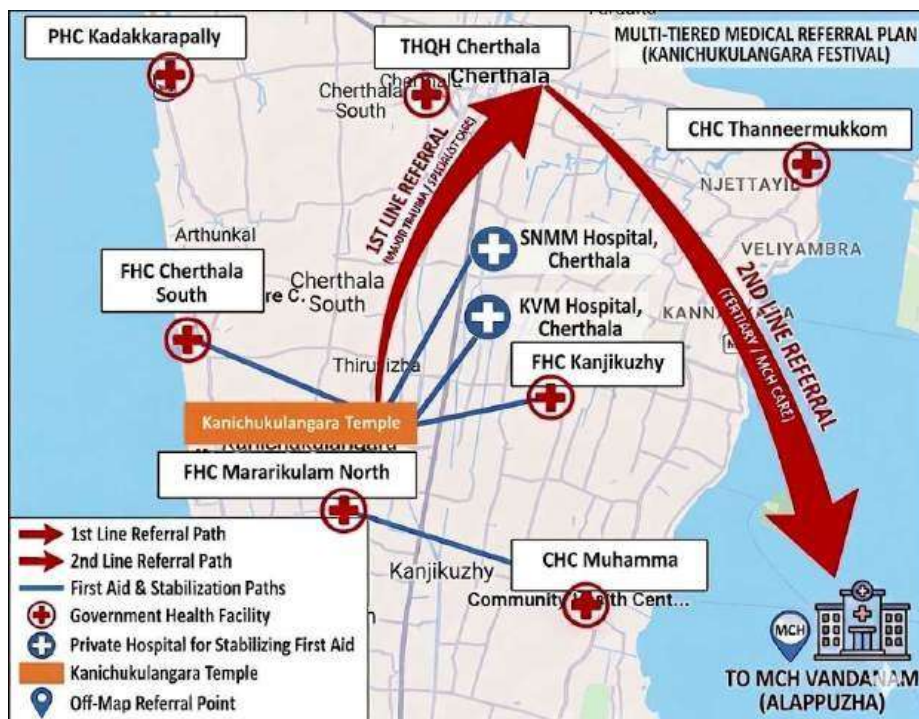
<b>Trigger Category</b>	<b>Specific Indicator (Threshold)</b>	<b>Action Level</b>
Cluster Signal	3+ cases of Acute Diarrheal Disease (ADD) from the same food source/ward.	Immediate RRT Launch
Severe Event	A single case of suspected Cholera or highly infectious respiratory illness.	Immediate Isolation & Investigation
Trauma Surge	5+ major injury cases arriving at a MAP within a 30-minute window.	Mass Casualty Protocol
Environmental	Reports of water contamination at major "Ambala Kulams" or <i>Sadhya</i> halls.	Environmental Sample Collection

Climatic Surge      10+ cases of Syncope/Heat Exhaustion within 1 hour.      Activation of Cooling Zone

**Other Hospitals Under Muhamma Block**

All government health facilities under Muhamma Block (FHCs, PHCs, and CHCs) will remain in **alert mode**, with the following:

- Increased staff availability
- Readiness to receive referred cases from the festival area
- Coordination with ambulance teams and medical aid posts



**REFERRAL PROTOCOL:** Medical Aid Post → FHC Mararikulam North → CHC/THQH → Higher Referral Hospital

**CAPACITY BUILDING & STRATEGIC COORDINATION**

Effective disaster preparedness during large religious gatherings depends on timely coordination, capacity building of field staff, and clear communication among all stakeholders. Therefore, a series

of coordination meetings and training activities will be conducted at the district level, block level, and facility level prior to the festival.

### *Schedule of Statutory Coordination Meetings*

To ensure a unified command, a three-tier meeting structure is implemented, moving from district-level policy to ground-level execution.

<b>Sl. No</b>	<b>Name of Meeting</b>	<b>Presiding Authority</b>	<b>Key Stakeholders</b>	<b>Proposed Timeline</b>
1	District Level Meeting	District Collector	MLA, DMO (H), Dy. DMO, District Surveillance Officer, Animal Husbandry Department (SP), Police Department, Devaswom President.	30 Days Prior
2	Inter-Sectoral Planning Meeting	Panchayat President	MO, LSGD Secretary, KSEB, KWA, Fire & Rescue, Temple Committee.	15 Days Prior
3	Local Health Preparedness Meeting	Medical Officer (FHC Mararikulam North)	HI/JHIs, Staff Nurses, MLSPs, ASHA Workers, Ambulance Drivers, Pharmacy Store-keepers.	15 Days Prior
4	Meeting with temple committee	Temple Committee Secretary	Health Inspector, LSGD, Police etc.	15 Days Prior

The primary focus of these sessions is to secure formal SOP approval and inter-district resource mobilization at the Apex level, while the Inter-Sectoral and Local meetings finalize the "Green Corridor" logistics, safety audits (water/electrical), and the strategic deployment of RRT kits and Health Staffs across designated festival area.

## **TRAINING & OPERATIONAL MOCK DRILLS**

Training and mock drills will be conducted to strengthen the preparedness of medical teams and field staff involved in the festival.

The training will include:

- Emergency management of fainting, dehydration, and heat-related illness
- First aid and basic life support (BLS)
- Rapid response during crowd surge or mass casualty incidents
- Communication and referral protocols
- Use of emergency kits and oxygen support
- Roles and responsibilities of RRT members

### **Volunteer and Police Sensitization Programme**

A short sensitization programme will be conducted for temple volunteers and police personnel to improve crowd safety and emergency response during the festival.

The training will include:

- Basic awareness on **crowd psychology** and safe management of high-density areas and choke points.
- **Practical training on stretcher movement** in crowded areas, including safe patient evacuation using a simple “V-shaped” volunteer formation.

This programme will help ensure faster medical response, safer crowd control, and improved coordination during emergencies.

### ***MOCK DRILLS***

A mock drill will be conducted, if feasible, at the temple premises or nearby area to ensure that medical teams, ambulance staff, and volunteers are familiar with evacuation routes, emergency response procedures, and coordination mechanisms.

## **STANDARD OPERATING PROCEDURES (SOP) FOR COMMON POSSIBLE HEALTH HAZARDS**

Large religious gatherings are associated with a higher risk of sudden medical emergencies such as crowd-related injuries, burns, fainting episodes, seizures, and drowning incidents. To ensure rapid and uniform response, the following standardized SOPs will be followed by medical teams, volunteers, and first responders during the festival period.

### **1. SOP FOR MASS CASUALTY INCIDENTS (MCI) & STAMPEDES**

**Objective:** To ensure rapid and coordinated medical response in the event of crowd congestion, stampede risk, or multiple casualties. In the event of a crowd crush or structural collapse, the goal is "The Greatest Good for the Greatest Number."

#### ***IMMEDIATE ACTIONS***

On identification of a crowd crush, stampede risk, or multiple injured persons, the following actions shall be taken immediately:

- Do not run or shout; calm communication shall be maintained through volunteers and public announcement systems.
- Police and volunteers must immediately stop further crowd entry into the affected area.
- Identify injured persons and shift them to a safe zone.
- Create a temporary human corridor for evacuation.
- Inform the nearest medical aid post and ambulance immediately.

#### **MEDICAL MANAGEMENT**

All patients shall be rapidly assessed and classified based on the severity of injury using the **START (Simple Triage and Rapid Treatment) method**. Triage shall be completed within one minute per patient wherever feasible. Priority shall be given to patients with breathing difficulty, severe bleeding, head injury, or unconsciousness. First aid, oxygen support, hemorrhage control, and stabilization shall be initiated immediately before referral.

#### **TRIAGE CATEGORIES**

The triage categories shall be as follows:

---

**RED (Immediate):** Critical injuries (airway obstruction, uncontrolled bleeding).

**YELLOW (Delayed):** Serious but non-life-threatening (fractures with stable vitals).

**GREEN (Minor):** "Walking wounded."

**BLACK (Deceased):** No pulse or spontaneous respirations.

---

#### **MANAGEMENT OF HIGH-RISK COMPLICATIONS**

In cases where victims have been trapped for a prolonged period, medical teams shall monitor for features of **crush syndrome**. Early identification and rapid referral shall be ensured. Severe bleeding shall be controlled immediately using pressure dressings or tourniquets wherever required. Oxygen support and IV fluids shall be initiated wherever necessary before referral.

#### **COMMUNICATION AND REFERRAL**

Upon confirmation of a Mass Casualty Incident, a **"Code Red"** alert shall be activated. The Medical Officer in charge of the Medical Aid Post shall immediately inform THQH Cherthala and Medical College Hospital, Vandanam to ensure preparedness at referral centres.

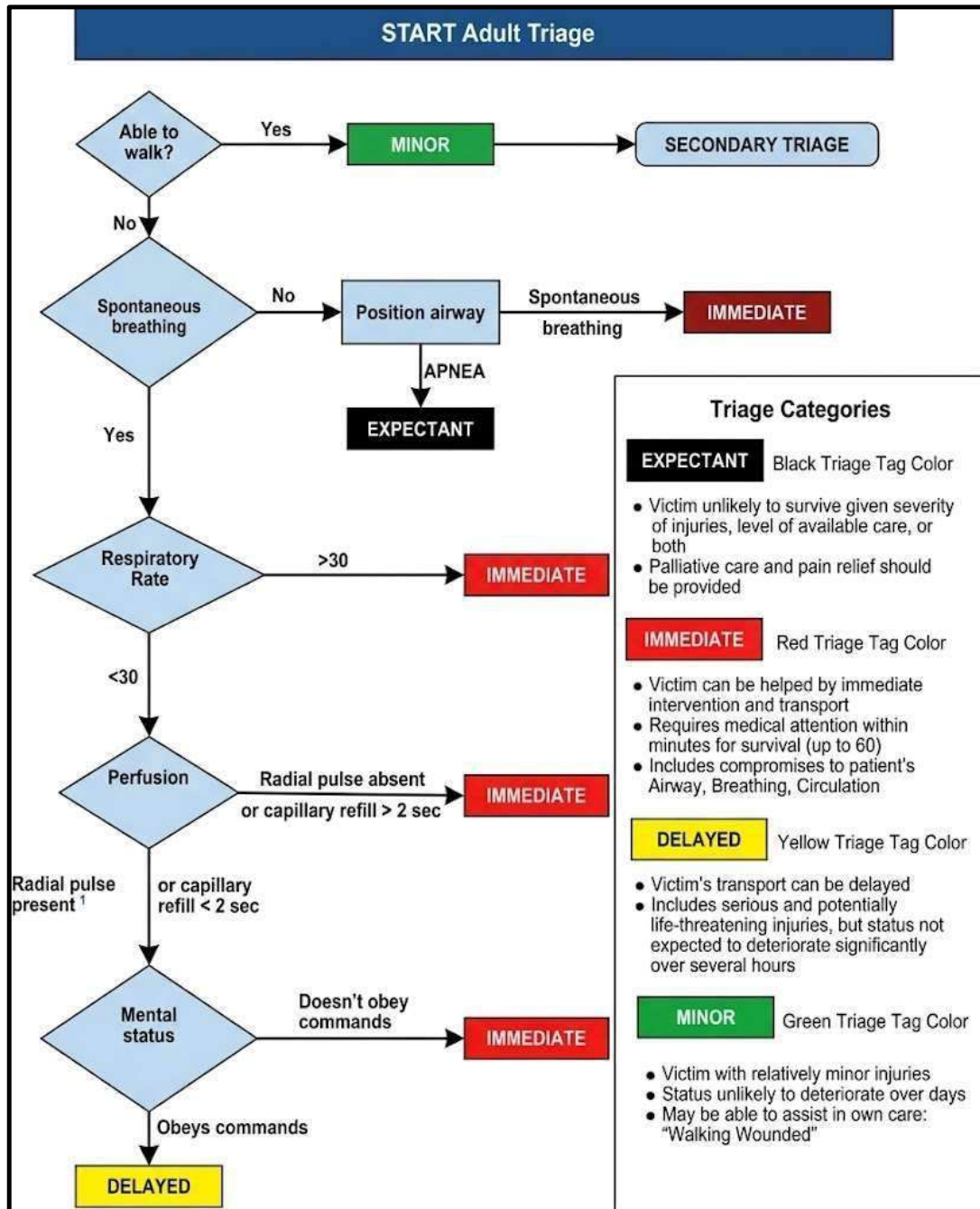
Ambulances shall be moved only through the designated green corridor, and patient referral shall be prioritized based on triage category.

#### **DOCUMENTATION AND REPORTING**

All patients managed during the incident shall be recorded in the emergency register at the medical aid post. The number of critical, moderate, and minor cases shall be documented and reported to the Block Medical Officer and District Control Room without delay.

### **STANDARD TRIAGE COLOUR CODING SYSTEM FOR MASS CASUALTY INCIDENTS**

---



## **2. SOP FOR BURNS AND FIRE-RELATED INJURIES**

**Objective:** To ensure immediate and correct first-aid management of burn injuries occurring during the festival due to fireworks, oil lamps, cooking areas, or accidental fire exposure, and to ensure timely referral of serious cases.

### **IMMEDIATE ACTIONS**

- Remove the person from the source of fire.
- Pour **clean running water for 15–20 minutes** over the affected area.
- Do not apply oil, turmeric, toothpaste, or any local remedies.
- Cover the burn area with a clean cloth or sterile dressing.
- Refer immediately if burns are extensive.

### **MEDICAL RESPONSE**

The patient shall be **assessed for the severity of the burn** and managed accordingly. Pain relief shall be provided and the wound shall be dressed using sterile materials. In cases where the **burn involves more than 10% of the body surface area**, intravenous fluids shall be initiated as early as possible.

IV Ringer's Lactate shall be started in moderate to severe burn cases as per standard burn-management protocols. Vital signs shall be monitored continuously, and the patient shall be prepared for early referral if required.

### **ASSESSMENT OF AIRWAY AND BREATHING**

All burn patients shall be assessed for signs of **inhalation injury**, especially in cases involving fire, smoke exposure, or burns in enclosed spaces. Warning signs such as singed nasal hair, soot around the mouth or nose, hoarseness of voice, or difficulty in breathing shall be treated as medical emergencies.

If inhalation injury is suspected, high-flow oxygen shall be administered immediately, and the patient shall be referred without delay to a higher centre.

### **REFERRAL PROTOCOL**

All patients with facial burns, circumferential burns, burns involving the hands, feet, or eyes, and burns covering more than 10% of the body surface area shall be referred immediately to higher centres. The primary referral centre for severe burn cases shall be Medical College Hospital, Vandanam.

Patients with minor burns may be treated at the medical aid post or the nearest health facility after proper assessment.

**DOCUMENTATION AND REPORTING**

All burn cases reported during the festival shall be recorded in the emergency register at the medical aid post. The severity of the burn, treatment provided, and referral details shall be documented and reported to the Block Medical Officer.

**STANDARD BURN FIRST AID GUIDELINES**

 <b>STANDARD 'DO' ACTIONS</b>	 Hold under cool running water for 20 minutes	 Use sterile NON-STICK bandages	 Take an appropriate pain reliever	 Apply burn ointment after 1 hour (as needed)
 <b>STANDARD 'DON'T' ACTIONS</b>	 Don't apply oil or butter	 Don't apply toothpaste	 Don't apply mustard, pickles, or eggs	 Don't use ice directly

### **3. SOP FOR FAINTING & SYNCOPE (VASOVAGAL/HEAT)**

**Objective:** To ensure early recognition and safe management of fainting (syncope) cases, which are common during large gatherings due to prolonged standing, heat exposure, dehydration, and reduced venous return.

#### **IMMEDIATE ACTIONS:**

- Lay the patient flat on their back (supine).
- Elevate the legs 12 inches (30 cm) above the level of the heart. This utilizes gravity to increase venous return to the heart and brain.
- Loosen tight clothing around the neck and waist.
- Ensure adequate ventilation / move to a shaded area.
- Give ORS / water once the person regains consciousness.

#### **MEDICAL RESPONSE**

The patient's pulse and breathing shall be checked immediately. Most patients regain consciousness within a short period once placed in the proper position. After the patient regains consciousness, small quantities of drinking water or ORS may be given, provided the patient is fully conscious and able to swallow.

The patient shall be observed for a few minutes at the medical aid post, especially if the episode occurred in a crowded or hot environment. Vital signs shall be checked before allowing the person to leave.

#### ***REFERRAL PROTOCOL***

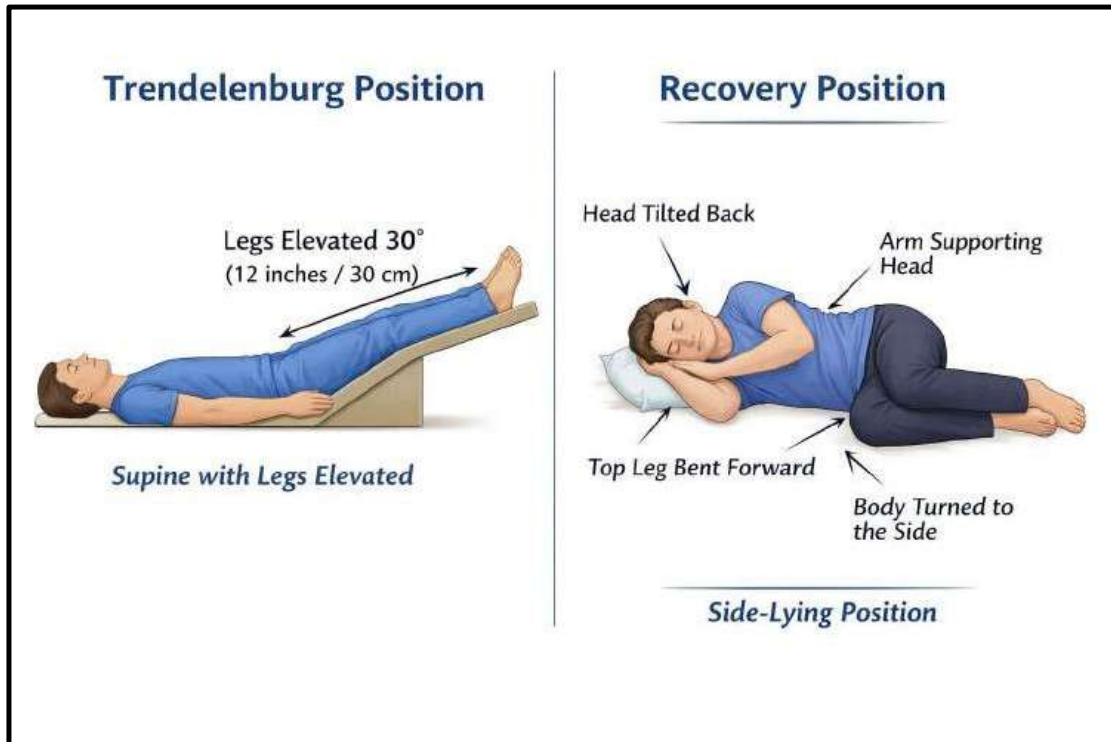
The patient shall be referred to the nearest health facility if any of the following are present:

- Loss of consciousness lasting more than a few minutes
- Repeated fainting episodes
- Associated injury due to fall
- Abnormal pulse or breathing
- Suspected heat exhaustion or heat stroke

#### **DOCUMENTATION AND REPORTING**

---

All fainting cases managed at the medical aid post shall be recorded in the emergency register. If multiple fainting cases are reported within a short period, the medical officer shall assess the possibility of heat-related illness and initiate preventive measures such as ORS distribution and crowd ventilation.



Correct Position During Fainting (Supine Position with Legs Elevated) and Recovery

#### **4. SOP FOR SEIZURE / FITS**

**Objective:** To ensure safe, prompt, and standardized management of seizure (fit) cases during mass gatherings while preventing injury and complications such as aspiration and prolonged seizures.

##### **COMMON SITUATIONS IN MASS GATHERINGS**

Seizures may occur due to:

- Heat exposure/dehydration
- Exhaustion
- Pre-existing epilepsy
- Stress, crowding, or lack of sleep
- Fever or underlying illness

##### **IMMEDIATE ACTIONS:**

- Ensure the crowd does not panic or gather too close to the patient.
- Lay the person on one side (recovery position).
- Remove nearby objects to prevent injury.
- Do not put anything inside the mouth.
- Do not attempt to hold the tongue or forcefully open the mouth.
- Loosen tight clothing around the neck.
- Do not hold the person tightly.
- Wait until the seizure stops.

##### **MEDICAL RESPONSE**

Once the seizure stops, the medical team at the medical aid post shall take the following actions:

The patient should be kept in the **lateral (side-lying) position** to prevent aspiration of saliva or vomit into the lungs. Airway, breathing, and pulse should be checked immediately. Most patients may remain confused, drowsy, or disoriented for a few minutes after the seizure (post-ictal phase), and this should not be mistaken for another emergency unless symptoms persist.

The patient should be shifted to the **Medical Aid Post** for observation and monitoring. Oral fluids may be given only after the patient has fully regained consciousness and is able to swallow safely.

## PHARMACOLOGICAL MANAGEMENT (BY MEDICAL OFFICER ONLY)

If the seizure **lasts more than 5 minutes** or repeated seizures occur without recovery of consciousness, the condition shall be treated as **Status Epilepticus**, which is a medical emergency.

In such cases, the Medical Officer shall administer:

- **Inj. Diazepam (0.1 mg/kg IV/IM)**  
**OR**
- **Midazolam** as per emergency kit protocol

Immediate referral to the nearest hospital shall be arranged through the designated ambulance service.

## REFERRAL CRITERIA

The patient must be referred immediately if:

- Seizure lasts more than 5 minutes
- Repeated seizures occur
- Patient does not regain consciousness
- Head injury occurs during the seizure
- First-time seizure
- Pregnant woman / elderly patient
- Breathing difficulty after seizure

## **5. SOP FOR DROWNING / NEAR-DROWNING INCIDENTS**

**Objective:** To ensure rapid, safe, and standardized response to drowning and near-drowning incidents during mass gatherings and to prevent death, brain injury, and delayed complications.

### **BACKGROUND**

Drowning and near-drowning incidents are possible during mass gatherings conducted near temple ponds (Ambala Kulams), rivers, canals, and other water bodies. Such incidents commonly occur due to overcrowding near the water, accidental slipping, panic situations, or attempts by untrained persons to rescue victims. Even when the person appears to have recovered after rescue, there is a significant risk of delayed respiratory complications (secondary drowning / delayed pulmonary edema). Hence, all such cases require immediate medical attention and referral.

### **POSSIBLE SCENARIO**

Temple ponds (Ambala Kulams), crowd near water bodies, accidental slipping.

### **IMMEDIATE ACTIONS**

- Use a pole or throw a float; do not enter the water unless trained in water rescue.
- Once the person reaches the edge, remove them safely with the help of available staff.
- If a diving injury is suspected, maintain the head and neck in a neutral position while removing the person from the water.
- Check breathing immediately.
- If the person is unconscious but breathing, place in the recovery position.
- If the person is unresponsive and not breathing, initiate CPR (30:2 ratio) immediately. Unlike standard cardiac arrest, in drowning, start with 5 rescue breaths.
- Remove wet clothes and cover with dry blankets to prevent hypothermia.

### **MEDICAL RESPONSE**

All drowning / near-drowning victims must be treated as **medical emergencies**, even if the person appears normal after rescue.

The Medical Team shall:

- Check airway, breathing, and circulation.
- Provide **oxygen support** immediately.
- Monitor pulse, breathing, and level of consciousness.
- Observe breathing difficulty, cough, chest discomfort, or altered consciousness.

#### **REFERRAL PROTOCOL**

All drowning / near-drowning cases must be referred to the nearest hospital without delay, even if the patient appears recovered.

This is necessary due to the risk of:

- Delayed pulmonary edema
- Aspiration pneumonia
- Secondary drowning
- Hypoxia-related complications

During transport:

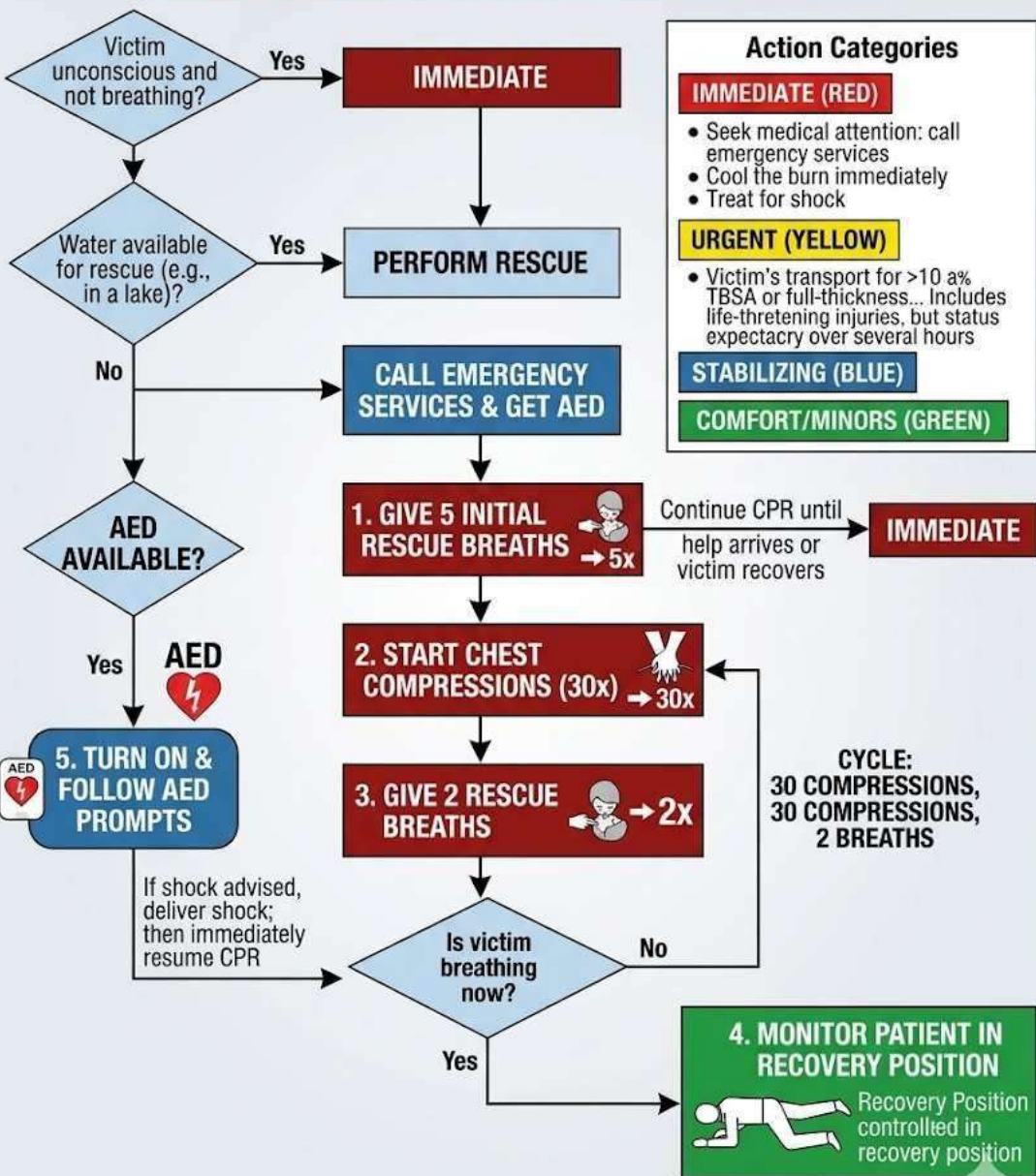
- Continue oxygen support
- Monitor breathing and consciousness continuously
- Inform the referral hospital in advance

#### **STANDARD REPORTING MANDATE**

Every drowning / near-drowning incident managed during the mass gathering must be entered in the Patient Line-list by the JHI on duty and reported to the Block Medical Officer immediately.

#### **DROWNING RESUSCITATION PROTOCOL**

## SIMPLE CPR FOR DROWNING: KEY STEPS



**Action Categories**

**IMMEDIATE (RED)**

- Seek medical attention: call emergency services
- Cool the burn immediately
- Treat for shock

**URGENT (YELLOW)**

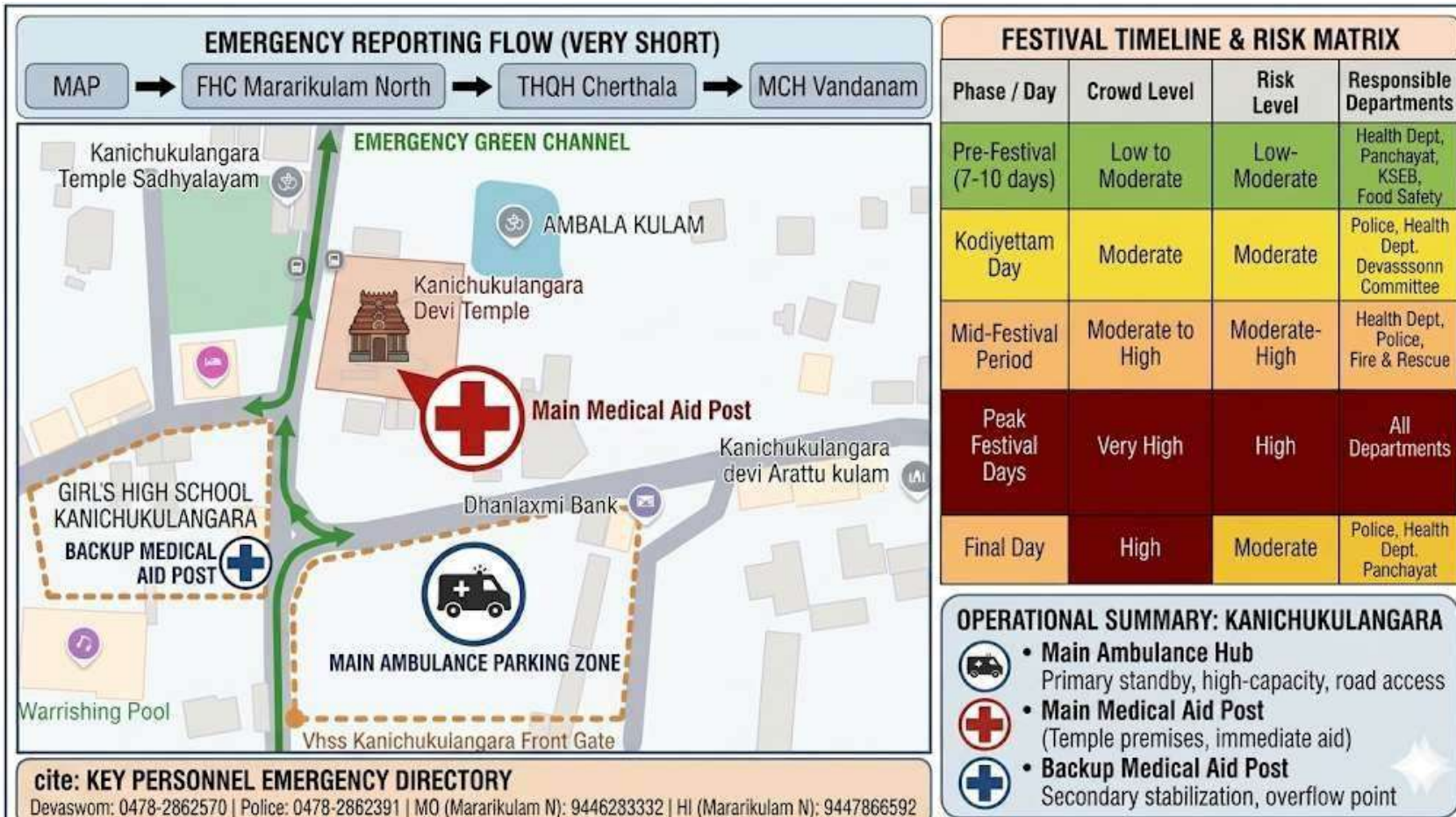
- Victim's transport for >10 a% TBSA or full-thickness... Includes life-threatening injuries, but status expectancy over several hours

**STABILIZING (BLUE)**

**COMFORT/MINORS (GREEN)**

**DO NOT APPROACH**

## CONSOLIDATION & QUICK-REFERENCE SUMMARY



## CONCLUSION

The Kanichukulangara Festival is a major religious event that attracts a large number of devotees from different parts of the district and nearby regions. Such mass gatherings require careful planning and coordinated action from multiple departments to ensure the safety and well-being of the public. This preparedness plan has been developed with a focus on risk identification, inter-departmental coordination, strengthening of health facilities, and effective response mechanisms during the festival period.

Special emphasis has been given to public-health preparedness through preventive measures, medical aid arrangements, surveillance activities, and rapid response systems. The preparedness of FHC Mararikulam North as the primary first-line treatment centre, activation of Rapid Response Teams, coordination with referral hospitals, and establishment of medical aid posts are key components of this plan. Capacity-building activities, coordination meetings, and mock drills will further strengthen the ability of field-level teams to respond effectively to medical emergencies and public-health incidents during the festival.

Beyond immediate response, this plan integrates modern epidemiological tools, such as geospatial mapping and real-time data visualization, to transition from traditional crowd management to a "precision health" approach. By establishing an Emergency Green Channel and a digitized command structure, we ensure that the high-density windows—specifically during the Thiruvulsavam and Aarattu—are monitored with clinical accuracy.

With the coordinated efforts of the Health Department, District Administration, Police Department, Local Self-Government, Fire & Rescue Services, and the Temple Management Committee, this preparedness plan aims to ensure a safe and well-managed festival. Proper implementation of the planned activities, continuous monitoring during the festival period, and timely response to emergencies will help in protecting the health of devotees and ensuring the smooth conduct of the Kanichukulangara Festival

# Chengannur Festival

## PREAMBLE



The Varshikotsavam (Annual Festival) of Chengannur Mahadeva Temple is one of the most important religious events associated with the temple. The festival extends for 28 days, making it one of the longest temple festivals in the region.

The annual festival begins on the Thiruvathira star of the Malayalam month Dhanu and concludes on the Thiruvathira star of the Malayalam month Makaram. During this period, several special rituals, poojas, cultural programmes, and temple processions are conducted as part of the traditional celebrations.

The festival attracts thousands of devotees and visitors from various parts of Kerala as well as from other states. Due to the large number of devotees gathering at and around the temple premises during the festival period, effective public health preparedness, crowd management, and emergency medical response systems are essential to ensure the safety and well-being of the participants.<sup>1</sup>

Thiruppooth Aratt is a festival celebrated in the temple at least thrice a year when the festival images of Mahadeva and Bhadrakali are taken in a procession of decorated elephants to the Pamba River. A holy dip, called '*arat*', is offered to the images, and the decorated images are taken back to the temple. Women devotees carry traditional thalappoli lamps during the procession. The procession is accompanied by a temple orchestra and pachavadyam. The major festivals in the temple are flag hoisting during the Thiruvathira month of Dhanu and Araattu during the Thiruvathirai month of Makaram. The yearly festival is celebrated from December to January and lasts 28 days.

For Chengannur during the Sabarimala Pilgrimage Season, the season-change period (Mandala–Makaravilakku time) brings a very large inflow of pilgrims travelling to Sabarimala Temple. Chengannur becomes a major transit hub, especially through Chengannur Railway Station. The Sabarimala pilgrimage season attracts lakhs of pilgrims annually. During the Mandala–Makaravilakku season, Chengannur functions as a key transit and resting point for pilgrims travelling to Sabarimala.

## **RISK MITIGATION OF GATHERING**

Major risks anticipated:

<b>MEDICAL RISKS</b>	<b>PUBLIC HEALTH RISKS</b>	<b>ENVIRONMENTAL RISKS</b>
Cardiac arrest Heat exhaustion Dehydration Injuries Diabetic emergencies Burn injuries	Food poisoning Water-borne diseases Respiratory infections Vector-borne diseases	Overcrowding Traffic congestion Weather-related hazards

### **MITIGATION MEASURES**

1. Establish medical aid posts
2. Deploy ambulances strategically
3. Ensure safe drinking water and sanitation
4. Public awareness through announcements
5. Continuous disease surveillance

### **SUMMARY OF TEMPORAL EVENTS WITH TIMELINE**

PHASE	ACTIVITY

Pre-season	Planning meetings and resource mobilization
1 Month Before	Staff deployment, training
2 Weeks Before	Mock drills and emergency preparedness
Season Start	Activation of medical posts
Peak Pilgrim Days	Maximum deployment
Post-season	Review and reporting

## Phases of Implementation

### 1. Preparedness Phase (Pre-Event Phase)

This phase includes all activities undertaken before the start of the festival to ensure adequate health preparedness and coordination among various departments.

Key activities include:

Conducting planning meetings with stakeholders such as the Health Department, Police, Fire and Rescue Services, Municipality, and temple authorities. Risk assessment of crowd density, environmental hazards, and potential public health threats. Identification and setup of medical aid posts at strategic locations around the temple premises and festival areas. Deployment planning for medical personnel, ambulances, and emergency response teams.

Ensuring hospital preparedness, including availability of emergency beds, essential medicines, and trained staff. Arranging drinking water, sanitation facilities, and waste management systems in coordination with the local authorities. Training of staff and volunteers and conducting briefings or mock drills if required. Preparation of communication systems and emergency contact networks.

## 2. Event Phase (Operational Phase)

This phase includes all activities carried out during the festival period when large numbers of devotees gather at the temple.

Key activities include:

Operation of medical aid posts and provision of first aid and emergency medical care. Continuous crowd monitoring and coordination with police and temple authorities to prevent overcrowding. Deployment and readiness of ambulances for rapid transportation of emergency cases to designated hospitals. Daily health surveillance to identify any cases of communicable diseases or outbreaks. Monitoring of food safety, drinking water quality, and sanitation conditions.

Immediate response to medical emergencies, injuries, heat exhaustion, or other health hazards. Maintaining continuous communication between field teams, hospitals, and the control room.

### 3. Recovery Phase (Post-Event Phase)

This phase includes activities carried out after the completion of the festival to restore normal conditions and review the event.

Key activities include:

Withdrawal of temporary medical aid posts and emergency teams. Final reporting of medical cases, emergencies, and referrals during the festival.

Assessment of public health issues such as disease outbreaks or environmental concerns. Cleaning and restoration of festival areas in coordination with local authorities. Conducting a review meeting with stakeholders to evaluate the effectiveness of the preparedness and response measures. Documentation of lessons learned and recommendations for future festivals.

## 5. LIST OF KEY PEOPLE

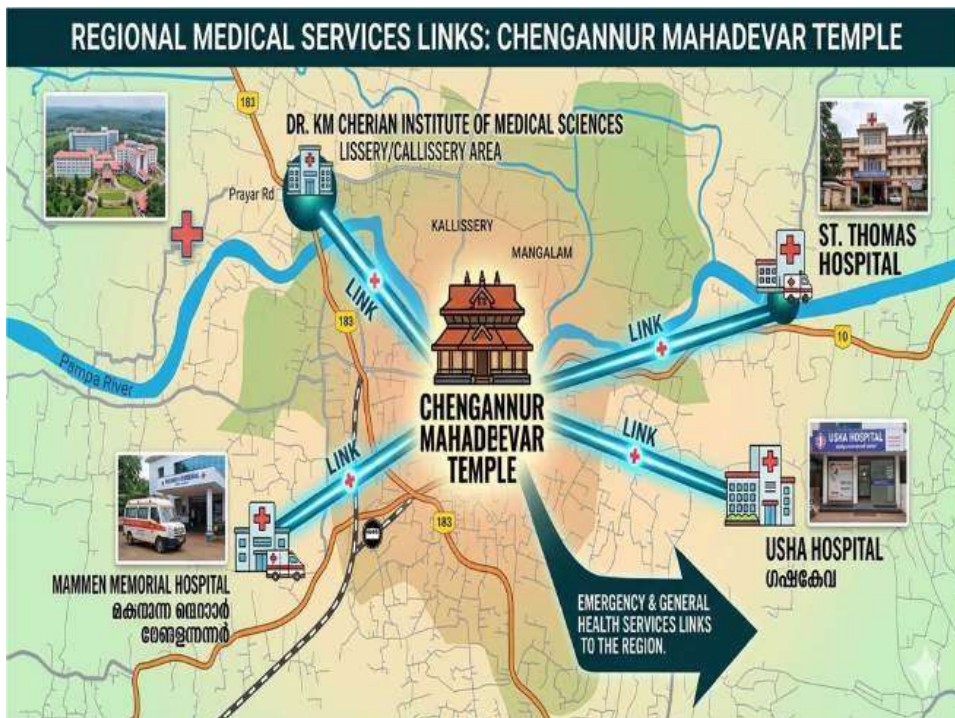
Sl. No	Name of the office	Contact person
1.	collectorate	collector
2.	Village Office	Village Officer

<b>3.</b>	<b>Police Station</b>	<b>Police Officer</b>
<b>4.</b>	<b>Block Office</b>	<b>Officer</b>
<b>5.</b>	<b>KSEB Office</b>	<b>Officer</b>
<b>6.</b>	<b>Fire and Rescue</b>	<b>Officer</b>

#### **LIST OF HOSPITALS DIRECTLY INVOLVED**

<b>Hospital</b>	<b>Level</b>	<b>Distance</b>
District Hospital Chengannur	Primary Referral	<b>1.6 KM</b>
Government Medical College Alappuzha	Tertiary Care	<b>38 KM</b>
Government Medical College Kottayam	Tertiary Care	<b>44 KM</b>

Mammen Memorial Hospital	Multispeciality	1.2 km
Dr. K M Cherian Institute of Medical Sciences	Multispeciality	3.4 km
Usha Hospital	Multispeciality	1.6 km
St. Thomas Hospital	Multispeciality	5.1



## **7. MANDATORY AMBULANCE AND MEDICAL AID POSTS**

### **Geospatial Locations**

#### **Medical aid posts to be established at:**

Chengannur Railway Station, KSRTC Bus Stand, Major pilgrim resting areas,  
Temporary pilgrim shelters

#### **Number and Split of HR**

##### **Each Medical Aid Post:**

Medical Officer, Staff Nurses, Pharmacist, Health Inspector, Volunteers

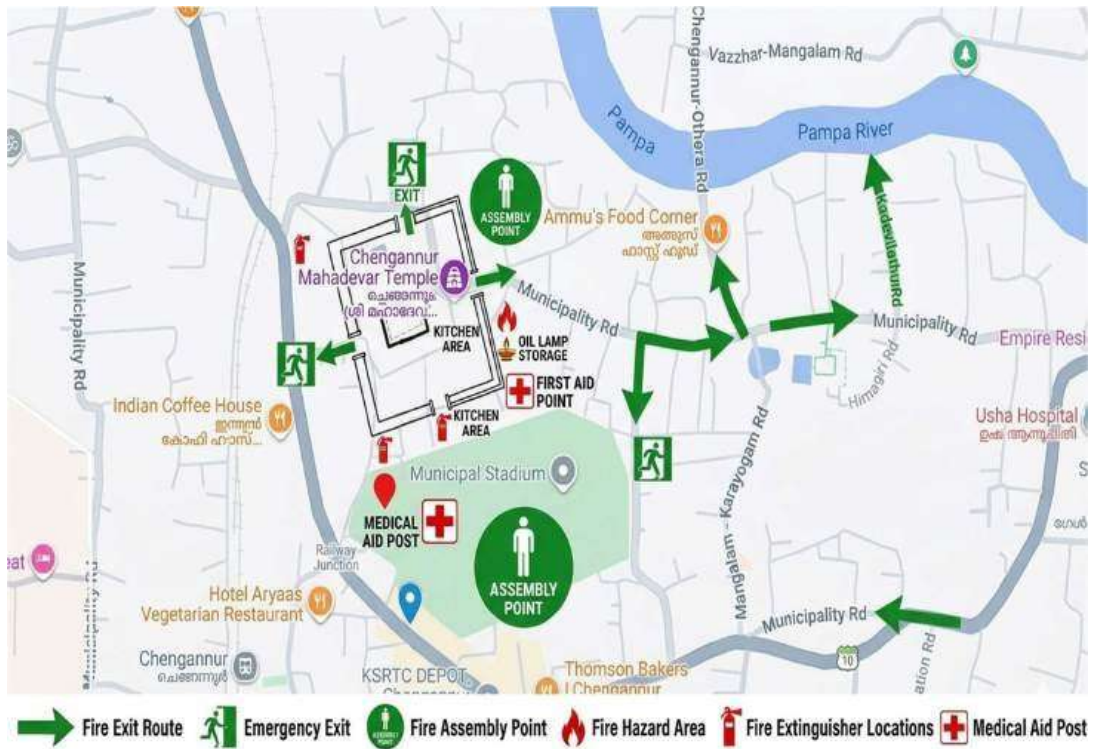
#### **Facilities to be Arranged**

First aid medicines, Oxygen cylinder, Defibrillator, IV fluids, Basic monitoring  
equipment

#### **Support Accessories**

Stretchers, Wheelchairs, Emergency lighting, Drinking water, Public  
announcement system.

### **Geospatial Emergency and Medical Response Plan**



A geospatial emergency response map has been prepared for the temple festival area around Chengannur Mahadeva Temple to facilitate effective crowd movement, emergency evacuation, and medical response during the festival period.

The map identifies important locations including emergency exits, assembly points, medical aid posts, fire hazard areas, and evacuation routes to ensure timely response in case of emergencies.

### Medical Aid Post

A Medical Aid Post will be established near the Municipal Stadium area close to the temple premises. This post will function as the primary point for providing first aid and emergency medical care to devotees and visitors during the festival. Patients requiring further management will be stabilized at the medical aid post and referred to the nearby hospitals, primarily the District Hospital Chengannur.

### **Emergency Exit Routes**

Multiple emergency exit routes have been identified around the temple premises to ensure rapid evacuation in case of crowd congestion, fire, or any other emergency situation.

These exit routes connect the temple area to the surrounding roads including:

- Municipality Road
- Mangalom–Karayogam Road
- Nearby junctions leading to the main town area

Clear signage will be installed along these routes to guide devotees during emergencies.

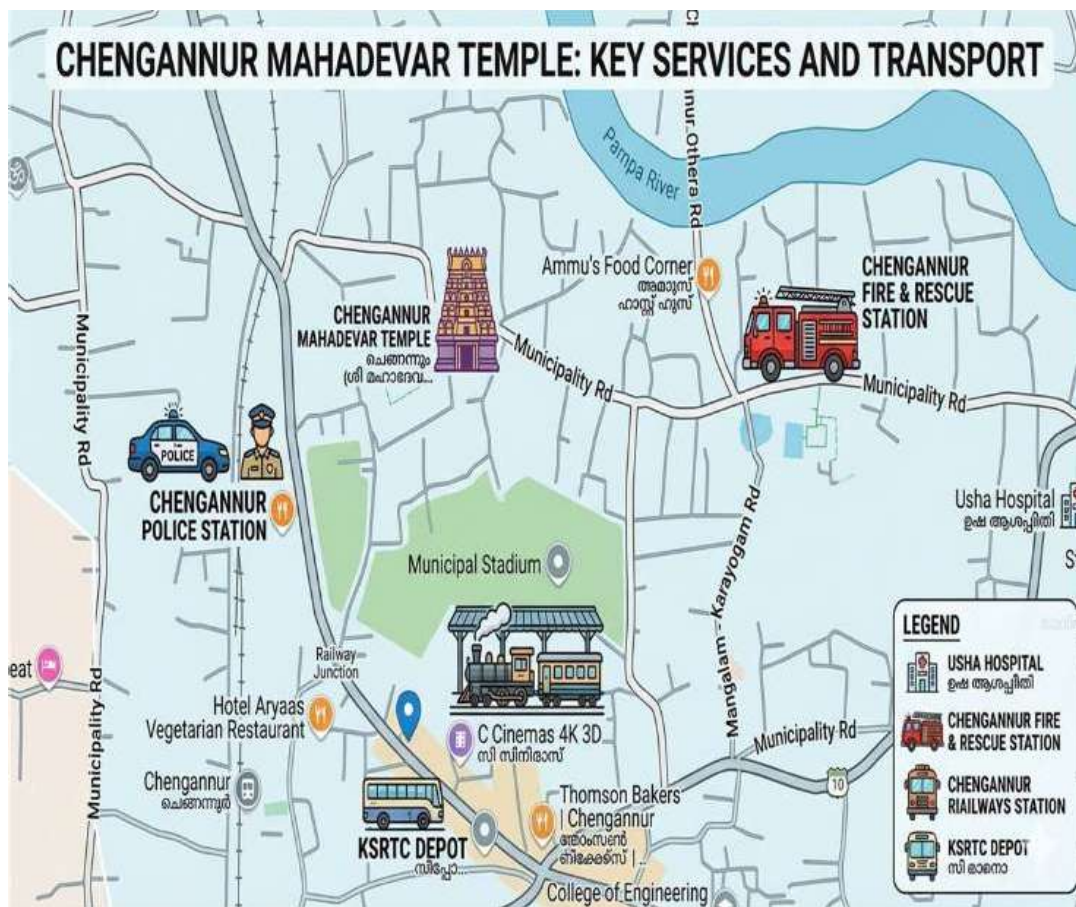
### **Assembly Points**

Two designated assembly points have been identified where people can safely gather in case of evacuation:

1. Area near the temple premises
2. Municipal Stadium ground

These open spaces will serve as safe congregation points during emergency evacuation procedures.

## CHENGANNUR MAHADEVAR TEMPLE: KEY SERVICES AND TRANSPORT



### **Fire Hazard Areas**

Certain areas within the temple complex, particularly the kitchen areas and oil lamp storage locations, have been identified as potential fire hazard zones due to the use of open flames and cooking activities during the festival.

These areas will be monitored continuously and appropriate safety precautions will be implemented.

### **Fire Safety Measures**

Fire safety arrangements include:

- Placement of fire extinguishers at strategic locations
- Coordination with the Fire and Rescue Department
- Continuous monitoring of high-risk zones such as kitchens and lamp storage areas

## Coordination with Emergency Services

During the festival period, coordination will be maintained with:

- Police Department
- Fire and Rescue Services
- Health Department
- Local Municipality

This coordinated approach will ensure timely evacuation, effective crowd control, and rapid medical response in case of emergencies.

## 8. AMBULANCE PLAN

### ALS and BLS Lists

Type
ALS Ambulances
BLS Ambulances-

For emergency medical support during the festival, 108 Emergency Services (KANIV-108) provides 9 Basic Life Support (BLS) ambulances for Alappuzha district , and assistance can be accessed through the toll-free number 1800-599-2270.

## Capacity Building Plans & Meeting Details for Disaster Preparedness

Name of Meeting / Training	Purpose	Date	Stakeholders Involved
Pre-festival Planning Meeting	To discuss health preparedness, resource allocation, and interdepartmental coordination	(Date)	District Medical Officer, Taluk Hospital Superintendent, Police, Fire and Rescue, Municipality, Temple authorities
Interdepartmental Coordination Meeting	To finalize emergency response plan and communication system	(Date)	Health Department, Police, Fire and Rescue, Disaster Management Authority, Municipality
Medical Team Briefing	Orientation of medical officers, nurses, and health staff regarding duties at medical aid posts	(Date)	Medical Officers, Staff Nurses, Health Inspectors, Pharmacists
Ambulance Staff Trainings	Training on emergency response, patient stabilization, and evacuation routes	(Date)	Ambulance drivers, Emergency Medical Technicians (EMT), hospital staff
Fire and Emergency Preparedness Training	Training on fire safety, evacuation procedures, and crowd safety	(Date)	Fire and Rescue Department, Police, volunteers

Mock Drill / Emergency Simulation	Practice exercise for handling medical emergencies or crowd incidents	(Date)	Health Department, Police, Fire and Rescue, volunteers
Post-Festival Review Meeting	Evaluation of preparedness measures and identification of improvements for future events	(Date)	All stakeholder departments

### SOP of Interventions in Common Possible Health Hazards

During mass gatherings such as the annual Ulsavam festival, various health hazards may arise due to large crowd gatherings, environmental conditions, and prolonged outdoor activities. The following Standard Operating Procedures (SOP) outline the response measures for common health emergencies.

Health Hazards	Possible Causes	Immediate Interventions	Referral/ Responsible Unit
Heat Exhaustion / Dehydration	Prolonged exposure to heat  Lack of adequate fluid intake  Overcrowding	Move patient to shaded area, provide ORS/drinking water, monitor vital signs	Refer to nearest hospital if symptoms persist

Cardiac Emergencies	Stress, fatigue, pre-existing heart disease	Immediate assessment, provide oxygen, initiate Basic Life Support (BLS) if required	Immediate ambulance referral to district Headquarters Hospital Chengannur
Trauma / Injuries	Slips, falls, crowd congestion, minor accidents	First aid, control bleeding, immobilize fractures, wound dressing	Refer serious injuries to hospital via ambulance
Fire / Burn Injuries	Oil lamps, fireworks, kitchen areas	Cool burn area with clean water, apply sterile dressing, avoid ointments	Refer moderate and severe burns to hospital; inform Fire and Rescue
Food Poisoning / Gastrointestinal Illness	Contaminated food or water, poor hygiene	Provide ORS, monitor symptoms like vomiting or diarrhea, ensure hydration	Notify Health Inspector; refer severe cases to hospital
Communicable Diseases	Respiratory infections, fever cases, poor hygiene	Early detection at medical post, isolate if needed, provide symptomatic treatment	Report to District Surveillance Unit for monitoring
Crowd-related Emergencies	Sudden crowd surge, panic situations	Coordinate with police for crowd control, evacuate injured persons, provide emergency care	Ambulance referral to hospital
Lost / Vulnerable Persons	Children or elderly separated in crowd	Provide temporary care at medical aid post, inform control room	Coordinate with police for family tracing

## **Conclusion**

The Annual Festival (Varshikotsavam) at Chengannur Mahadeva Temple attracts a large number of devotees from different parts of Kerala and neighboring states, making it a significant mass gathering event in Chengannur. Effective preparedness and coordinated response are essential to ensure the safety and well-being of all participants.

This Standard Operating Protocol (SOP) outlines the comprehensive preparedness measures adopted by the Health Department and associated stakeholders, including risk mitigation strategies, medical aid post deployment, ambulance services, hospital preparedness, and interdepartmental coordination. Capacity building initiatives, emergency response mechanisms, and clear communication channels have been incorporated to strengthen the health system's readiness for potential emergencies.

The successful implementation of this plan depends on close collaboration among the Health Department, Police Department, Fire and Rescue Services, Local Self Government Institutions, Temple Authorities, and other supporting agencies. Continuous monitoring, prompt response to health incidents, and adherence to the established protocols will help ensure safe conduct of the festival.

Through systematic planning, resource mobilization, and coordinated action, the preparedness plan aims to minimize health risks and ensure a safe, organized, and well-managed festival experience for all devotees and visitors.

## Eid Ul Fitr

### Preamble:

In Alappuzha, Eid ul-Fitr (locally called *Cheriyā Perunnal*) is celebrated with communal prayers, charity, festive meals, and cultural traditions unique to Kerala's Mappila Muslim community. The festival often begins a day earlier than other parts of India due to local moon sighting practices.

Eid ul-Fitr, also known as the "Festival of Breaking the Fast," is an important Islamic holiday marking the end of Ramadan. It celebrates the completion of a month of fasting, prayer, and reflection. The festival is observed globally by Muslims with communal prayers, charitable giving, festive meals, and social gatherings. Eid al-Fitr is the first of the two main festivals in Islam, the other being Eid al-Adha. The holiday falls on the first day of Shawwal, the tenth month of the Islamic calendar. One of the most important Islamic celebrations, Eid al-Fitr is celebrated by Muslims worldwide as it marks the end of the month-long, dawn-to-dusk fasting (*sawm*) during Ramadan. The holiday is known under various other names in different languages and countries around the world.

Eid al-Fitr begins with a communal prayer and is followed by visits to relatives, giving gifts, and sharing meals. It has a particular *salah* that consists of two *rakats* generally performed in an open field or large hall. It may only be performed in congregation (*jamā'at*) and features six additional *Takbirs* (raising of the hands to the ears whilst reciting the Takbir, saying "Allāhu 'Akbar", meaning "God is the greatest"). In the Hanafi school of Sunni Islam, there are three *Takbirs* at the start of the first *rakat* and three just before *rukū'* in the second *rakat*. Other Sunni schools usually have 12 *Takbirs*, similarly split in groups of seven and five. In Shia Islam, the *salat* has six *Takbirs* in the first *rakat*

at the end of *Tilawa*, before *rukū'*, and five in the second. Depending on the

juristic opinion of the locality, this *salat* is either *farḍ* (obligatory) or *mustaḥabb* (strongly recommended). After the *salat*, Muslims celebrate the Eid al-Fitr in various ways with food being a central theme,<sup>1</sup> which also gives the holiday the nickname "Sweet Eid" or "Sugar Feast".

In many parts of the world, Eid al-Fitr is also characterized by distinctive local customs that reflect regional cultures. Communities often mark the occasion with large family visits, public celebrations, and the sharing of traditional foods and sweets prepared specifically for the holiday. Markets and neighborhoods in several countries become especially lively as people buy new clothing, gifts, and festive meals, while charitable giving and community gatherings remain central elements of the celebration. Despite cultural differences, the festival commonly emphasizes social connection, generosity, and the strengthening of family and community ties.

### ***Key facts***

- Religious significance: Marks the end of Ramadan fasting
- Date (2025, projected): March 31 – April 2, pending moon sighting
- Calendar basis: 1 Shawwal, 10th month of the Islamic lunar year
- Duration: 1–3 days (varies by country)
- Greeting: “Eid Mubarak” (“Blessed Eid”)

### ***Religious and cultural background***

Eid ul-Fitr was introduced by Prophet Muhammad after the Hijrah to Medina in 622 CE . It concludes the observance of sawm (fasting), one of Islam’s Five Pillars. The festival begins only after the new moon of Shawwal is sighted, emphasising lunar observation as a central feature of the Islamic calendar.

### ***Traditions and observances***

The day begins with a special Eid prayer (Salat al-Eid) held in open grounds or mosques, followed by a sermon and communal supplications for peace and prosperity. Muslims exchange greetings, visit relatives, and share festive foods. Sweet dishes such as sheer khurma (a vermicelli milk pudding) are traditional in South Asia, while baklava and Turkish delight are common in Turkey . Fasting is prohibited on this day as it represents joy and gratitude for completing Ramadan.

### ***Charity and social emphasis***

Before attending prayers, Muslims perform Zakat al-Fitr, a charitable donation of food or money to the poor. This ensures that everyone, regardless of means, can partake in the celebrations. The act reinforces the community's commitment to compassion and social equality.

### ***Global observance***

Eid ul-Fitr is a public holiday in most Muslim-majority nations, including Saudi Arabia, the United Arab Emirates, and Pakistan. In 2025, Pakistan has announced official holidays from March 31 to April 2, subject to moon sightings. The holiday promotes unity, renewal of faith, and the expression of gratitude after a month of spiritual discipline.

## **Muhyudheen Juma Masjid Pulincunnu**

Muhyudheen Juma Masjid in Pulincunnu, Alappuzha, is one of the most prominent mosques in the district, known for its historic significance and beautiful riverside setting. It is a central hub for Eid prayers and community gatherings in the region.

- **Location:** Pulincunnu, Alappuzha district, Kerala.
- **Phone:** +91 89432 94254
- **Category:** Mosque / Place of Worship
- **Religious Importance:** A major mosque for the local Muslim community, especially during Ramadan and Eid ul-Fitr.
- **Architecture:** Traditional Kerala mosque style, often featuring arched entrances, minarets, and spacious prayer halls.

- **Community Role:** Hosts Friday (*Juma*) prayers, religious classes, and acts as a center for charity and social activities.
- **Festivals:** During Eid, thousands gather here for *Salat al-Eid* followed by sermons and communal meals.

## Cultural Significance

- **Historic Roots:** The mosque is part of the rich Islamic heritage of Alappuzha, where Muslim communities have lived for centuries along the backwaters.
- **Social Hub:** Beyond worship, it plays a role in education, welfare, and inter-community harmony.
- **Festive Atmosphere:** On Eid, the mosque and its surroundings are decorated, and families gather along the scenic Pulincunnu backwaters.

### *Risk Mitigation of Gathering*

1. **Crowd control barriers** around prayer zones.
2. **Separate entry/exit points** to avoid congestion.
3. **Dedicated volunteers** for guiding elderly, women, and children.
4. **Noise & firecracker monitoring** per Pollution Control Board norms.
5. **Emergency evacuation drills** for volunteers before the event.

#### *1. Crowd Control Barriers Around Prayer Zones*

Barriers help **organize the flow of people** and prevent overcrowding near the prayer area. They create designated lanes and zones, ensuring worshippers can enter and exit smoothly without pushing or bottlenecks.

#### *2. Separate Entry/Exit Points to Avoid Congestion*

By having **different gates for entry and exit**, the movement of people is streamlined. This reduces the risk of stampedes and makes it easier for emergency responders to access the site if needed.

### ***3. Dedicated Volunteers for Guiding Elderly, Women, and Children***

Specially assigned volunteers provide **personal assistance** to vulnerable groups. This ensures that those who may struggle in large crowds are safely guided to their places and supported during dispersal.

### ***4. Noise & Firecracker Monitoring per Pollution Control Board Norms***

Festive events often involve firecrackers. Monitoring ensures that **noise levels remain within legal limits** and that banned high-decibel crackers are not used, protecting both public health and the environment.

### ***5. Emergency Evacuation Drills for Volunteers Before the Event***

Volunteers are trained in **evacuation procedures** ahead of time. This means they know exactly how to guide people out quickly and safely if an emergency occurs, such as a fire, medical crisis, or crowd surge.

### ***Temporal Events Timeline***

- **04:30 AM – 05:30 AM:** Volunteer briefing & setup.
- **06:00 AM – 07:00 AM:** Arrival of worshippers, crowd management.
- **07:30 AM – 08:30 AM:** Eid prayers.
- **08:30 AM – 09:30 AM:** Sermon & community announcements.
- **09:30 AM – 11:00 AM:** Distribution of food/charity (Zakat al-Fitr).
- **11:00 AM onwards:** Controlled dispersal, monitoring of traffic & safety.

#### ***1. 04:30 AM – 05:30 AM: Volunteer Briefing & Setup***

This is the **preparation phase**. Volunteers gather to receive instructions on crowd management, emergency protocols, and their assigned roles. Barriers, signage, and medical aid posts are set up, ensuring everything is ready before worshippers arrive.

#### ***2. 06:00 AM – 07:00 AM: Arrival of Worshippers, Crowd Management***

Worshippers begin to arrive at the masjid. Volunteers guide them to designated prayer zones, assist the elderly and families, and manage entry points to prevent congestion. Security and police presence ensure orderly movement.

**3. 07:30 AM – 08:30 AM: Eid Prayers**

The central religious activity. Thousands may gather for the special Eid prayer. This requires strict crowd discipline, with volunteers ensuring people remain seated in organized rows and emergency exits remain clear.

**4. 08:30 AM – 09:30 AM: Sermon & Community Announcements**

After prayers, the Imam delivers a sermon (khutbah) highlighting spiritual lessons and community welfare. Announcements about charity, upcoming programs, and safety reminders are made. This is also a time when people reflect quietly, so noise control is important.

**5. 09:30 AM – 11:00 AM: Distribution of Food/Charity (Zakat al-Fitr)**

Community members distribute food packets, clothing, and financial aid to the needy. Volunteers manage queues to avoid overcrowding. Medical teams remain alert for fatigue or health issues among participants.

**6. 11:00 AM Onwards: Controlled Dispersal, Monitoring of Traffic & Safety**

The final phase involves dispersal of worshippers. Volunteers and police coordinate traffic flow, ensuring safe exits. Ambulances remain on standby until the crowd has fully dispersed. Post-event checks are conducted to confirm no incidents occurred

**Command System & Collaboration**

- **Incident Commander:** Chief Imam / Masjid Committee President.

- **Collaboration:** Police, Health Department, Fire & Rescue, Local Self Government (LSG), NGOs.
- **Communication:** Walkie-talkies for leads, mobile backup.

### ***1. Incident Commander: Chief Imam / Masjid Committee President***

- The Incident Commander is the single point of authority during the event.
- Typically, this role is held by the Chief Imam or the Masjid Committee President, who oversees all operations.
- They make final decisions in emergencies, coordinate with external agencies, and ensure religious and community aspects are respected while maintaining safety.

### ***2. Collaboration with Agencies***

- Police: Manage traffic, crowd control, and security.
- Health Department: Provide medical teams, ambulance support, and ensure public health standards.
- Fire & Rescue: Standby for fire hazards or structural emergencies.
- Local Self Government (LSG): Support logistics, sanitation, and local permissions.
- NGOs: Assist with volunteer manpower, food distribution, and welfare services.

This collaboration ensures that all critical services work together seamlessly.

### ***3. Communication System***

- **Walkie-talkies:** Used by team leads for instant communication across zones (entry, prayer hall, medical aid posts, traffic points).
- **Mobile backup:** Ensures redundancy in case walkie-talkies fail or coverage is limited.

- **Command Post:** A central control tent or room where the Incident Commander and agency representatives monitor activities and coordinate responses.

### **Key People & Contacts**

- **Masjid Committee Lead:** Contact via +91 89432 94254.
- **Police Station (Pulincunnu):** Local SHO contact.
- **Health Inspector (Alappuzha):** District Health Office.
- **Fire & Rescue:** Alappuzha Fire Station.

<b>Role / Responsibility</b>	<b>Name / Designation</b>	<b>Contact Number</b>	<b>Notes / Duties</b>
<b>Masjid Committee Lead</b>	President / Chief Imam	+91 89432 94254	Incident Commander; overall coordination of religious and safety aspects
<b>Police Station (Pulincunnu)</b>	Station House Officer (SHO)	Local police station line	Crowd control, traffic management, law & order
<b>Health Inspector (Alappuzha)</b>	District Health Office Representative	District health office number	Medical inspections, onsite health monitoring, coordination with hospitals

<b>Fire &amp; Rescue (Alappuzha)</b>	Fire Station Officer	Alappuzha Fire Station line	Fire hazard prevention, emergency response
<b>Local Self Government (LSG)</b>	Ward Member / Panchayat Officer	Local LSG office contact	Sanitation, logistics, permissions
<b>NGO Volunteers</b>	Local NGO coordinators	Shared contact list	Support services: food distribution, welfare, additional manpower

### ***Hospitals Directly Involved***

The nearest hospitals directly involved with Eid preparedness at Muhiyudheen Juma Masjid, Pulincunnu include THQH Pulincunnu (just minutes away), Alappuzha Medical College (the main referral hospital), and Providence Super Speciality Hospital. Each provides ambulance services, with THQH and Medical College offering government-backed emergency response.

- **Pulincunnu Primary Health Centre**
- **Alappuzha Medical College Hospital** (Base referral hospital)
- **Nearby private hospitals** (empaneled for emergencies).

<b>Hospital Name</b>	<b>Distance from Masjid</b>	<b>Travel Time (approx.)</b>	<b>Services</b>	<b>Ambulance Availability</b>
<b>Taluk Headquarters Hospital (THQH), Pulincunnu</b>	~1 km	5 minutes	Government hospital, Ayushman Bharat empaneled, 24/7 emergency care	<b>Yes – Govt. ambulances (BLS units)</b>
<b>Alappuzha Medical College Hospital</b>	~12 km	25–30 minutes	Tertiary care, trauma, ICU, referral base hospital	<b>Yes – ALS &amp; BLS ambulances, critical care transport</b>
<b>Providence Super Speciality Hospital, Alappuzha</b>	~15 km	30–35 minutes	NABH certified, super-speciality care, emergency medicine	<b>Yes – Private ambulances, 24/7 emergency response</b>
<b>Primary Health Centre, Ramankary</b>	~4 km	10–12 minutes	Basic care, first aid, stabilization	<b>Yes – Local BLS ambulance</b>

## **Ambulance Service Details**

**ALS (Advanced Life Support):** 1 unit with doctor, paramedic, driver.

**BLS (Basic Life Support):** 1 unit with nurse, paramedic, driver.

**Evacuation Routes:** Pre-marked towards Alappuzha Medical College.

**Training:** Volunteers briefed on evacuation routes & triage.

- **BLS (Basic Life Support):** Available at THQH Pulincunnu and PHC Ramankary. Suitable for non-critical transfers.
- **ALS (Advanced Life Support):** Available at Alappuzha Medical College and Providence Hospital. Equipped with ventilators, defibrillators, and trained paramedics.
- **On-Site Plan:**
  - 1 ALS ambulance stationed near Masjid.
  - 1 BLS ambulance for immediate transfers.
  - Coordination with the District Control Room for backup units.

## Geospatial & Preparedness Notes

- **THQH Pulincunnu** is the **closest hospital** and first response point.
- **Alappuzha Medical College** acts as the **base referral hospital** for serious cases.
- **Providence Hospital** provides **private super-speciality backup**.
- Evacuation routes are mapped along **Pulincunnu–Alappuzha road**, with traffic police assisting during dispersal.

### *On-Site Medical Preparedness*

**Mandatory Ambulance Posts: 2 units (1 ALS, 1 BLS)**

- To ensure immediate response capability, two ambulances are stationed at the masjid premises throughout the event. One is an **Advanced Life Support (ALS) unit**, equipped with ventilators, defibrillators, and trained emergency physicians for critical cases. The other is a **Basic Life Support (BLS) unit**,

staffed with paramedics and nurses to handle non-critical emergencies and provide rapid transport. This dual setup guarantees that both minor and major medical incidents can be addressed without delay.

**Medical Aid Posts: First-aid tents with paramedics**

- Temporary medical aid stations are set up near the prayer zones. These tents are staffed by paramedics and nurses who can provide first-line care such as wound dressing, hydration for heat exhaustion, and stabilization of patients before ambulance transfer. Their proximity ensures worshippers can access medical help quickly without leaving the masjid grounds.

**Support Accessories: Stretchers, wheelchairs, oxygen cylinders, defibrillator**

- Essential medical equipment is kept ready at aid posts and ambulances. Stretchers and wheelchairs allow safe movement of patients through crowded areas. Oxygen cylinders are available for respiratory distress cases, and defibrillators are on standby for cardiac emergencies. This ensures preparedness for a wide range of health hazards common in mass gatherings.

***Human Resources (HR) Split***

**Volunteers: 50 (crowd control, guidance)**

A large team of trained volunteers is deployed to manage entry and exit points, guide worshippers to prayer areas, and assist vulnerable groups such as the elderly, women, and children. Their role is crucial in preventing overcrowding and ensuring orderly movement.

**Medical Staff: 10 (doctors, nurses, paramedics)**

A dedicated medical team consisting of doctors, nurses, and paramedics is present on-site. They are responsible for triage, first aid, and coordination with ambulances and hospitals. Their presence ensures immediate medical intervention without waiting for external support.

**Police & Fire: 20 officers**

Local police officers and fire service personnel are stationed around the masjid. Police manage traffic flow, crowd discipline, and law enforcement, while fire officers monitor fire hazards and ensure firefighting equipment is ready. Together, they provide a strong safety net for both crowd and environmental risks.

**Masjid Committee: 15 coordinators**

Members of the masjid committee act as coordinators, linking religious leadership with safety teams. They oversee volunteer deployment, liaise with external agencies, and ensure that religious activities proceed smoothly alongside safety measures.

Category	Number of Personnel	Roles & Responsibilities
Volunteers	50	Crowd control, guiding worshippers to prayer zones, assisting elderly, women, and children, maintaining orderly queues, supporting evacuation drills.

<b>Medical Staff</b>	10	Doctors, nurses, and paramedics stationed at medical aid posts; responsible for triage, first aid, stabilization, and coordination with ambulances and hospitals.
<b>Police &amp; Fire</b>	20	Police officers manage traffic flow, law enforcement, and crowd discipline; Fire service personnel monitor fire hazards, ensure firefighting equipment readiness, and respond to emergencies.
<b>Masjid Committee</b>	15	Coordinators linking religious leadership with safety teams; oversee volunteer deployment, liaise with external agencies, and ensure smooth integration of religious activities with safety measures.

## ***Hospital Preparedness***

### ***1. Incident Command Structure***

- **Duty Doctors as Incident Commanders:** Each hospital designates the duty doctor as the on-site commander responsible for immediate decision-making.
- **Chain of Command:** Clear escalation pathway from ward staff → duty doctor → hospital superintendent → district medical officer.
- **Coordination Hub:** Alappuzha Medical College serves as the central command hospital, receiving updates and directing referrals.

### ***2. Crisis Teams on Red Alert***

- **Activation Time:** Teams mobilized from midnight before Eid, with peak readiness during morning hours.

- **Composition:** Emergency physicians, trauma nurses, paramedics, and administrative staff.
- **Rapid Response Units:** Ambulance crews and triage officers stationed at key points for immediate deployment.

### ***3. Referral Protocols***

- **Primary Base Hospital:** Alappuzha Medical College handles critical and complex cases.
- **Secondary Referrals:** Private hospitals alerted and prepared to absorb overflow, especially for non-critical cases.
- **Transport Coordination:** Ambulances assigned specific routes to avoid duplication and ensure fastest transfers.

### ***4. Resource Readiness***

- **Emergency Supplies:** Blood banks, oxygen cylinders, ventilators, and surgical kits pre-stocked.
- **Staffing:** Surge rosters prepared with backup duty doctors and nurses.
- **Communication Lines:** Dedicated hotlines between hospitals, police, and ambulance services.

### ***5. Community & Public Interface***

- **Information Dissemination:** Public announcements on referral pathways to reduce confusion.
- **Help Desks:** Set up at major hospitals to guide families and patients.
- **Feedback Loop:** Real-time reporting of patient load and resource status to the command center

### ***Key Considerations***

- **Communication Channels:** Ensure rapid contact between duty doctors, crisis teams, and referral hospitals.
- **Resource Allocation:** Ambulances, blood banks, and critical care units should be pre-checked and ready.

- **Public Awareness:** Inform local communities about referral pathways to avoid confusion during emergencies.
- **Monitoring & Feedback:** Real-time updates from each hospital to the command center for situational awareness.

### ***Capacity Building & Meetings***

Capacity building and pre-event meetings are about getting all stakeholders aligned and trained before the actual Eid gathering. Here's how the process unfolds:

#### **Pre-event Meetings (2–3 days before Eid):**

- Representatives from the Masjid committee, police, health department, fire & rescue, and NGOs meet to finalize safety protocols, assign responsibilities, and confirm communication channels.

#### **Stakeholder Collaboration:**

- Each stakeholder outlines their role — police for crowd control, health for medical aid, fire for hazard prevention, NGOs for volunteer support. This ensures no overlap and smooth coordination.

#### **Training & Orientation:**

- Volunteers are briefed on crowd management, assisting vulnerable groups, and emergency evacuation routes. They are taught how to use walkie-talkies, guide worshippers, and respond to medical emergencies.

#### **Mock Drill:**

- A simulated evacuation is conducted to test readiness. Volunteers practice guiding worshippers out of the masjid safely, ambulances are positioned, and hospitals are alerted. This drill helps identify gaps and builds confidence among the team.

**01** : Schedule pre-event meeting Hold a meeting 2–3 days before Eid with all stakeholders to finalize plans.

**02** : Define stakeholder roles Assign responsibilities to police, health, fire, NGOs, and masjid committee for smooth coordination.

**03**: Conduct volunteer orientation Train volunteers on crowd control, assisting vulnerable groups, and emergency protocols.

**04**: Test communication systems Ensure walkie-talkies and mobile backups are functional for incident coordination.

**05**: Run a mock evacuation drill Simulate an emergency evacuation to test readiness and identify gaps in the plan.

### ***SOP for Common Hazards***

- **Heat exhaustion:** Water stations, shaded tents.
- **Stampede risk:** Controlled entry/exit, barricades.
- **Fire hazards:** Fire extinguishers, fire team standby.
- **Medical emergencies:** On-site triage, ambulance referral.

#### **1. Prevent Heat Exhaustion**

Safety

Ensure hydration and shade for staff and visitors.

- Set up water stations at key points
- Provide shaded tents or cooling areas
- Assign staff to monitor for signs of dehydration

#### **2. Control Stampede Risk**

Crowd Safety

Manage crowd flow to prevent panic and injuries.

- Use controlled entry and exit points
- Install barricades to guide movement
- Deploy security staff for crowd monitoring

### **3. Mitigate Fire Hazards**

#### Emergency Response

Prepare for fire incidents with equipment and trained personnel.

- Place fire extinguishers at strategic locations
- Keep a fire response team on standby
- Conduct quick fire safety checks before peak hours

#### **1. Preparedness Measures**

- **Equipment Readiness**
  - Fire extinguishers placed at all strategic points: entrances, stairwells, kitchens, electrical rooms, and patient wards.
  - Fire hydrants and hose reels checked for water pressure and accessibility.
  - Emergency lighting and exit signs tested before peak hours.
- **Personnel Training**
  - Fire response team trained in extinguisher use, evacuation procedures, and patient handling during emergencies.
  - Duty doctors and nurses briefed on immediate evacuation priorities (ICU, neonatal, and immobile patients first).
  - Security staff trained to guide crowds and prevent panic.

#### **2. Standby Arrangements**

- Fire Response Team

- On standby during peak hours, equipped with protective gear.
- Assigned zones of responsibility (e.g., one team per floor).
- Quick communication channel with hospital command center.
- Safety Checks Before Peak Hours
  - Inspect electrical panels, kitchens, and oxygen storage areas.
  - Confirm extinguishers are charged and accessible.
  - Ensure evacuation routes are clear of obstructions.

### ***3. Incident Response Protocol***

- **Detection & Alarm**
  - Any staff spotting smoke or fire must immediately activate the nearest alarm and notify the command center.
  - Public address system used to announce evacuation instructions.
- **Containment**
  - Fire team attempts to extinguish small fires using appropriate extinguishers (CO<sub>2</sub> for electrical, foam/water for general).
  - Shut down electrical supply in affected areas if safe to do so.
- **Evacuation**
  - Patients triaged: critical patients moved first with ambulance support.
  - Controlled exit through designated fire-safe stairwells.
  - Security ensures no stampede or overcrowding at exits.
- **Coordination with External Agencies**
  - Immediate alert to local fire department.
  - Ambulances positioned for rapid patient transfer if hospital sections are compromised.

### ***4. Post-Incident Actions***

- Medical Support: Treat smoke inhalation, burns, or trauma cases at on-site triage stations.

- Documentation: Record incident details, response actions, and patient outcomes.
- Debriefing: Conduct a quick review with staff to identify gaps and improve readiness

#### **4. Handle Medical Emergencies**

##### Critical Care

Provide immediate medical support and referral pathways.

- Establish on-site triage stations
- Keep ambulances ready for rapid transfer
- Train staff in basic life support (BLS) and emergency protocols

#### **Additional Notes**

- Coordination: Duty doctors act as incident commanders, ensuring each SOP step is implemented.
- Communication: Use walkie-talkies or dedicated hotlines for instant updates between crisis teams.
- Drills: Conduct short refresher drills before Eid morning to ensure staff know their roles.
- Documentation: Record all incidents and responses for post-event review and improvement.

## **Conclusion**

The Eid-ul-Fitr preparedness strategy ensures that hospitals in Alappuzha district and surrounding areas are ready to handle the surge of patients and emergencies during the festival morning. By designating duty doctors as incident commanders, activating crisis teams on red alert, and establishing a referral hierarchy with Alappuzha Medical College as the base hospital, the system guarantees clear leadership and coordination.

The SOPs for common hazards—heat exhaustion, stampede risk, fire incidents, and medical emergencies—provide structured responses that minimize risks and safeguard both patients and the public. Preventive measures such as water stations, shaded tents, controlled entry/exit, fire safety checks, and on-site triage ensure proactive readiness.

With fire response teams on standby, ambulance networks coordinated, and private hospitals alerted for overflow, the plan balances preparedness with flexibility. Communication channels, resource allocation, and public awareness campaigns further strengthen resilience.

This preparedness framework is not just about responding to crises—it's about anticipating risks, organizing resources, and ensuring seamless coordination across hospitals. By combining proactive safety measures with clear referral protocols, the healthcare system can provide timely, efficient, and compassionate care during Eid-ul-Fitr, protecting lives and maintaining public trust.

# Chettikulangara Bharani Kurathikad Block



## PREAMBLE

Chettikulangara Grama Panchayat, located in Kurathikad Block, is a region of profound

---

historical, cultural, and spiritual significance in the Alappuzha district. The Panchayat is globally renowned for the sacred Chettikulangara Bhagavathy Temple and the annual Chettikulangara Kumbhabharani in the months of February-March, one of the largest and most vibrant temple festivals in Kerala. Rituals such as Kettukazhcha and Kuthiyottam are not merely ceremonial events but living expressions of faith, tradition, and collective identity, drawing lakhs of devotees from across the state and beyond. Mass gathering events of this magnitude are inherently associated with increased public health risks. During the peak festival months, lakhs of people congregate in and around the temple premises for Kettukazhcha and Kuthiyottam. High crowd density, prolonged exposure, shared water and sanitation facilities, and continuous ritual activities elevate the risk of water-borne and air-borne diseases, dehydration, injuries, and medical emergencies. Hence, robust surveillance systems, proactive health education, and timely preventive interventions are critical to safeguard public health during this period.

## **GENERAL PROFILE OF CHETTIKULANGARA KUMBHABHARANI I**

### ***1. Name of the Festival : Chettikulangara Kumbhabharani***

### ***2. Location***

- **Temple:** Chettikulangara Bhagavathy Temple
- **Panchayat:** Chettikulangara Grama Panchayat
- **Ward :** 15
- **Block:** Kurathikad Block
- **District:** Alappuzha



### 3. Cultural and Historical Significance

Chettikulangara Kumbhabharani is one of the most prominent and spiritually significant temple festivals in Kerala. Dedicated to **Goddess Chettikulangara Bhagavathy**, the festival is deeply rooted in centuries-old traditions, ritual art forms, and community participation. It represents a unique blend of devotion, cultural expression, and collective identity, with rituals that have been passed down through generations.

The festival is particularly renowned for its large-scale ritual performances, community-organised offerings, and the intense spiritual fervour that characterises the entire region during the festival period.

### 4. Period and Duration

- **Month:** February–March (Malayalam month of Kumbham)
- **Main Festival Day:** Kumbhabharani day
- **Total Duration:** Approximately 14 days, including pre- and post-festival rituals
- **Peak Activity Period:** Last 3 days, especially Kumbhabharani day



### 5. Major Rituals and Events

Ritual / Event	Description	Risk & Crow Level
<b>Kuthiyottam</b>	Intense ritual involving young devotees as an offering to the Goddess	High
<b>Kettukazhcha</b>	Display and procession of massive decorated structures (theru, kuthira, effigies)	Very High

<b>Kumbhabharani</b>	Culminating ritual day with continuous worship and mass congregation	Extreme
----------------------	--	---------



### 6. Crowd Profile

- **Estimated Total Footfall:** ~5 lakh devotees over the festival period
- **Peak Day:** Kumbhabharani day
- **Nature of Crowd:**
  - ◆ Local residents

- ◆ Devotees from across Kerala and neighbouring states

→ **Crowd Characteristics:**

- ◆ High density
- ◆ Long duration stay
- ◆ Peak surges during ritual timings

**7. Geographic and Environmental Context**

- The temple and surrounding areas include narrow roads, residential clusters, and temporary open grounds used for rituals and stalls.
- Though the festival occurs during the dry season, heat stress, dehydration, and sanitation pressure are important considerations.



## **RISK MITIGATION OF THE GATHERING**

Mass gatherings of the scale and intensity witnessed during Chettikulangara Kumbhabharani involve dynamic, inter-linked risks related to crowd behaviour, public health, environment, infrastructure, and emergencies. Risk mitigation therefore requires phase-wise planning

before, during, and after the festival integrating preventive, preparedness, response, and recovery measures.

### **MAJOR RISK FACTORS**

<b>Risk Category</b>	<b>Specific Risk</b>	<b>Before Festival</b>	<b>During Festival</b>	<b>After Festival</b>	<b>Lead Team</b>
<b>Crowd-related risks</b>	Extreme crowd density during Kettukazhcha routes and Kumbhabharan i day	Crowd zoning; barricading, one-way movement plan	Real-time crowd control, PA advisories, ritual regulation if required	Phased dispersal, incident review	Police
<b>Medical emergencies</b>	Cardiac events, trauma, dehydration among elderly devotees	ALS/BLS deployment, medical posts; hospital alert	On-site triage, rapid ambulance evacuation	Case review; response time analysis	Health Dept
<b>Communicable diseases</b>	Risk of ILI, diarrhoea, dengue due to crowding and sanitation	Surveillance, water chlorination, vector control	Daily symptom reporting, ORS distribution	Post-festival surveillance	Health Dept
<b>Environmental risks</b>	Heat stress, sudden rain, low-lying water-logging	ORS,shelters,d rainage clearance	Hydration advisories, activity regulation	Stagnation check,disease watch	LSG
<b>Fire &amp; structural risks</b>	Temporary pandals, lighting overload, lamps	Safety certification; fire equipment placement	Continuous inspection, rapid fire response	Safety audit	Fire & Rescue

<b>Sanitation &amp; waste risks</b>	Toilet shortage, waste accumulation	Toilets; waste plan, sanitation staff	Continuous cleaning, food hygiene checks	Final clearance, disinfection	LSG
<b>Transport &amp; road safety</b>	Traffic congestion, ambulance obstruction	Traffic diversion, ambulance corridors	Police regulation, priority emergency movement	Traffic normalization	Police
<b>Vulnerable populations</b>	Elderly, children, persons with disabilities	Help desks, wheelchairs, volunteers	Priority care, assisted movement	Follow-up support	Health & LSG

## PHASE-WISE RISK MITIGATION PLAN

### ***A. PRE-FESTIVAL PHASE (Preparedness & Prevention)***

The pre-festival phase focuses on anticipatory risk reduction through systematic planning and inspections. Key activities include detailed crowd estimation and zoning, identification of high-risk locations, inspection and regulation of temporary structures, food stalls, electrical installations, and sanitation facilities. Health preparedness measures such as disease surveillance strengthening, water quality testing, vector-control activities, medical fitness screening for ritual participants (especially children involved in Kuthiyottam), and empanelment of ambulances are undertaken. Inter-departmental coordination meetings, mock drills, community awareness programmes, and dissemination of health advisories ensure that all stakeholders are informed, prepared, and aligned well before the festival begins.

Risk Area	Risk Factors	Mitigation Measures (Before Festival)
<b>Crowd Management</b>	High footfall, ritual congestion	<ul style="list-style-type: none"> <li>• Crowd estimation &amp; zoning</li> <li>• One-way movement plans</li> <li>• Barricading &amp; queue systems</li> <li>• Identification of high-risk choke points</li> </ul>
<b>Public Health</b>	Disease transmission	<ul style="list-style-type: none"> <li>• Strengthening disease surveillance (ILI, ADD, fever)</li> <li>• Pre-festival sanitation drive</li> <li>• Water quality testing &amp; chlorination</li> </ul>
<b>Medical Emergencies</b>	Delayed response	<ul style="list-style-type: none"> <li>• Identification of medical aid post locations</li> <li>• Ambulance empanelment &amp; route mapping</li> <li>• Stocking emergency drugs &amp; consumables</li> </ul>
<b>Environmental Risks</b>	Heat, rain	<ul style="list-style-type: none"> <li>• ORS &amp; drinking water points planning</li> <li>• Temporary shelters &amp; shade mapping</li> </ul>
<b>Communicable Diseases</b>	Dengue, Leptospirosis, Hepatitis, ADD, ILI	<ul style="list-style-type: none"> <li>• Source reduction activities</li> <li>• Fogging &amp; larvicidal measures</li> <li>• Awareness on personal protection</li> <li>• Water quality testing</li> </ul>

		<ul style="list-style-type: none"> <li>• Chlorination</li> </ul>
<b>Temporary Food Stalls &amp; Vendors</b>	<p>Unlicensed vendors</p> <ul style="list-style-type: none"> <li>• Unsafe food handling</li> <li>• Use of contaminated water</li> <li>• Improper storage of cooked food</li> <li>• Reuse of oil</li> </ul>	<ul style="list-style-type: none"> <li>• Mandatory registration &amp; licensing of all food stalls</li> <li>• Joint inspection by Health &amp; Food Safety Departments</li> <li>• Water quality testing for cooking &amp; drinking</li> <li>• Ban on high-risk foods</li> <li>• IEC on safe food practices for vendors</li> </ul>
<b>Temporary Shops &amp; Commercial Stalls</b>	<ul style="list-style-type: none"> <li>• Structural instability</li> <li>• Overcrowding of narrow pathways</li> <li>• Electrical overloading</li> </ul>	<ul style="list-style-type: none"> <li>• Structural safety inspection before approval</li> <li>• Regulated spacing between stalls</li> <li>• Electrical safety certification</li> <li>• Removal of unauthorized extensions</li> </ul>
<b>Drinking Water Supply (Shops &amp; Public Points)</b>	<p>Unsafe water, unchlorinated sources</p>	<ul style="list-style-type: none"> <li>• Identification of all drinking water sources used by vendors</li> <li>• Water quality testing (bacteriological &amp; residual chlorine)</li> <li>• Chlorination of temporary tanks</li> <li>• Prohibition of unapproved water sources</li> </ul>
<b>Sanitation Facilities (Toilets &amp; Waste)</b>	<ul style="list-style-type: none"> <li>• Inadequate toilets</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of toilet-to-crowd ratio</li> </ul>

	<ul style="list-style-type: none"> <li>• Poor waste disposal near shops</li> </ul>	<ul style="list-style-type: none"> <li>• Placement of handwash stations near food areas</li> <li>• Solid waste management plan with daily clearance</li> </ul>
<b>Fire &amp; Structural Safety</b>	Temporary structures	<ul style="list-style-type: none"> <li>• Structural safety inspection</li> <li>• Electrical safety audit</li> <li>• Fire clearance &amp; extinguisher placement</li> </ul>
<b>Inter-agency Coordination</b>	Fragmented response	<ul style="list-style-type: none"> <li>• Formation of Incident Command System (ICS)</li> <li>• Coordination meetings &amp; role clarity</li> </ul>
<b>Community Awareness</b>	Non-compliance	<ul style="list-style-type: none"> <li>• IEC campaigns on health &amp; safety</li> <li>• Announcements through temple committee</li> </ul>

### ***B. DURING FESTIVAL PHASE (Response & Control)***

The during-festival phase emphasizes real-time risk management and rapid response. Continuous crowd monitoring, regulated crowd movement, and deployment of police and trained volunteers help prevent overcrowding and panic. Medical aid posts function round-the-clock with trained personnel, essential drugs, and equipment, supported by strategically placed ambulances with clear evacuation routes. Active syndromic surveillance, food safety enforcement, sanitation monitoring, and prompt management of medical emergencies including trauma, dehydration, cardiac events, seizures, and alcohol-related incidents are critical during this phase. A centralized control room ensures timely communication, coordinated decision-making, and immediate escalation to higher facilities when required.

Risk Area	Risk Scenario	Mitigation Measures (During Festival)
<b>Crowd Surge</b>	Sudden influx, panic	<ul style="list-style-type: none"> <li>• Real-time crowd monitoring</li> <li>• Police &amp; volunteer deployment</li> <li>• Temporary diversion of crowd flow</li> </ul>
<b>Medical Emergencies</b>	Collapse, trauma	<ul style="list-style-type: none"> <li>• Functional medical aid posts 24x7</li> <li>• Rapid triage &amp; stabilization</li> <li>• Dedicated ambulance corridors</li> </ul>
<b>Communicable Diseases</b>	Dengue, Leptospirosis, Hepatitis, ADD, ILI	<ul style="list-style-type: none"> <li>• Daily syndromic surveillance</li> <li>• Rapid response teams for clusters</li> <li>• Health education announcements</li> </ul>
<b>Heat &amp; Dehydration</b>	Prolonged rituals	<ul style="list-style-type: none"> <li>• ORS distribution points</li> <li>• Water misting / shaded rest areas</li> </ul>
<b>Fire Incidents</b>	Lamps, fireworks	<ul style="list-style-type: none"> <li>• Fire &amp; Rescue standby teams</li> <li>• Immediate isolation of incident area</li> </ul>
<b>Sanitation</b>	Overuse of toilets	<ul style="list-style-type: none"> <li>• Continuous cleaning &amp; waste removal</li> <li>• Adequate mobile toilets &amp; handwashing</li> </ul>
<b>Traffic &amp; Road Safety</b>	Congestion	<ul style="list-style-type: none"> <li>• Traffic diversions</li> <li>• Ambulance priority lanes</li> </ul>

<b>Information flow</b>	Delays, confusion	<ul style="list-style-type: none"> <li>• Central control room</li> <li>• Dedicated communication channels</li> </ul>
-------------------------	-------------------	--
































































### ***C. POST-FESTIVAL PHASE (Recovery & Surveillance)***

The post-festival phase focuses on recovery, surveillance, and system strengthening. Enhanced disease surveillance is continued for at least 7–14 days to detect any delayed onset of communicable diseases. Comprehensive cleaning, waste disposal, drainage clearing, and vector-control measures are carried out to prevent post-event health hazards. Medical follow-up is ensured for reported cases, and all incidents are documented and reviewed through post-event debriefing meetings. Lessons learnt are analysed to identify gaps and best practices, enabling refinement of standard operating procedures and strengthening preparedness for future mass gathering events.

<b>Risk Area</b>	<b>Scenario</b>	<b>Mitigation Measures (After Festival)</b>
<b>Disease Outbreaks</b>	Incubation period	<ul style="list-style-type: none"> <li>• Post-event disease surveillance (7–14 days)</li> <li>• Early outbreak detection &amp; reporting</li> </ul>
<b>Environmental Risks</b>	Waste accumulation	<ul style="list-style-type: none"> <li>• Post-festival cleaning drive</li> <li>• Drainage clearing &amp; disinfection</li> </ul>
<b>Vector Proliferation</b>	Stagnant water	<ul style="list-style-type: none"> <li>• Anti-larval measures</li> </ul>

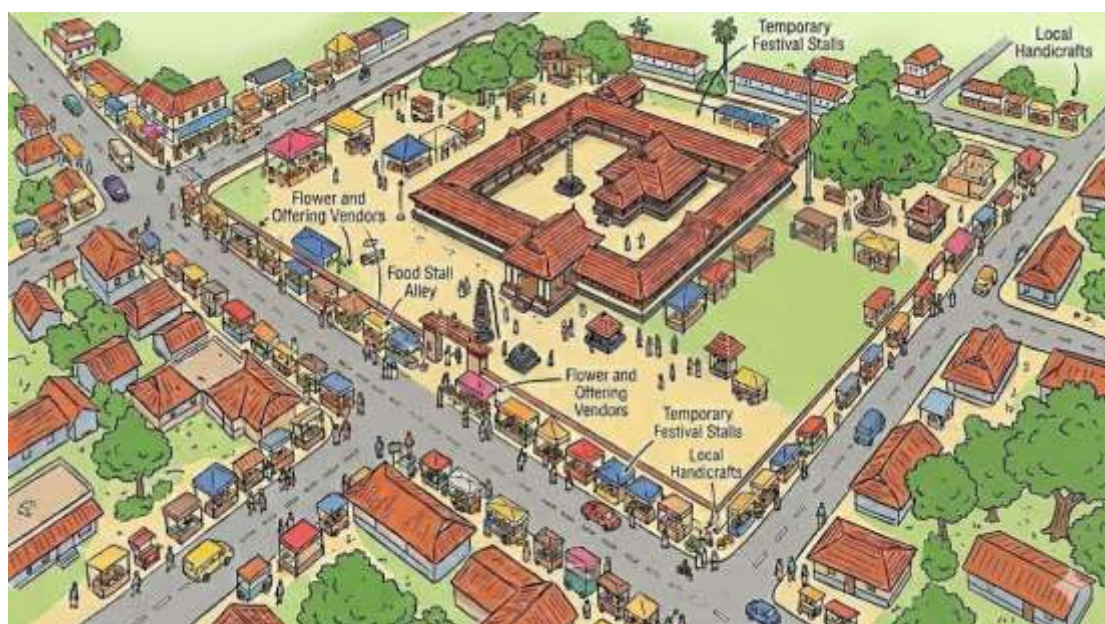
		<ul style="list-style-type: none"> <li>• Source reduction inspections</li> </ul>
<b>Data &amp; Learning</b>	Missed gaps	<ul style="list-style-type: none"> <li>• Review meeting &amp; documentation</li> <li>• Analysis of incidents &amp; near-misses</li> </ul>
<b>Community Health</b>	Residual illness	<ul style="list-style-type: none"> <li>• Follow-up care &amp; referrals</li> <li>• Awareness on symptom reporting</li> </ul>
<b>System Strengthening</b>	Future events	<ul style="list-style-type: none"> <li>• Updating SOPs based on lessons learnt</li> </ul>

# CHETTIKULANGARA KUMBHABHARANI FESTIVAL: PUBLIC HEALTH PREPAREDNESS

FESTIVAL CONTEXT	RISK DOMAIN	KEY HEALTH ISSUES	PREVENTIVE & CONTROL MEASURES
 <p>High Crowd Density</p>  <p>High Crowd Density    Hot Climate</p>  <p>Fasting Devotees    Prolonged Duration</p> 	 <p><b>FOOD SAFETY (STREET VENDORS &amp; STALLS)</b></p> 	    <p>Acute Diarrhoeal Diseases    Food Poisoning    Typhoid    Hepatitis A</p>	     <p>Mandatory FSSAI Registration    Daily Inspection by HI/THI    Prohibition of Previous Day Food    Safe Cooking Temperature    Food Handler Health Screening</p>
	 <p><b>WATER USE</b></p> 	 <p>Water-borne diseases (Diarrhoea, Dysentery)</p>	   <p>Supply of Chlorinated Water    Ban on Untreated Well Water    On-site Chlorination Checks</p>
	 <p><b>PERSONAL HYGIENE</b></p> 	 <p>Enteric &amp; Respiratory Infections</p>	   <p>Handwashing Stations    Gloves/Cape/Aprons Mandatory    Exclusion of Symptomatic Handlers</p>
	 <p><b>WASTE MANAGEMENT &amp; VECTOR BREEDING</b></p> 	    <p>Fly Breeding    Rodent Infestation    Dengue    Chikungunya</p>	    <p>Segregated Covered Bins    Frequent Waste Clearance    Daily Inspection &amp; Dry Day Enforcement    Larval Source Reduction</p>
	 <p><b>MIGRANT WORKERS - HEALTH &amp; LIVING CONDITIONS</b></p> 	    <p>Respiratory Infections    Skin Infections    Heat Exhaustion    Dehydration</p>	     <p>Overcrowded Shelter Prevention    Safe Drinking Water &amp; Sanitation    Health Screening, ORS Availability    Shaded Rest Breaks    Shaded Breaks, Health Education</p>
	 <p><b>COMMUNICABLE DISEASE &amp; SUBSTANCE USE</b></p> 	    <p>ARI    Influenza-like illness    Accidents    Violence</p>	    <p>Early Reporting    Referral Mechanism    Enforcement &amp; Coordination with Police    Counseling</p>
	 <p><b>CHILD &amp; VULNERABLE POPULATIONS</b></p> 	 <p>Exposure to Unsafe Food &amp; Environment</p>	  <p>Zoning of Stalls Away from Ritual Routes    Child-Friendly Spaces</p>

**A COLLABORATIVE EFFORT FOR A SAFE AND HEALTHY FESTIVAL**

*RISKS ASSOCIATED WITH STREET VENDORS, TEMPORARY SHOPS, FOOD STALLS, AND MIGRANT WORKERS*



During the Chettikulangara Kumbhabharani Festival, the sudden influx of temporary street vendors, food stalls, makeshift shops, and migrant workers significantly increases public health risks. These activities, while essential to festival economy and convenience, can act as amplifiers of communicable diseases, food and water-borne illnesses, environmental sanitation issues, and occupational health risks if not systematically regulated. Given the high crowd density, hot climate, devotees and prolonged festival duration, strict preventive and regulatory measures are essential before, during, and after the festival.

### Key Risk Factors, Health Issues, and Control Measures

Domain	Risk Factors	Potential Health Issues	Preventive & Control Measures
<b>Food Safety (Street Vendors &amp; Food Stalls)</b>	Temporary kitchens, unlicensed vendors, mass cooking, reuse of oil, prolonged storage of cooked food, poor utensil hygiene	Acute diarrhoeal diseases, food poisoning, typhoid, hepatitis A	Mandatory registration, daily inspection by HI/JHI, prohibition of previous-day food, safe cooking temperature, food handler health screening

<b>Water Use</b>	Use of unsafe water for cooking, washing utensils, ice preparation	Water-borne diseases (diarrhoea, dysentery, hepatitis A)	Supply of chlorinated water, ban on untreated well water, on-site chlorination checks
<b>Personal Hygiene of Food Handlers</b>	Lack of handwashing, no protective gear, sick food handlers	Transmission of enteric & respiratory infections	Handwashing stations, gloves/caps/aprons mandatory, exclusion of symptomatic handlers
<b>Waste Management</b>	Open dumping, food waste accumulation, inadequate bins	Fly breeding, rodent infestation, diarrhoeal diseases	Segregated covered bins, frequent waste clearance by LSG
<b>Vector Breeding</b>	Wastewater stagnation, discarded containers	Dengue, chikungunya	Daily inspection, dry day enforcement, larval source reduction
<b>Migrant Workers</b>	Overcrowded temporary shelters, poor ventilation, unsafe water	Respiratory infections, skin infections, diarrhoeal diseases	Health screening, safe drinking water, sanitation facilities, health education
<b>Communicable Disease Spread</b>	Crowded interaction with devotees, lack of awareness	ARI, influenza-like illness	Health education, early reporting, referral mechanism

<b>Substance Use (Associated Workers)</b>	Alcohol or substance use after work hours	Accidents, violence, poor hygiene practices	Enforcement, coordination with police, counselling where required
---	--	--	---

**RISK FACTORS AND MITIGATION MEASURES DURING KETTUKAZHCHA / THERU PROCESSION**



**A STRUCTURAL SAFETY & INSPECTIONS**

① **MANDATORY PRE-MOVEMENT INSPECTION**

② **REINFORCED JOINTS & BASES**

**B MOVEMENT CONTROLS**

① **APPROVED ROUTE WITH TURN ANALYSIS**

② **ROUTE CLEARANCE & POWER SHUTDOWN COORDINATION**

**C CROWD-STRUCTURE INTERFACE**

① **CHILDREN & ELDERLY SAFE DISTANCE**

② **VOLUNTEERS AND POLICE FORM A PERIMETER**

③ **CLEAR PUBLIC ANNOUNCEMENTS BEFORE/ DURING MOVEMENT**

**D ELECTRICAL & FIRE SAFETY**

**E EMERGENCY RESPONSE & STOP PROTOCOL**

① **STOP SIGNAL**

**IMMEDIATE HALT & CROWD CLEARANCE PROTOCOL**

③ **EMERGENCY MEDICAL RESPONSE**

④ **EMERGENCY MEDICAL RESPONSE**

Kettukazhcha (Theru procession) is the most visually grand and structurally complex ritual of the Chettikulangara Kumbhabharani, involving massive, tall, and mobile structures moved through densely crowded routes. Given the size, height, weight, and human-powered movement of the Theru, this event carries significant structural, crowd, and occupational safety risks, requiring strict controls before and during movement.

## **A. STRUCTURAL RISK FACTORS**

### ***Identified Risks***

- Structural instability due to height and weight of Theru
- Weak joints, poor anchoring, or material fatigue
- Damage caused by wind, uneven ground, or moisture
- Inadequate load-bearing capacity of wheels/rollers
- Improper balancing during turns or halts

### ***Risk Mitigation Measures***

- Mandatory pre-movement structural safety inspection by competent technical personnel
- Certification of structural integrity before public display
- Reinforcement of joints, bases, and load-bearing components

## **B. MOVEMENT-RELATED RISK FACTORS**

### ***Identified Risks***

- Loss of control during pulling or pushing
- Sudden crowd surge towards Theru
- Narrow roads and sharp turns
- Slippery or uneven road surfaces
- Poor coordination among pullers

### ***Risk Mitigation Measures***

- Pre-defined movement route approval with width and turning radius assessment

- Route clearance of obstructions, overhead cables, and signage
- Road surface inspection and correction of uneven patches
- Controlled speed with designated stop points
- Use of trained and identifiable movement coordinators

### **C. CROWD–STRUCTURE INTERFACE RISKS**

#### ***Identified Risks***

- Devotees standing too close to moving Theru
- Children and elderly in high-risk proximity
- Panic due to sudden halts or imbalance

#### ***Risk Mitigation Measures***

- Creation of buffer zones around moving structures using barricades/ropes
- Deployment of police and trained volunteers for crowd control
- Prohibition of public access within defined danger radius
- Clear public announcements before and during movement

### **D. ELECTRICAL & FIRE-RELATED RISKS**

#### ***Identified Risks***

- Contact with overhead electric lines
- Fire risk from decorative lighting

#### ***Risk Mitigation Measures***

- Coordination with Electricity Department for temporary power shutdown or line elevation
- Inspection of all electrical decorations
- Fire extinguishers positioned along route
- Fire & Rescue standby during movement

### **E. EMERGENCY RESPONSE & STOP PROTOCOL**

### ***Identified Risks***

- Structural tilt or partial collapse
- Medical emergency during procession

### ***Risk Mitigation Measures***

- Clear STOP SIGNAL protocol known to all coordinators
- Immediate halt and crowd clearance on warning signs
- Dedicated emergency access corridors
- Rapid medical and rescue response activation

Kettukazhcha is a symbol of collective devotion and artistic excellence. Ensuring the structural stability and safe movement of Theru is essential to protect devotees, performers, and workers, and to uphold the sanctity of the ritual without preventable harm.

### ***STAMPEDE RISK AND MITIGATION MEASURES***

Sudden and unpredictable crowd inflow and outflow during the Kettukazhcha procession, especially at peak ritual moments, significantly increases the risk of crowd congestion and loss of movement control. The convergence of multiple processions at temple junctions, combined with narrow approach roads and physical bottlenecks near temple entry and exit points, further amplifies the likelihood of crowd pressure and instability. Environmental factors such as dust, uneven ground surfaces, and water spillage can lead to slips and falls, particularly in densely packed areas. The presence of vulnerable groups including children participating in Kuthiyottam, elderly devotees, and individuals observing prolonged fasting increases the risk of collapse and injury. Additionally, panic triggered by rumours, sudden loud noises, perceived structural instability, or medical emergencies within the crowd can rapidly escalate into dangerous crowd surges or stampede-like situations if not promptly and effectively managed.

### ***Stampede prevention & Control measures***

#### **1. Pre-Festival Measures**

- Detailed crowd flow mapping with identification of bottlenecks

- Structural safety certification of Kettukazhcha structures and temporary platforms
- Installation of barricades and one-way pedestrian routes
- Removal of encroachments, unauthorized vendors, and parked vehicles
- Pre-positioning of medical aid posts, ambulances, and fire & rescue teams
- Training of police, volunteers, and temple staff on crowd psychology and stampede prevention

## **2. During Festival Measures**

- Real-time crowd density monitoring by police and control room
- Staggered movement and controlled release of processions
- Strict enforcement of one-way movement during peak rituals
- Deployment of trained volunteers at high-risk junctions
- Continuous public address announcements to prevent panic and misinformation

## **3. Emergency Response Measures**

- Rapid lateral dispersal of crowd rather than forward push
- Immediate activation of medical triage protocol
- Dedicated evacuation corridors cleared by police
- Priority evacuation for children, elderly, and injured persons
- Immediate information flow through control room to avoid rumours

# KETTUKAZHCHA PROCESSION: STAMPEDE RISK ASSESSMENT & MITIGATION MEASURES

STAMPEDE RISK FACTORS	STAMPEDE PREVENTION & CONTROL MEASURES		
 <b>Sudden Crowd Surges</b> (at ritual moments)  <b>Procession Convergence</b> (at temple junctions)  <b>Narrow Roads &amp; Bottlenecks</b>  <b>Slippery Surfaces</b> (dust, water spillage)  <b>Vulnerable Groups</b> (Children in Kuthiyottam, Elderly, Fasting Devotees)  <b>Panic Triggers</b> (Rumors, Loud Noises)	<b>PRE-FESTIVAL MEASURES</b>  <b>Detailed Crowd Flow Mapping &amp; Bottleneck</b>  <b>Structural Safety Certification</b> (Kettukazhcha, platforms)  <b>Barricades &amp; One-Way Pedestrian Routes</b>  <b>Removal of Encroachments &amp; Vehicles</b>  <b>Pre-positioning Medical, Ambulance, Fire Teams</b>  <b>Staff Training on Crowd Psychology</b>	<b>DURING FESTIVAL MEASURES</b>  <b>Real-time Crowd Density Monitoring</b> (Police Control Room)  <b>Staggered Movement &amp; Controlled Procession Release</b>  <b>Strict One-Way Movement Enforcement</b>  <b>Trained Volunteers at High-Risk Junctions</b>  <b>Continuous Public Address Announcements</b>	<b>EMERGENCY RESPONSE MEASURES</b>  <b>Rapid Lateral Crowd Dispersal</b> (not forward push)  <b>Immediate Medical Triage Activation</b>  <b>Dedicated Evacuation Corridors</b>  <b>Priority Evacuation for Vulnerable Groups</b>

**A COLLABORATIVE EFFORT FOR A SAFE KETTUKAZHCHA PROCESSION**



## **FOOD SAFETY MEASURES DURING FESTIVAL DAYS (ANNADANAM)**



Annadanam and community food distribution are integral to festivals like Chettikulangara Kumbhabharani, reflecting the spirit of service and collective devotion. At the same time, the scale of food preparation and mass consumption during festival days poses a significant public health risk if food safety standards are not strictly followed. Therefore, structured food safety measures are essential to prevent food-borne illnesses and protect the health of devotees.

### **A. KEY FOOD SAFETY RISK FACTORS**

- Large-scale cooking and mass serving within short time periods
- High ambient temperature and humidity
- Use of temporary kitchens and utensils
- Involvement of multiple food handlers and volunteers
- Risk of unsafe water use for cooking and washing
- Inadequate hand hygiene and cross-contamination
- Storage of cooked food for prolonged periods
- Improper waste disposal attracting flies and rodents

### **B. MANDATORY FOOD SAFETY MEASURES**

#### ***1. Food Preparation & Cooking***

- Only freshly prepared food shall be cooked and served daily
- Food shall

- be prepared in small, manageable batches
- Reheating and reuse of cooked food strictly prohibited
- Cooking must be done at adequate temperatures to ensure food safety
- Raw and cooked food areas must be strictly segregated

## **2. Water Safety**

- Only potable, chlorinated water to be used for cooking, drinking, and washing
- No use of open wells, untreated surface water, or tanker water without certification
- Drinking water containers must be covered, cleaned, and labelled
- Ladles and taps to be used—no hand dipping

## **3. Food Handler Hygiene**

→ All food handlers must:

- ◆ Wash hands with soap and water frequently
- ◆ Wear clean clothing, head covers, and gloves
- ◆ Keep nails short and avoid jewellery

→ Any food handler with fever, diarrhoea, cough, skin lesions, or wounds must be excluded immediately

## **4. Serving Practices**

- Food must be served hot and within safe time limits
- Cooked food must be covered at all times to prevent contamination
- Serving utensils must not touch food directly by hand
- Avoid overcrowding at serving points through queue management

## **5. Storage & Leftovers**

- No storage of cooked food for the next serving session
- Leftover food shall not be reused or redistributed
- Raw materials to be stored off the ground, covered, and protected from pests

## **6. Kitchen & Environment Hygiene**

→ Kitchens and Annadanam areas must be:

- ◆ Clean, well-ventilated, and pest-free
- ◆ Protected from dust, smoke, and waste accumulation
- Regular surface cleaning and disinfection to be done
- Handwashing stations with soap to be available near kitchens and serving areas

### **7. Waste Management**

- Adequate covered waste bins to be placed near food preparation and serving areas
- Food waste to be removed at frequent intervals
- No open dumping of food waste
- Waste disposal to be coordinated with Local Self Government sanitation teams

### **8. Monitoring & Enforcement**

- Continuous supervision by Health and Food Safety Officers
- Surprise inspections during peak Annadanam hours
- Immediate corrective actions for any lapses
- Closure of food distribution units in case of serious violations

### **9. Disease Surveillance & Reporting**

- Active surveillance for:
  - ◆ Diarrhoea
  - ◆ Vomiting
  - ◆ Abdominal pain clusters
- Immediate reporting of suspected food-borne illness to control room
- Line listing and investigation as per protocol

## **SUMMARY OF TEMPORAL EVENTS OF GATHERING WITH TIMELINE**

The Chettikulangara Kumbhabharani festival unfolds over several days with distinct ritual phases, each associated with varying crowd density, risk levels, and preparedness requirements. A temporal, event-wise preparedness plan is essential to ensure continuous risk mitigation before, during, and after peak rituals.

## TEMPORAL EVENT-WISE PREPAREDNESS FRAMEWORK

Phase	Period	Nature of Crowd	Overall Risk Level
Pre-festival phase	7–14 days before Bharani	Gradual increase	Low–Moderate
Ritual build-up	7 days before Bharani	Large, mobile	Moderate–High
Peak festival day	Kumbhabharani day	Very dense, prolonged	Very High / Critical
Immediate post-festival	1–7 days after	Gradual dispersal	Moderate
Post-event surveillance	Up to 14 days	Community-wide	Public health risk



### TEMPORAL EVENT-WISE PREPAREDNESS PLAN

### **1. PRE-FESTIVAL PERIOD (7–14 DAYS BEFORE BHARANI)**

<b>Component</b>	<b>Details</b>
<b>Major Activities</b>	Arrival of temporary shops, preparation of Kettukazhcha structures
<b>Expected Crowd</b>	Low to moderate
<b>Key Risks</b>	Unsafe temporary structures, unhygienic food stalls, vector breeding
<b>Preparedness Measures</b>	<ul style="list-style-type: none"><li>• Registration &amp; inspection of temporary shops</li><li>• Food safety inspections</li><li>• Structural &amp; electrical safety checks</li><li>• Source reduction for dengue &amp; leptospirosis</li><li>• Water quality testing</li></ul>
<b>Medical Preparedness</b>	On-call medical teams, stockpiling of drugs
<b>Surveillance Focus</b>	Fever, ILI, ADD
<b>Lead Departments</b>	Health, LSG, Food Safety, Police, Fire & Rescue

### **2. RITUAL BUILD-UP PHASE – KUTHIYOTTAM (7 DAYS BEFORE BHARANI)**

Component	Details
<b>Major Activities</b>	Kuthiyottam rituals, increased pilgrim flow
<b>Expected Crowd</b>	High
<b>Peak Hours</b>	Early morning to late night
<b>Key Risks</b>	<p>Dehydration, minor injuries, crowd congestion</p> <p>Safeguarding children during Kuthiyottam- Children should always be accompanied by designated guardians.</p>
<b>Preparedness Measures</b>	<ul style="list-style-type: none"> <li>• Activation of medical aid posts</li> <li>• ORS &amp; drinking water distribution</li> <li>• Crowd flow regulation &amp; barricading</li> <li>• Enhanced sanitation &amp; waste removal</li> </ul>
<b>Medical Preparedness</b>	BLS ambulances positioned, first aid teams
<b>Surveillance Focus</b>	Heat illness, syncope, minor trauma

<b>Lead Departments</b>	Health, Police, LSG
-------------------------	---------------------

### **3. MAJOR PROCESSION PHASE – KETTUKAZHCHA**

<b>Component</b>	<b>Details</b>
<b>Major Activities</b>	Kettukazhcha processions
<b>Expected Crowd</b>	Very high (lakhs)
<b>Peak Hours</b>	From early morning to next day morning
<b>Risk Level</b>	Very High
<b>Key Risks</b>	Stampede, trauma, cardiac events
<b>Preparedness Measures</b>	<ul style="list-style-type: none"> <li>• One-way crowd movement enforced</li> <li>• Maximum deployment of police &amp; volunteers</li> <li>• ALS &amp; BLS ambulances on standby</li> <li>• Fire &amp; Rescue teams positioned</li> </ul>

<b>Medical Preparedness</b>	Full-fledged medical aid posts with triage
<b>Surveillance Focus</b>	Trauma, cardiac emergencies
<b>Lead Departments</b>	Police, Health, Fire & Rescue

#### **4. PEAK DAY – KUMBHABHARANI DAY**

<b>Component</b>	<b>Details</b>
<b>Major Activities</b>	Continuous rituals, night-long congregation
<b>Expected Crowd</b>	Extreme density, prolonged stay
<b>Risk Level</b>	Critical
<b>Key Risks</b>	Mass casualty incidents, exhaustion, communicable diseases
<b>Preparedness Measures</b>	<ul style="list-style-type: none"> <li>• 24x7 control room activation</li> <li>• All medical aid posts operational round-the-clock</li> <li>• Dedicated ambulance corridors</li> </ul>

	<ul style="list-style-type: none"> <li>• Continuous public announcements on safety</li> </ul>
<b>Medical Preparedness</b>	ALS ambulances, rapid referral to base hospitals
<b>Surveillance Focus</b>	Clusters of illness, heat stress, injuries
<b>Lead Departments</b>	Police, Health, Fire & Rescue

**5. POST-FESTIVAL PHASE (UP TO 7 DAYS)**

<b>Component</b>	<b>Details</b>
<b>Major Activities</b>	Crowd dispersal, dismantling of structures
<b>Expected Crowd</b>	Moderate
<b>Key Risks</b>	Residual injuries, sanitation issues
<b>Preparedness Measures</b>	<ul style="list-style-type: none"> <li>• Continued medical aid availability</li> <li>• Post-event sanitation &amp; waste removal</li> </ul>

	<ul style="list-style-type: none"> <li>• Removal of temporary shops</li> </ul>
<b>Medical Preparedness</b>	On-call teams
<b>Surveillance Focus</b>	Injury follow-up, fever
<b>Lead Departments</b>	Health, LSG

#### ***6. POST-EVENT SURVEILLANCE PHASE (UP TO 14 DAYS)***

<b>Component</b>	<b>Details</b>
<b>Major Activities</b>	Community-level monitoring
<b>Key Risks</b>	Delayed outbreaks (ILI, ADD, dengue, leptospirosis)
<b>Preparedness Measures</b>	<ul style="list-style-type: none"> <li>• Strengthened IDSP surveillance</li> <li>• Early outbreak investigation</li> <li>• Health education on symptom reporting</li> </ul>
<b>Lead Departments</b>	Health Department

This temporal preparedness plan ensures continuous protection across all phases of the Chettikulangara Kumbhabharani festival, enabling authorities to deploy the right resources, at the right place, at the right time.

## COMMAND & CONTROL MECHANISM

The control and command mechanism for the Chettikulangara Kumbhabharani Festival follows a unified Incident Command System (ICS) to ensure clear leadership, rapid decision-making, and coordinated action across all departments during routine operations and emergencies. Effective management of a mass gathering of the scale of Chettikulangara Kumbhabharani requires a clear command structure, defined roles, and seamless inter-departmental collaboration.

### *Festival Control Room*

Component	Details
Location	Near Temple
Operational Period	From pre-festival inspections to post-event surveillance
Functions	Incident reporting, resource allocation, communication
Staffing	Multi-departmental representatives

Effective management of a mass gathering of the scale of Chettikulangara Kumbhabharani requires a clear command structure, defined roles, and seamless inter-departmental collaboration.

<b>Level</b>	<b>Authority / Officer</b>	<b>Department</b>	<b>Command Role</b>	<b>Key Responsibilities</b>
<b>District Level</b>	District Collector, Alappuzha	District Administration	Overall Incident Commander	Overall control, inter-departmental coordination, resource mobilization, emergency declaration
<b>Health Command</b>	District Medical Officer (Health)	Health Services	Health Incident Commander	Medical preparedness, surveillance, outbreak response
	Block Medical Officer, Kurathikad	Health Services	Block Health Lead	On-site health operations, ambulance & referral coordination
	Medical Officer, FHC Chettikulangara	Health Services	On-site Medical Lead	Medical aid posts, first aid, reporting

	Superintendent, DH Mavelikkara	Health Services	Nodal Hospital Commander	Emergency admissions, referral coordination
<b>Police &amp; Traffic</b>	DySP, Chengannur	Police	Law & Order Commander	Overall crowd control & security
	CI, Mavelikkara, Kayamkulam	Police	Field Command	Crowd movement, traffic diversion, evacuation routes
<b>Fire &amp; Rescue</b>	Station Officer, Fire & Rescue	Fire & Rescue	On-site Response Lead	Fire safety, rescue planning, immediate fire & rescue operations
<b>Food Safety &amp; Sanitation</b>	Food Safety Officer	Food Safety	Food Safety Lead	Inspection of Annadanam & food stalls
<b>Local Level</b>	President, Chettikulanga Grama Panchayat	Local Self Government	Local Incident Manager	Ground-level coordination, logistics, sanitation, control room functioning
<b>Temple &amp; Festival Ops</b>	Temple Executive Officer	Temple Authority	Festival Operations Lead	Ritual coordination, site management

	Thanthri	Temple Authority	Ritual Authority	Oversight of rituals
	Kettukazhcha / Kuthiyottam Coordinators	Festival Committee	Event Leads	Event-specific safety coordination
<b>Support Systems</b>	Ambulance Nodal Officer	EMS / Health	Evacuation Lead	Ambulance deployment & tracking
	Volunteer Team Leaders	Civil Defence / Volunteers	Support Lead	Crowd guidance, first aid support

***On-Field Command & Control Team Structure***

Level / Team	Designation	Key Responsibilities
<b>Incident Commander (Health)</b>	Medical Officer (MO), FHC Chettikulangara	Overall health response command, decision-making, coordination with Block & District control
<b>Medical Response Team Lead</b>	Medical Officer	Coordinates first aid posts, triage, referrals

<b>Field Operations Lead</b>	Health Inspector (HS)	Supervises on-ground public health activities, sanitation, food safety
<b>Surveillance &amp; Reporting Lead</b>	HI	Real-time disease surveillance, reporting of alerts/events
<b>Volunteer &amp; Crowd Interface Lead</b>	HI / JHI	Volunteer supervision, risk communication, crowd guidance
<b>Documentation &amp; Communication</b>	JHI	Situation reports, line-listing, communication logs

## **COMMUNICATION & ESCALATION FLOW**

During the Chettikulangara Kumbhabharani Festival, communication and escalation follow a structured and rapid flow to ensure timely response to health and safety incidents. Field teams and volunteers positioned across temple premises, procession routes, food distribution areas, and medical aid posts identify and report incidents to their designated supervisors for immediate verification and first response. Verified information is escalated to the Festival Control Room, which coordinates resources and maintains real-time liaison with all departments. Situations requiring higher-level decision-making or surge response are escalated to the Incident Commander (Medical Officer, FHC Chettikulangara), who activates appropriate alert levels and referral mechanisms. When incidents exceed local handling capacity, the Incident Commander escalates to District level support for additional ambulances, specialist care, and disaster management assistance, ensuring continuity of care and overall festival safety.

# COMMUNICATION & ESCALATION FLOW



## FIELD TEAMS / VOLUNTEERS

**First Point of Contact**  
Report incidents, risks, and updates.



## SUPERVISORS

**Sector / Zone Level**  
Validate information, provide immediate guidance, and escalate if required.



## FESTIVAL CONTROL ROOM

**Central Coordination Unit**  
Central hub for communication, monitoring, and resource coordination.



## INCIDENT COMMANDER

**Overall In-Charge**  
Decision-making authority for major incidents and emergency response.



## DISTRICT-LEVEL SUPPORT

**DMO / Police / Fire & Rescue / Administration**  
Provides advanced support, inter-departmental coordination, and crisis management.

## LIST OF KEY PEOPLE AND CONTACTS

Effective preparedness and response during a mass gathering depend on clear identification of key functionaries, defined roles, and readily accessible contact points. This contact framework ensures round-the-clock coordination, rapid escalation, and timely decision-making throughout all phases of the festival.

### A. HEALTH & MEDICAL COMMAND

Sl. No.	Designation	Role During Festival
1	District Medical Officer (Health), Alappuzha	Health Incident Commander
2	Deputy DMO, DSO	Surveillance, outbreak response
3	DPM	Overall coordination
4	Block Medical Officer, Kurathikad	Block health operations lead
5	Medical Officer, FHC Chettikulangara	On-site health coordination

6	Superintendent, Hospital Mavelikkara	District	Nodal commander	hospital
7	Health Supervisor		Surveillance & IEC	
8	Health Inspector		Surveillance & IEC	

## B. TEMPLE COMMITTEE & VOLUNTEER COORDINATION

Sl. No	Designation		Role
1	Devaswom officer	Administrative	Festival Management
2	Temple Devaswom / Committee Chairperson		Festival Coordination
3	Festival Convenor		Ritual Scheduling
4	Volunteer Coordinator		Crowd & Support Services

## C. POLICE, TRAFFIC & CROWD MANAGEMENT

Sl. No.	Designation	Role During Festival
1	CI Mavelikkara Police Station	Field command, crowd control
2	CI Kayamkulam Police Station	Local policing & route security

#### D. FIRE, RESCUE & DISASTER RESPONSE

Sl. No.	Designation	Role During Festival
1	Station Officer, Fire & Rescue (Mavelikkara)	On-ground emergency response
2	Station Officer, Fire & Rescue (Kayamkulam)	On-ground emergency response

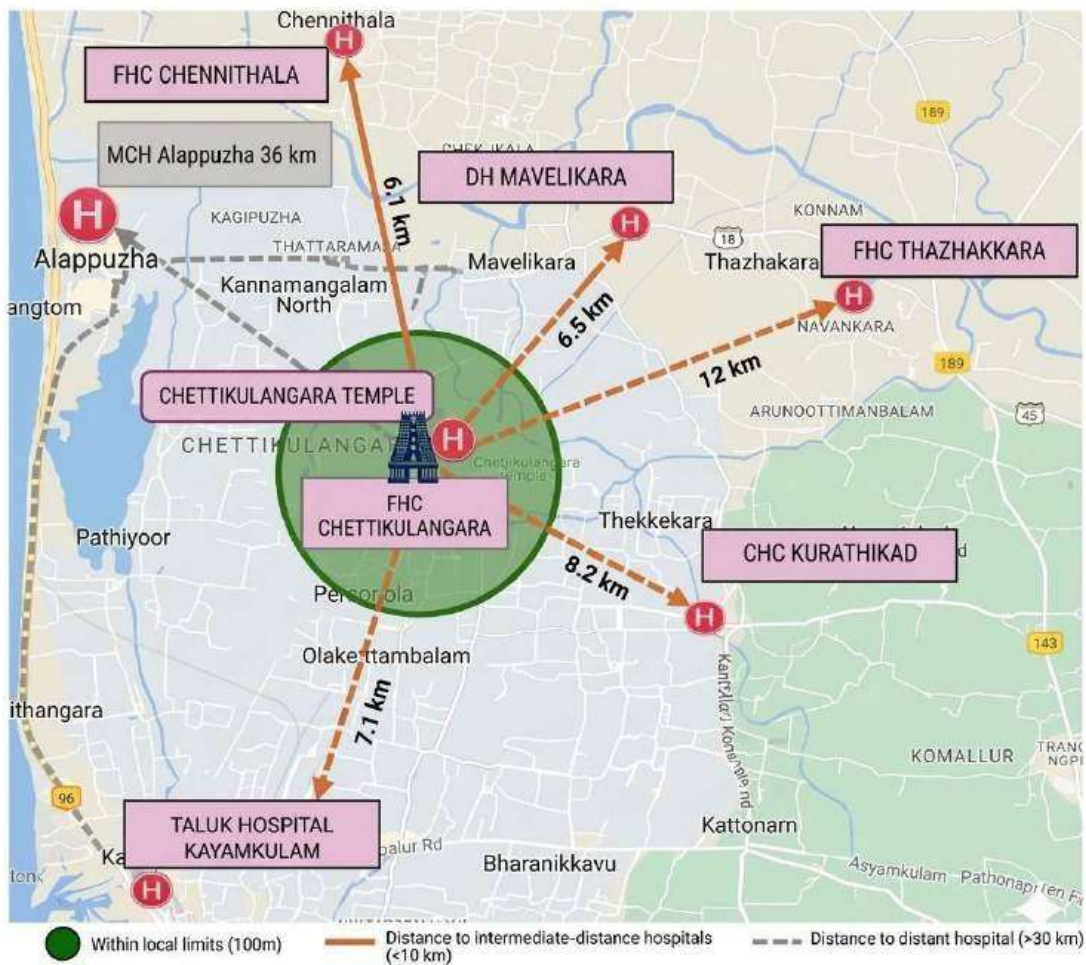
#### LIST OF HOSPITALS DIRECTLY INVOLVED

Given the scale, crowd density, and prolonged duration of the Chettikulangara Kumbhabharani festival, a tiered hospital preparedness and referral framework is essential to ensure uninterrupted emergency care, rapid evacuation, and surge capacity throughout all phases of the event

## Government Hospitals

Sl. No.	Name of Health Facility	Distance from Festival Site	Level of Care	Functional Role During Festival
1	Family Health Centre Chettikulangara	Within local limits (100m)	Primary Care/Onsite	First contact care, minor illness management, ORS distribution, surveillance, referral initiation
2	Community Health Centre Kurathikad	8.2 km	Primary Care	Minor trauma care, coordination hub for block-level response
3	Family Health Centre Chennithala	6.1 km	Primary Care	Peripheral support, surveillance, minor injury and illness management
4	Family Health Centre Thazhakkara	12 km	Primary Care	Peripheral support, surveillance, minor injury and illness management
5	District Hospital Mavelikkara	6.5 km	Secondary / Nodal Hospital	Nodal referral centre, trauma care, medical emergencies, inpatient services, control coordination
6	Taluk Hospital Kayamkulam	7.1 km	Secondary	Emergency care, stabilization, overflow management, referral support

7	<b>Government Medical College Hospital Alappuzha</b>	36 km	Tertiary	Emergency triage priority, ICU surge, Polytrauma
---	--	-------	----------	--



**PRIVATE HOSPITALS**

Sl. No	Hospital Category	Distance from Festival Site	Level of care	Role
--------	-------------------	-----------------------------	---------------	------

1	VSM Hospital, Mavelikkara	2.4 km	Multispeciality	Casualty support
2	Sreekandapuram Hospital, Mavelikkara	3.4 km	Multispeciality	Casualty support



## Mandatory Ambulance & Medical Aid Posts On-Site

Given the scale, crowd density, ritual intensity, and prolonged duration of events, strategically placed ambulance units and medical aid posts are mandatory to ensure rapid medical response, effective triage, and timely evacuation. These facilities form the first line of medical care during the festival.

### A. Geospatial Locations of Medical Aid Posts & Ambulance Points

Sl. No	Location	Rationale	Type of Facility
1	Temple Main Entrance (Eastern Nada)	Highest footfall, first point of entry	Major Medical Aid Post
2	Southern Nada (Near Kettukazhcha path)	Festival-related injuries	First Aid Post
3	Ground near South Exit	Emergency ambulance	Ambulance Parking area
4	Ground near the east exit	Standby ambulance	Ambulance Parking area

## B. Human Resources (HR)

Sl. No.	Category	Number Deployed
1	Doctors	4
2	Staff Nurses	4
3	Pharmacists	1
4	Emergency Medical Technicians (EMTs)	1

5	Health Inspectors	5
6	Attenders	4
7	Volunteers	10

**Shift pattern:**

- 3 shifts × 8 hours during peak days
- Reinforced staffing during Kettukazhcha night & Kumbhabharani day

**C. Facilities to be Arranged at Each Medical Aid Post**

***Core Medical Facilities***

- Examination beds with privacy screens
- Emergency drug kits (as per mass gathering SOP)
- IV fluids and cannulation sets
- Oxygen cylinders with flow meters
- Nebulization facility
- Glucometer and BP apparatus
- ORS and rehydration corner

***Emergency Stabilization***

- Trauma care kit (bandages, splints, cervical collar)
- Suction apparatus (manual/electric)
- Thermal blankets

***Public Health Functions***

- Fever screening and syndromic surveillance
- Wound care and minor procedures
- Documentation and daily reporting to the control room

#### D. Support Accessories & Logistics

Category	Items
<b>Medical Consumables</b>	Gloves, masks, antiseptics, syringes, IV sets
<b>Communication</b>	Dedicated mobile phones, wireless sets, emergency hotline display
<b>Power &amp; Lighting</b>	Backup power supply, emergency lighting
<b>Crowd Interface</b>	Signage boards, public address linkage
<b>Transport Support</b>	Wheelchairs, stretchers
<b>Waste Management</b>	Biomedical waste bins with color coding
<b>Infection Control</b>	Hand hygiene stations, disinfectants



## Ambulance Plan

The ambulance plan is designed to ensure rapid response, safe evacuation, and seamless referral of medical emergencies arising during the festival. Considering high crowd density, restricted movement during peak rituals, and the need for time-critical care, a structured, tiered, and well-coordinated ambulance deployment system is essential.

### *a. Ambulances Available*

All ambulances deployed for the festival shall be pre-empaneled, verified, and integrated into the unified control system.

- District Hospital Mavelikkara - 1
- Taluk Hospital kayamkulam - 1
- Private hospitals - 2
- NGO (Sewa Bharathi) - 3

During peak hours and in emergencies other private ambulances can be deployed.

### ***b. Ambulance Deployment***

Ambulances shall be categorized based on level of care, ensuring appropriate response according to case severity.

#### **Ambulance Deployment**

Type	Placement
ALS Ambulances	Kettukazhcha corridor
BLS Ambulances	Staging area, parking zone, procession route
Standby Ambulances	Outside congestion zone for surge response

### ***c. Ambulance Staff Pattern***

Each ambulance shall be staffed to ensure continuous readiness and quality emergency care.

#### **Ambulance Staff:**

- Emergency Medical Technician (EMT) – 1

- Nurse – 1
- Driver – 1

#### ***d. Evacuation Route Briefing and Training***

##### ***Temple Location & Road Environment***

- The Chettikulangara Bhagavathy Temple is located within a mixed residential–commercial area
- Internal temple approach roads are narrow and pedestrian dominated
- Major external connectivity is through the Kayamkulam -Thiruvalla Highway which serves as the primary arterial routes

### **PRIMARY EVACUATION ZONES AROUND THE TEMPLE**

#### ***A. INNER ZONE (Temple Premises & Immediate Surroundings)***

→ Area includes:

- ◆ Temple pradakshina paths
- ◆ Kettukazhcha assembly points

→ **Evacuation Method:**

- ◆ Manual evacuation using stretchers, wheelchairs
- ◆ To nearest Medical Aid Post

→ **Responsible teams:**Health, Police, EMTs, Temple staff, Volunteers

#### ***B. MIDDLE ZONE (Immediate Approach Roads)***

- Acts as the primary ambulance interface zone
- Casualties stabilized at medical aid posts and shifted here

### **➤ EVACUATION ROUTES**

**→ To Base Referral Hospital - District Hospital Mavelikkara**

**Primary Route**

Chettikulangara Bhagavathy Temple → North Exit → Kayamkulam Thiruvalla State Highway  
→ Thattarambalam → Mavelikkara Town → District Hospital Mavelikkara

**Alternate Route**

Chettikulangara Bhagavathy Temple → East Exit → Aaltharamoodu → Kandyoor → District  
Hospital Mavelikkara

**→ Secondary referral - Taluk Hospital Kayamkulam**

**Primary Route**

Chettikulangara Bhagavathy Temple → South Exit → Kayamkulam Thiruvalla State Highway  
→ Taluk Hospital Kayamkulam

**Alternate Route**

Chettikulangara Bhagavathy Temple → East Exit → Aaltharamoodu → First Mile → Taluk  
Hospital Kayamkulam

**→ Tertiary Level care - Government Medical College Hospital Alappuzha**

DH Mavelikkara → Nangiarkulangara → Haripad → MCH Alappuzha

**➤ Operational Measures:**

**Activation & Command**

- Evacuation is initiated only through the Festival Control Room or by the on-site Incident Commander.

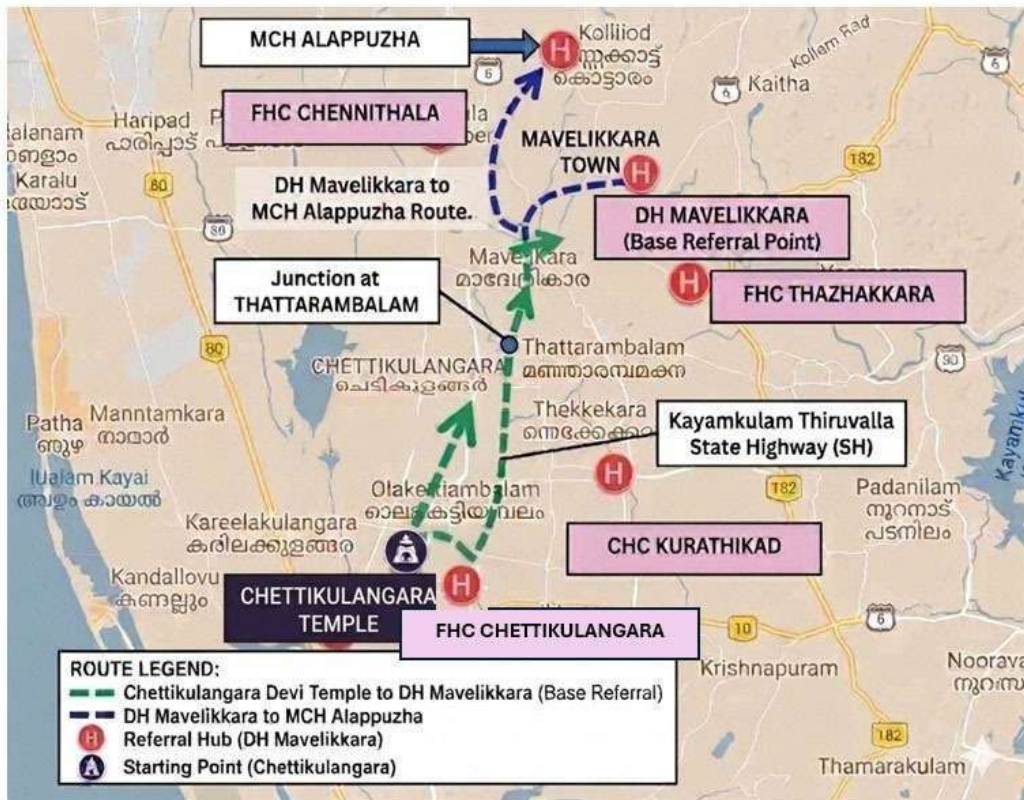
- The nature of emergency (medical / trauma / crowd surge / fire) is assessed and communicated within minutes.
- Appropriate ambulances and referral hospitals are decided immediately.

#### **Site-level operations**

- Police and volunteers create a clear evacuation corridor from the incident site to the nearest ambulance point.
- Non-essential crowd movement is temporarily halted or diverted.
- Casualty is shifted using stretcher/wheelchair, avoiding vertical crowd movement.
- Priority evacuation for children, elderly, unconscious, and critically ill persons.

#### **Ambulance movement**

- Ambulance positioned engine ON, front-facing exit.
- Police ensure signal-free movement at junctions.
- No halting en route except for life-saving intervention.
- Continuous communication maintained with the control Room and receiving hospital emergency department.



## Hospital Preparedness

Hospital preparedness is a critical pillar of mass gathering medical management, ensuring that patients evacuated from the festival site receive timely, coordinated, and quality care. All hospitals in Kurathikad Block shall function in alignment with the Unified Command System, following pre-agreed protocols and maintaining surge readiness throughout the festival period.

### *a. List of Hospitals with Key Numbers of Incident Commander*

#### **GOVERNMENT HOSPITALS**

Sl. No	Name of Health Facility	Distance from Festival Site	Level of Care	Hospital Incident Commander (HIC)
1	Family Health Centre Chettikulangara	Within local limits (100m)	Primary Care/Onsite	Medical officer
2	Community Health Centre Kurathikad	8.2 km	Primary Care	Block Medical officer
3	Family Health Centre Chennithala	6.1 km	Primary Care	Medical officer

4	<b>Family Health Centre Thazhakkara</b>	12 km	Primary Care	Medical officer
5	<b>District Hospital Mavelikkara</b>	6.5 km	Secondary / Nodal Hospital	Superintendent
6	<b>Taluk Hospital Kayamkulam</b>	7.1 km	Secondary	Superintendent

***PRIVATE HOSPITALS***

Sl. No	Hospital	Distance from Festival Site	Level	Hospital Incident Commander (HIC)
1	VSM Hospital, Mavelikkara	2.4 km	Multispeciality	Nodal Medical officer
2	Sreekandapuram Hospital, Mavelikkara	3.4 km	Multispeciality	Nodal Medical officer

### ***b. Preparation of Protocol for Hospitals***

All hospitals mapped for the Chettikulangara Kumbhabharani Festival shall operate under a uniform, pre-approved emergency preparedness protocol to ensure continuity of care, rapid surge response, and seamless referrals during peak festival days.

#### **1. Emergency Services Readiness**

- Casualty/Emergency departments shall function 24×7 with augmented staffing.
- Dedicated festival emergency triage area to be activated.
- Priority triage protocols for:
  - ◆ Trauma and stampede related injuries
  - ◆ Cardiac and respiratory emergencies
  - ◆ Pediatric cases (especially Kuthiyottam participants)
- Separate fast-track triage for minor ailments to reduce ED congestion.

#### **2. Clinical Protocol Standardization**

- Uniform SOPs to be followed for:
  - ◆ Trauma and crush injuries
  - ◆ Heat exhaustion and dehydration
  - ◆ Cardiac emergencies
  - ◆ Seizures and loss of consciousness
  - ◆ Communicable disease suspicion (food/water borne, respiratory)
- WHO-recommended ABC and triage principles to be followed at all levels.
- Referral escalation criteria clearly defined from:
  - ◆ Base referral hospital - Mavelikkara District Hospital → Government Medical College Hospital Alappuzha

### 3. Infrastructure & Logistics Preparedness

→ Verification of:

- ◆ Oxygen supply and backup cylinders
- ◆ Power backup (generator readiness)
- ◆ Emergency lighting

→ Emergency drugs, IV fluids, ORS, antidotes, and consumables stocked in advance.

→ Blood bank preparedness at District Hospital and Medical College.

### 4. Referral & Communication Protocol

- Pre-designated hospital nodal officer for festival period.
- Advance intimation to receiving hospital mandatory for critical referrals.
- Real-time bed and ICU status sharing with Festival Control Room.
- Ambulance handover protocol standardized.

### 5. Infection Prevention & Control

- Standard precautions for all cases.
- Isolation protocol for suspected communicable diseases.
- Safe biomedical waste disposal ensured even during surge.

#### ***c. Crisis Team in Each Hospital on Red Alert***

During peak festival days, all mapped hospitals shall activate a Hospital Crisis Team and function under Red Alert Mode, enabling rapid response to mass casualty or surge events.

Position	Designation	Key Responsibilities During Festival & Emergencies
----------	-------------	--

<b>Hospital Incident Commander</b>	Medical Superintendent / Senior Medical Officer	Overall command and decision-making, activation of Red Alert, coordination with District Control Room
<b>Emergency Medical Lead</b>	Casualty MO / Emergency Physician	Clinical triage, casualty management, trauma protocols, referral decisions
<b>Nursing Lead</b>	Nursing Superintendent / Senior Staff Nurse	Deployment of nursing staff, triage assistance, casualty coordination
<b>Pharmacy Lead</b>	Pharmacist	Emergency drugs, IV fluids, consumables, oxygen, equipment availability
<b>Communication &amp; Reporting Officer</b>	Designated MO	Reporting to Control Room, bed status updates, documentation
<b>Infection Control Officer</b>	MO / Staff Nurse	IPC practices, isolation if required, sanitation monitoring

### ***Red alert operational Principles***

- Crisis Team to be activated during peak ritual hours and Bharani day
- Team members to be physically present or on immediate call
- Elective services may be deferred if mass casualty risk increases
- Clear handover and documentation for every referred patient
- Allocation of beds and human resources

- Liaison with district control room and festival command
- Ensuring uninterrupted emergency services

#### **d. Base referral Hospital plan**

**District Hospital Mavelikkara** functions as the Base Referral Hospital for all medical emergencies arising during the Chettikulangara Kumbhabharani Festival. The hospital will ensure 24×7 emergency response, triage, stabilization, definitive care, and onward referral as required.

#### **Preparedness Components:**

- Designation as the primary receiving facility for festival emergencies
- Reservation of emergency and observation beds
- Strengthening of casualty services with additional staff
- Dedicated triage desk for festival-related cases
- Pre-positioning of emergency drugs, consumables, and trauma kits
- Blood bank readiness with adequate stock and donor call-up plan
- Stabilization and onward referral to tertiary centres when required
- Activation of referral hospitals during surge load

#### **Activation & command structure**

##### **Red Alert Activation Triggers:**

- Bharani Day & Kettukazhcha peak hours
- ≥10 casualties within 30 minutes
- Stampede alert / structural incident
- Multiple pediatric emergencies
- Police / District Control Room alert

→ **Hospital Incident Command System (HICS):**

- ◆ Incident Commander: Medical Superintendent
- ◆ Emergency Operations Centre: Casualty Department
- ◆ Single Point Communication with District Control Room

### Alert levels & Activation

Alert Level	Trigger Point	Action
<b>Green (Preparedness)</b>	Festival period begins	Staff sensitization, stock verification, duty roster finalized
<b>Yellow (High Crowd Hours)</b>	Kettukazhcha / Bharani peak hours	Additional casualty staff, triage desk activated
<b>Orange (Surge)</b>	≥10 casualties in 1 hour OR ≥3 critical cases	Surge protocol, extra wards opened, ICU standby
<b>Red (Mass Casualty)</b>	Stampede, structural collapse, multiple trauma	Full Hospital Disaster Plan activated, elective services deferred

### *Triage System: Colour Coding*

Category	Colour	Criteria	Action
Immediate	<b>Red</b>	Airway compromise, shock, major trauma, cardiac arrest	Immediate resuscitation

Urgent	<b>Yellow</b>	Fractures, dehydration needing IV, moderate head injury	Treatment within 30 min
Minor	<b>Green</b>	Minor injuries, fainting, mild illness	OPD / observation
Deceased / Expectant	<b>Black</b>	No signs of life	As per protocol

***Referral flow***

- Stabilization at DH Mavelikkara
- Pre-referral intimation to receiving hospital
- Ambulance with EMT + oxygen
- Referral note with triage category
- Documentation & control room update

**Tertiary Referral:**

- Government Medical College Hospital, Alappuzha

**Coordination & Communication:**

- Direct communication line with festival control room
- Real-time bed availability updates
- Advance intimation of incoming casualties from ambulances

## Temporal Dynamic Plan

Chettikulangara Kumbhabharani is a multi-day, multi-event mass gathering with varying crowd density, risk profiles, and operational demands. Hence, preparedness and response must be dynamic, event-specific, and time-bound.

Festival Phase / Event	Time Period	Nature of Gathering	Major Risk Factors	Key Preparedness & Operational Measures
<b>Pre-Festival Phase</b>	7–10 days before Bharani	Temple preparations, creation of temporary structures, arrival of vendors	Unsafe temporary structures, food safety issues, early crowding	<ul style="list-style-type: none"> <li>• Joint inspections (Health, LSG, Police, Fire, Electrical)</li> <li>• Licensing &amp; inspection of food stalls</li> <li>• Mapping ambulance points &amp; evacuation routes</li> <li>• Control Room activation</li> <li>• Hospital rosters finalized</li> </ul>

<b>Kuthiyottam Ritual Phase</b>	5-7 days before Bharani	Child-centric ritual involving fasting & movement	Hypoglycaemia, dehydration, syncope, minor trauma, psychological stress	<ul style="list-style-type: none"> <li>• Pre-ritual health screening</li> <li>• Hydration &amp; rest supervision</li> <li>• Guardian tagging &amp; controlled movement</li> <li>• Pediatric-friendly medical teams</li> <li>• Priority evacuation corridors</li> </ul>
<b>Kettukazhcha Preparation &amp; Night Assembly</b>	Night before Bharani	Assembly of large Theru structures, night-long congregation	Structural instability, poor visibility, alcohol-related incidents	<ul style="list-style-type: none"> <li>• Structural safety certification</li> <li>• High-mast lighting &amp; electrical safety</li> <li>• Crowd zoning &amp; barricading</li> <li>• Increased police &amp; volunteer deployment</li> </ul>
<b>Kettukazhcha Procession (Theru Movement)</b>	Early hours of Bharani day	Peak density, movement of massive structures	Stampede, crowd surge, crush injuries, falls	<ul style="list-style-type: none"> <li>• One-directional crowd flow</li> <li>• Continuous police &amp; temple coordination</li> <li>• ALS ambulance standby</li> <li>• Rapid triage &amp; evacuation protocol</li> </ul>

<b>Bharani Day – Peak Festival</b>	Bharani day	Maximum footfall (~2.5 lakh devotees), multiple rituals	Heat exhaustion, cardiac events, trauma, communicable diseases	<ul style="list-style-type: none"> <li>• Full activation of medical aid posts</li> <li>• Hospital Red Alert</li> <li>• Surge staffing &amp; beds</li> <li>• Disease surveillance</li> <li>• Continuous public announcements</li> </ul>
<b>Annadana m / Mass Feeding</b>	Throughout festival days	Large-scale food preparation & distribution	Food poisoning, water contamination	<ul style="list-style-type: none"> <li>• Strict food safety inspection</li> <li>• Safe water chlorination monitoring</li> <li>• Rapid response to GI illness</li> <li>• Line-listing &amp; notification</li> </ul>
<b>Post-Festival Event</b>	After a week	After Kumbabharani, Makam Naal onwards Ethirelppu Maholsavam will start for 13 days and ends on Malayalam month medam on Ashwathy Naal	Road traffic accidents, fatigue-related illness	<ul style="list-style-type: none"> <li>• Continued ambulance deployment</li> <li>• Traffic regulation</li> <li>• Monitoring accident cases</li> <li>• Sanitation &amp; waste clearance</li> </ul>

<b>Post-Festival Surveillance Phase</b>	After 14 days	Community phase	Delayed communicable disease outbreaks	<ul style="list-style-type: none"> <li>• IDSP based intensified surveillance</li> <li>• Fever/ARI/ADD reporting</li> <li>• After-Action Review meeting</li> </ul>
---	---------------	-----------------	--	---

### Incident Contact Leads & Coordination Structure

Function	Designation	Primary Responsibility
Incident Commander (Health)	Medical Officer, FHC Chettikulangara	Overall on-field health command
Field Public Health Operations	Health Supervisor	Sanitation, food safety, environment
Surveillance & Reporting	Health Inspector	Disease alerts, vulnerable group monitoring
Hospital Coordination	Duty Medical Officer, DH Mavelikkara	Bed status, triage escalation
Police Coordination	CI	Crowd & evacuation corridor control

Fire & Rescue	Station Officer	Fire, rescue, structural incidents
---------------	-----------------	------------------------------------

### Alert Levels

- **Green (Preparedness):** Festival period begins; advance intimation to secondary and tertiary hospitals, nodal officers identified, ambulance availability mapped.
- **Yellow (High Crowd Hours):** Kettukazhcha and Bharani peak hours; secondary hospitals alerted to keep emergency beds ready and share bed status.
- **Orange (Surge):**  $\geq 10$  casualties in one hour or  $\geq 3$  critical cases; tertiary hospital pre-alerted, ICU/trauma beds confirmed, ALS ambulances earmarked.
- **Red (Mass Casualty):** Stampede, structural collapse, or multiple trauma; full disaster alert issued, continuous coordination with tertiary hospital and district control room.

### Alert Flow

- Medical Aid Post → Festival Control Room
- Control Room → Base Referral Hospital - DH Mavelikara
- Simultaneous alert to tertiary - MCH Akappuzha
- Ambulance routing adjusted in real time

### Decision Triggers for Escalation

Trigger Event	Immediate Action
---------------	------------------

≥3 similar cases from same location	Notify Control Room & Surveillance Officer
Any death or cardiac arrest	Activate Unified Command
Suspected food/water-borne outbreak	Seal source, inform Health Authorities
Crowd injury cluster	Police crowd control + ambulance surge
Hospital bed saturation	Divert to secondary referral hospitals

## Capacity Building Plans & Meeting Details for Disaster Preparedness

Given the scale, cultural intensity, and risk profile of Chettikulangara Kumbhabharani, preparedness requires structured meetings, inter-sectoral coordination, focused training, and mock drills, conducted well ahead of peak festival days.

### Structured Meetings for Preparedness

Sl. No.	Name of Meeting	Proposed Timeline	Key Objectives	Stakeholders Attending	Key Outputs
1	<b>District-Level Festival Meeting</b>	30 days before	District-wide oversight, policy direction, inter-sectoral	District Collector, District Police Chief, (Health), Fire & DMO	District-level approval, directives issued,

			coordination, approval of preparedness strategy	Rescue, Revenue, Transport, LSG representatives, Devaswom Board	resource commitment
2	<b>Pre-Festival High-Level Coordination Meeting</b>	25-30 days before festival	Overall planning, role clarity, resource mapping	Block Medical Officer, Health Staffs, Panchayat President, Police CI, Fire & Rescue Officer, Temple Devaswom officials	Approved preparedness framework
3	<b>Health Sector Preparedness Review Meeting</b>	20-25 days before festival	Medical plan finalization, HR & ambulance mapping	Medical Officers, Public Health staffs	Final medical & ambulance plan
4	<b>Inter-Departmental Emergency Coordination Meeting</b>	20 days before festival	Command system, evacuation routes, crowd & traffic plans	Health, Police, Fire & Rescue, LSG officials, KSEB	Unified command & evacuation plan

5	<b>Temple &amp; Volunteer Coordination Meeting</b>	15 days before festival	Community participation, volunteer roles, risk communication	Devaswom officials, volunteer coordinators, NGOs, Kudumbashree	Volunteer deployment plan
6	<b>Final Readiness &amp; Mock Drill Review Meeting</b>	3–5 days before festival	Gap analysis, final instructions	All nodal officers & incident leads	Go-ahead clearance

### Training Programmes and Mockdrill

Training and mock drills form a critical component of preparedness for the Chettikulangara Kumbhabharani festival, given the large-scale mass gathering, involvement of children, complex rituals such as Kettukazhcha and Kuthiyottam, and the risk of sudden surge or mass casualty incidents. Structured capacity-building activities are essential to ensure that all stakeholders respond in a coordinated, timely, and protocol-driven manner.

Sl. No.	Training Programme	Target Group	Key Focus areas	Timeline
1	<b>Basic Disaster Response &amp; First Aid</b>	Volunteers, Temple staff	First aid, stretcher handling, casualty reporting	15–20 days before

2	<b>Medical Emergency &amp; Triage Training</b>	Doctors, Nurses, EMTs	Mass casualty triage, stabilization, referral	10–15 days before
3	<b>Ambulance Evacuation &amp; Route Training</b>	Drivers, EMTs, Police	Route familiarization, green corridor protocol and activation	10 days before
4	<b>Crowd Safety &amp; Risk Communication</b>	Police, Volunteers	Crowd psychology, public messaging, Rapid response, triage, evacuation	7–10 days before
5	<b>Communicable Disease Surveillance &amp; IPC</b>	Health staff, Inspectors	Early detection, reporting, IPC measures	7 days before

### **Standard Operating Procedures (SOP) for Interventions in Common Possible Health Hazards**

Standard Operating Procedure (SOP) outlines the uniform, evidence-based medical interventions to be followed for common health hazards anticipated during the Chettikulangara Kumbhabharani festival. Given the scale of the mass gathering, prolonged rituals, high crowd density, fasting practices, temporary food arrangements, and increased physical exertion, there is a heightened risk of medical emergencies. Emphasis is placed on the ABCDE approach, rapid triage, infection prevention, child-specific safeguards (especially during Kuthiyottam), and prompt escalation of care when indicated.

Health Hazard	Festival-Specific Risk Factors	Immediate On-Site Intervention (Standard SOP)	Stabilization & Referral Protocol
Heat exhaustion / dehydration	Fasting, crowding, sun exposure	Shift to shade, oral rehydration, active cooling	IV fluids if required → DH Mavelikkara
Syncope / collapse	Prolonged standing, dehydration	Supine position, ABC check, oxygen	Refer if recurrent or prolonged LOC
Trauma / stampede injury	Crowd surge, procession movement	Immobilization, control, triage	bleeding DH / Medical College
Head injury	Falls, collisions	Cervical immobilization, GCS assessment	Immediate referral if GCS <13
Cardiac emergency	Stress, age, exertion	ALS response, defibrillation	oxygen, Immediate tertiary referral
Seizures	Epilepsy, sleep deprivation	Lateral position, protection, avoid restraint	airway Benzodiazepine if prolonged → referral

Acute respiratory illness	Crowding, viral spread	Masking, oxygen if hypoxic	Isolation & referral if severe
Asthma / COPD exacerbation	Dust, smoke, exertion	Nebulization, oxygen	Refer if poor response
Alcohol intoxication	Substance use	Airway protection, glucose check	Observe / refer if altered sensorium
Substance overdose	Drug misuse	ABC stabilization, antidote if indicated	Immediate referral
Food poisoning / GI illness	Annadanam, unsafe food	ORS, antiemetic	Notify surveillance, refer severe
Suspected communicable disease	Food/water exposure	Isolation, notification, masking,	As per public health protocol
Burns (Thermal / Electrical)	Fire lamps, camphor, cooking areas, electrical wiring	Stop burning source, cool with clean running water for ≥20 minutes, remove constricting items, cover with clean dry cloth,	Assess % burn & depth; IV fluids if >10% burns; analgesia; urgent referral to DH / Medical College

Psychological distress / panic	Noise, dense crowd	Reassurance, calm environment	Refer if persistent
--------------------------------	--------------------	-------------------------------	---------------------

### **GENERAL PRINCIPLES (APPLICABLE TO ALL HAZARDS)**

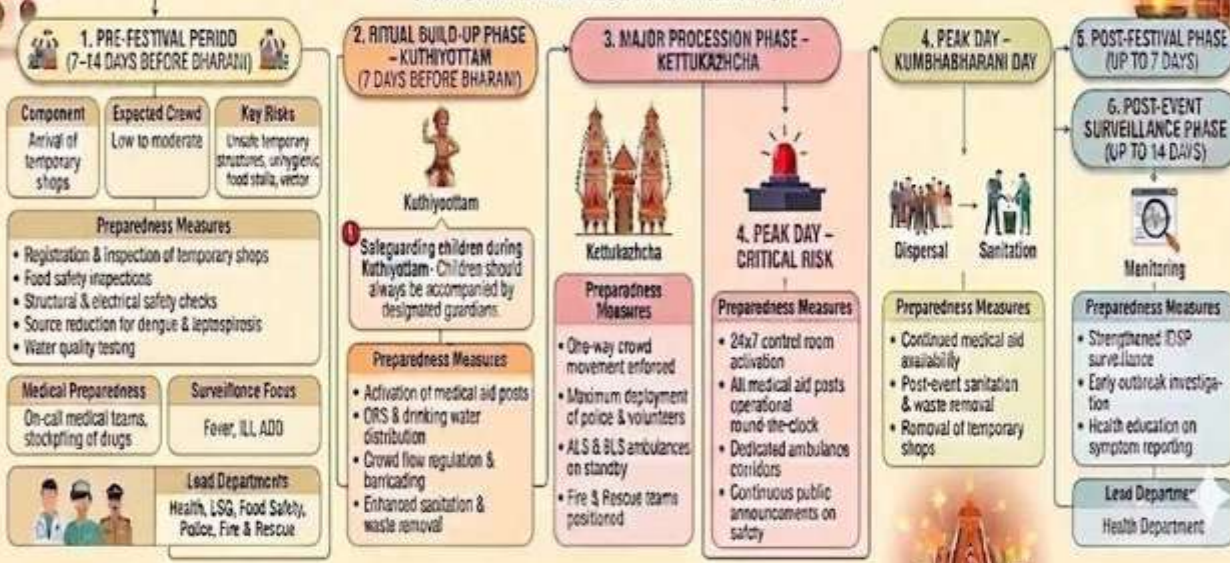
- Ensure scene safety before patient contact
- Follow ABCDE approach (Airway, Breathing, Circulation, Disability, Exposure)
- Early triage and stabilization at site
- Rapid referral based on severity
- Clear documentation & notification to control room
- Maintain infection prevention and control (IPC) practices

# CHETTIKULANGARA KUMBHABHARANI: TEMPORAL EVENT-WISE PREPAREDNESS FRAMEWORK & PLAN

## TEMPORAL EVENT-WISE PREPAREDNESS FRAMEWORK

Phase	Pre-festival phase (7-14 days before Bharani)	Ritual build-up (7 days before Bharani)	Peak festival day (Kumbhabharani day)	Immediate post-festival (1-7 days after)	Post-event surveillance (Up to 14 days)
Period	7-14 days before Bharani	7 days before Bharani	Kumbhabharani day	1-7 days after	Public health risk
Nature of Crowd					
Overall Risk Level	 Low-Moderate	 Moderate-High	 Very High / Critical	 Moderate	 Public health risk

## TEMPORAL EVENT-WISE PREPAREDNESS PLAN



**CHETTIKULANGARA KUMBHABHARANI: TEMPORAL EVENT-WISE PREPAREONESS FRAMEWORK & OPERATIONAL MAP**



# Conclusion

The Chettikulangara Kumbhabharani festival represents one of the largest and most dynamic mass gatherings in the region, marked by intense ritual practices and large-scale processions. The scale, intensity, and ritual complexity of events such as Kuthiyottam, Kettukazhcha, and Bharani day observances necessitate a robust, structured, and locally adapted preparedness plan that prioritizes public health and safety without compromising cultural sanctity. This comprehensive preparedness framework outlined integrates risk assessment, hospital preparedness, referral linkages, crowd and traffic management, food safety, emergency response, and inter-departmental coordination to address the unique public health and safety challenges associated with the festival. Through clearly defined alert levels, standardised triage and referral protocols, surge and mass casualty preparedness, and a robust alert mechanism linking primary, secondary, and tertiary care facilities, the health system is positioned to respond promptly and effectively to both routine medical needs and unforeseen emergencies. By integrating preparedness, response, referral, and recovery into a unified system, it ensures that faith, tradition, and public safety coexist without compromise, reinforcing Chettikulangara's capacity to host this iconic festival safely and responsibly year after year.

## Ambalappuzha Sri Krishna Temple Festival



## **PREAMBLE**

The Ambalappuzha Sree Krishna Temple is one of Kerala's most prominent spiritual and cultural landmarks, drawing thousands of devotees and visitors throughout the year. Celebrated for its deep-rooted traditions and historic significance, the temple becomes a focal point of large-scale gatherings during its annual festivals and special occasions. These festivals, marked by elaborate rituals, traditional performances, and processions, require meticulous planning and coordinated management to ensure their smooth and safe conduct.

Festival periods at Ambalappuzha witness a significant surge in crowd density, vehicular movement, and public activity in and around the temple premises. The convergence of devotees, cultural participants, vendors, and officials creates a dynamic environment that necessitates comprehensive preparedness across multiple domains, including crowd management, traffic regulation, safety and security, health services, sanitation, and emergency response systems.

A well-structured festival preparedness plan is therefore essential to uphold the sanctity of rituals while ensuring public safety and convenience. This involves coordinated efforts among temple authorities, local administration, law enforcement agencies, health departments, and volunteer organizations. Effective communication systems, contingency planning, risk assessment, and resource allocation play a critical role in managing the complexities associated with large gatherings.

In addition to logistical arrangements, special emphasis must be placed on preserving the traditional and cultural integrity of the festival. The seamless integration of ritual practices with modern management strategies ensures that the spiritual experience of devotees remains undisturbed while maintaining order and efficiency.

The framework for festival preparedness at Ambalappuzha Temple, detailing the strategies, responsibilities, and operational measures required for the successful execution of festival activities. It aims to provide a comprehensive guide to ensure that all aspects of festival management are addressed systematically, thereby facilitating a safe, organized, and spiritually fulfilling environment for all participants.

The annual festival at Ambalappuzha Sri Krishna Temple attracts a large number of devotees from across Kerala and neighboring states. The event involves mass gatherings, rituals, cultural programs, and distribution of palpayasam, increasing the risk of public health concerns. This plan is prepared to ensure effective health system preparedness, disease prevention, and emergency response during the festival period.

### **1. Objective: Ensure Safe and Healthy Conduct of the Festival**

#### **Strategies:**

- Implement systematic crowd control measures within and around temple premises
- Conduct safety inspections of temporary structures, electrical installations, and public areas
- Deploy trained personnel and volunteers for monitoring and guidance

#### **Key Activities:**

- Installation of barricades and designated entry/exit routes
- Continuous surveillance and public announcement systems
- Coordination with police and local authorities

#### **Expected Outcome:**

- Safe, orderly movement of devotees with minimal risk of accidents or hazards
- 

### **2. Objective: Provide Timely and Accessible Medical Care**

#### **Strategies:**

- Establish easily accessible medical aid points and emergency response units
- Ensure availability of trained medical personnel throughout the festival

#### **Key Activities:**

- Setting up first aid camps and mobile medical teams
-

- Deployment of ambulances at strategic locations
- Coordination with nearby hospitals for referral services

**Expected Outcome:**

- Immediate medical attention and reduced morbidity during emergencies
- 

**3. Objective: Prevent Outbreaks of Communicable Diseases**

**Strategies:**

- Strengthen disease surveillance and early warning systems
- Promote hygiene and preventive health practices among devotees

**Key Activities:**

- Regular health inspections and monitoring
- Awareness campaigns on hand hygiene and sanitation
- Rapid response to suspected cases of infectious diseases

**Expected Outcome:**

- Reduced risk of disease transmission and outbreak prevention
- 

**4. Objective: Ensure Food Safety and Sanitation**

**Strategies:**

- Enforce strict food hygiene regulations
- Maintain clean and sanitary surroundings

**Key Activities:**

- Inspection of food stalls and preparation areas
  - Provision of safe drinking water and sanitation facilities
-

- Efficient waste management and disposal systems

**Expected Outcome:**

- Safe consumption of food and a hygienic festival environment
- 

**5. Objective: Strengthen Referral and Emergency Services**

**Strategies:**

- Develop an efficient emergency response and referral network
- Ensure seamless communication between all response units

**Key Activities:**

- Linking on-site medical units with higher healthcare centers
- Maintaining fully equipped ambulances and trained staff
- Establishing control rooms and communication channels

**Expected Outcome:**

- Prompt handling of emergencies and effective patient transfer
- 

If you want, I can next help you create **roles & responsibilities, duty chart, resource mapping, or a full disaster management plan** for this festival.

PLZ MAKE IT AS ALL ELABORATED

Here is a **fully elaborated and professionally structured plan** of your objectives, suitable for an official **Festival Preparedness & Health Management Plan**:

---

## Objectives

### 1. Ensure Safe and Healthy Conduct of the Festival

#### Detailed

#### Strategy:

A comprehensive safety management system will be implemented to ensure the orderly conduct of the festival while minimizing risks associated with large gatherings. This involves multi-agency coordination, continuous monitoring, and preventive safety measures.

#### Key Components & Activities:

- **Crowd Management:**  
Scientific crowd control measures including zoning of temple premises, regulated entry and exit points, barricading, and one-way movement systems to avoid congestion and stampede risks.
- **Safety Inspections:**  
Pre-festival inspection of electrical systems, temporary structures, lighting arrangements, and fire safety compliance.
- **Deployment of Personnel:**  
Adequate deployment of trained volunteers, security staff, and police personnel for real-time monitoring and assistance.
- **Public Communication:**  
Installation of public address systems for announcements, instructions, and emergency alerts.

#### Monitoring & Evaluation:

- Continuous supervision through control rooms and field officers
- Daily safety audits during festival days

#### Expected

#### Outcome:

A safe, controlled, and incident-free environment ensuring the well-being of all attendees.

---

## 2. Provide Timely and Accessible Medical Care

### Detailed

### Strategy:

A robust on-site medical support system will be established to handle minor ailments, emergencies, and critical cases efficiently.

### Key Components & Activities:

- **Medical Aid Infrastructure:**  
Setting up multiple first aid posts at strategic high-density locations
- **Human Resources:**  
Deployment of doctors, nurses, paramedics, and trained first aid volunteers in shifts
- **Emergency Services:**  
Positioning of ambulances equipped with life-support systems for rapid response
- **Medical Supplies:**  
Ensuring adequate stock of essential medicines, emergency drugs, and equipment

### Referral Mechanism:

- Pre-identification and linkage with nearby government and private hospitals
- Dedicated communication channels for patient transfer

### Monitoring & Evaluation:

- Maintenance of patient records and daily reporting
- Review of response time and case handling efficiency

### Expected

### Outcome:

Prompt and effective medical care, reducing complications and ensuring timely intervention.

### 3. Prevent Outbreaks of Communicable Diseases

**Detailed**

**Strategy:**

Preventive public health measures will be strengthened to minimize the risk of infectious disease transmission during the festival.

**Key Components & Activities:**

- **Disease Surveillance:**  
Active monitoring for symptoms of communicable diseases and early detection systems
- **Health Awareness:**  
Dissemination of information on personal hygiene, handwashing, and safe practices through announcements and displays
- **Environmental Hygiene:**  
Regular cleaning and disinfection of public spaces and high-contact areas
- **Rapid Response Measures:**  
Immediate isolation and management of suspected cases, if identified

**Monitoring & Evaluation:**

- Daily health status reporting
- Coordination with public health authorities

**Expected**

**Outcome:**

Effective prevention and control of communicable diseases, ensuring a healthy environment.

### 4. Ensure Food Safety and Sanitation

**Detailed**

**Strategy:**

Strict enforcement of food safety standards and sanitation practices will be carried out to prevent foodborne illnesses and maintain hygiene.

**Key Components & Activities:**

---

- **Food Safety Inspections:**  
Regular inspection of food stalls, kitchens, and distribution centers
- **Safe Food Handling:**  
Ensuring hygienic preparation, storage, and serving of food, including mass offerings
- **Water Safety:**  
Provision of safe and potable drinking water at multiple locations
- **Sanitation Facilities:**  
Adequate number of clean toilets and handwashing stations
- **Waste Management:**  
Proper collection, segregation, and disposal of solid and liquid waste

**Monitoring & Evaluation:**

- Routine checks by health inspectors
- Immediate corrective action on violations

**Expected**

Safe food consumption practices and a clean, hygienic festival environment.

**Outcome:**

## 5. Strengthen Referral and Emergency Response Services

**Detailed**

An integrated emergency response system will be established to handle all types of emergencies efficiently and ensure seamless coordination.

**Strategy:**

**Key Components & Activities:**

- **Emergency Control Room:**  
Establishment of a centralized control unit for coordination and communication
- **Ambulance Network:**  
Deployment of ambulances at key locations with clear access routes
- **Referral Linkages:**  
Strong coordination with higher-level healthcare facilities for advanced treatment

- **Emergency Preparedness:**

Preparedness for incidents such as fire, stampede, accidents, or sudden health crises

- **Training & Mock Drills:**

Conducting training sessions and mock drills for staff and volunteers

**Monitoring & Evaluation:**

- Review of emergency response times
- Documentation and analysis of incidents

**Expected**

**Outcome:**

Efficient handling of emergencies with minimal delay, ensuring safety and saving lives

This structured and comprehensive plan aims to ensure that all aspects of health, safety, and emergency preparedness are systematically addressed during the festival at the Ambalappuzha Sree Krishna Temple. Through coordinated efforts, proactive planning, and continuous monitoring, the plan seeks to provide a safe, hygienic, and spiritually fulfilling experience for all devotees and participants.

**Estimated Load & Risk Assessment**

**Expected Scenario**

- Estimated footfall: 10000-20000 devotees/day (peak days)
- Peak timing: Morning rituals & evening events
- High-density zones:
- Temple premises
- Queue areas

- Annadanam (food distribution) areas

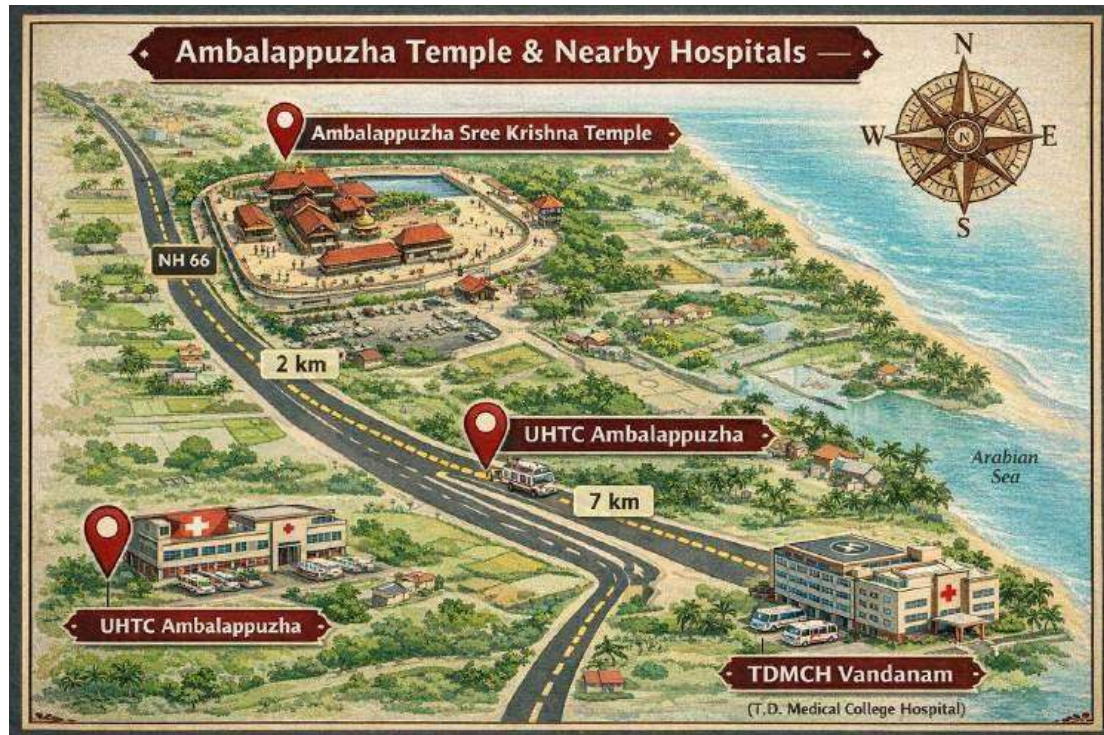
### **Major Risks**

- Heat-related illness, dehydration
- Food poisoning (especially palpayasam distribution)
- Acute diarrheal diseases
- Vector-borne diseases
- Stampede / crowd injuries
- Cardiac emergencies in elderly devotees

### **Health Facility Preparedness**

#### **Referral Hospitals**

- **UHTC AMBALAPPUZHA**
- TDMCH Alappuzha and General Hospital Alappuzha



### Preparedness Measures

- 24x7 casualty services
- Reserved beds:

GH Alappuzha: 20–30 emergency beds

WC Hospital: 10–15 beds

- ICU and blood bank readiness
- Emergency triage system activated

### Peripheral Health Support

- UHTC Ambalappuzha as nodal field unit

Nearby PHCs/CHCs to:

- Handle minor cases
- Stabilize and refer

## **Medical Camps & Field Deployment**

### **Health Camps at Festival Site**

- Minimum 2–3 medical aid posts

Each post staffed with:

- 1 Medical Officer
- 1 Staff Nurse
- 1 Health Inspector

### **Facilities Available**

- First aid and emergency drugs
- ORS and IV fluids
- Basic Life Support (BLS) equipment
- Wheelchair/stretchers support

### **Ambulance & Referral Transport**

- Deployment of 108 Ambulances:
- At least 2 ambulances near temple premises
- Additional standby units during peak hours

- Dedicated referral pathway to:
- GH Alappuzha (major emergencies)
- WC Hospital (maternal/child cases)

### **Surveillance & Outbreak Control**

- Strengthening of Integrated Disease Surveillance Programme (IDSP)
- Daily reporting of:
  - Fever cases
  - Diarrheal diseases
  - Food poisoning incidents
- Rapid Response Team (RRT) on standby
- Immediate reporting of clusters within 2 hours

### **Food Safety Measures**

#### **Special Focus: Annadanam & Palpayasam**

Inspection of:

- Preparation areas
- Storage facilities

Ensure:

- Fresh preparation
- Safe water use

- Hygienic serving practices

### **Vendor Monitoring**

- Licensing and hygiene checks for food stalls
- Ban on unsafe/stale food

### **Water Safety**

Chlorination of:

- Temple water sources
- Public drinking water points
- Provision of safe drinking water booths
- Advisory:
- Avoid unsafe water consumption

### **Sanitation & Waste Management**

Adequate number of:

- Toilets (separate for men & women)
- Handwashing stations
- Continuous waste collection:
- Coordination with LSGD & Haritha Karma Sena
- Special attention to:
- Food waste disposal

- Cleanliness of queue areas

### **Vector Control**

- Pre-festival:
- Source reduction activities
- During festival:
- Anti-larval measures
- Fogging in surrounding areas

### **Crowd Health Management**

Medical teams stationed at:

- Queue lines
- Entry/exit points
- Coordination with Police for:
- Crowd control
- Emergency evacuation
- Public announcement system for:
- Health advisories

### **Public Awareness (IEC)**

---

Key messages:

- Drink safe water
- Avoid overcrowding
- Follow hygiene practices
- Report illness early
- Mediums:
- Banners, posters
- Public announcements

**Control Room, Surveillance & Communication**



- Temporary control room at festival site
- Nodal officer appointed
- Emergency contact numbers displayed
- Real-time communication with:
- Ambulance teams
- Referral hospitals

## Logistics

Ensure availability of:

- ORS packets
- IV fluids

- Emergency drugs
- PPE kits
- Stretchers, wheelchairs

### **Monitoring & Reporting**

- Daily report briefing and submission to District Surveillance officer
- Case reporting under IDSP
- Incident reporting within 2 hours

### **Post-Festival Activities**

- Surveillance for 7–10 days
- Outbreak investigation (if required)
- Review meeting and documentation

**The coordinated efforts of the Health** Department, local authorities, and stakeholders will ensure that the festival at Ambalappuzha Sri Krishna Temple is conducted in a safe and healthy manner, safeguarding the wellbeing of all devotees.

# Edathua Perunnal



## PREAMBLE

The Edathua Perunnal is a grand annual festival celebrated at St. George's Church in Edathua, located in the Alappuzha district of Kerala. This prominent event, held every year from April 27th to May 7th, draws thousands of devotees who come to participate in the festivities dedicated to St. George. The church, built in 1810 in European Gothic architectural style, stands as a testament to Kerala's rich architectural heritage.

The festival, also known as the Feast of St. George, begins with a ceremonious flag hoisting on April 27th, marking the official start of the celebrations. Throughout the festival, various religious activities such as special prayers, masses, and retreats are conducted. The highlight of the festival is the procession of the gold-decked statue of St. George, carried from the church to the nearby beach and back. This procession is accompanied by traditional music and chants, creating a deeply spiritual atmosphere.

On the main festival days, May 6th and 7th, the statue of St. George is paraded around the church grounds by pilgrims from various parts of South India, including Tamil Nadu. The spacious grounds near the church transform into a bustling trade center, with vendors selling a variety of goods, adding to the festive atmosphere. Cultural performances, including traditional dances and music, are held throughout the festival, further enhancing the celebratory mood.

The Edathua Perunnal is not just a local event; it is a significant cultural gathering that fosters community spirit and unity. It attracts lakhs of pilgrims from all over South India, including states like Tamil Nadu and even foreign countries in the past. The festival provides an opportunity for devotees to seek blessings, fulfill vows, and celebrate their faith in a communal setting. The firework displays and cultural performances held during the festival add to the grandeur of the event.



#### **RISK MITIGATION OF GATHERING**

- Overcrowding and stampede risk during peak rituals and processions
- Outbreaks of food poisoning, water-borne diseases (Cholera, Typhoid), and vector-borne diseases (Mosquito-related) due to overcrowding and poor waste management
- Heat-related illnesses and dehydration
- Medical emergencies among elderly and chronically ill pilgrims
- Fire risk due to oil lamps
- Electrical risks due to Short circuits in temporary illumination
- Animal bite (Dog& Snake)
- Flooding risk due to proximity to River Pamba and low-lying Kuttanad region
- Traffic congestion and delayed emergency access

#### **SUMMARY OF TEMPORAL EVENTS WITH TIMELINE**

---

<b>Ritual / Event</b>	<b>Description</b>
<b>Festival Period</b>	Late April to Mid-May
<b>Flag hosting</b>	The festivities begin on April 27
<b>Peak Crowd Days</b>	Main feast days May 5–7
<b>Peak Hours</b>	Early morning prayers and evening processions
<b>Procession</b>	The main highlight, featuring the statue of St. George adorned in gold, carried in a procession
<b>Rituals</b>	Special prayers, candle lighting and cultural performances

### ***A. PRE-FESTIVAL PHASE (Preparedness & Prevention)***

#### ***Coordination Meeting Before Festival***

A joint coordination meeting will be conducted before the start of the festival with representatives from the Basilica Committee, Health Department, Edathua Panchayat, Police, Fire & Rescue Services, Electricity Department (KSEB), Kerala Water Authority (KWA), and the Food Safety Department. The purpose of the meeting is to review the overall preparedness plan and identify high-risk areas within and around the Basilica premises, and finalize the locations of medical aid posts, ambulance positioning, sanitation facilities, and emergency response mechanisms. This coordination ensures a unified response during the festival period and helps avoid delays in handling public-health emergencies.

### ***Public Health Awareness***

Public-health awareness activities will be carried out in the pre-festival period to reduce preventable illnesses during the festival. Information on safe drinking water, safe food consumption, personal hygiene, and early reporting of symptoms such as fever, diarrhoea, and fainting will be communicated through public announcements and display boards in the temple premises. In addition, temporary food handlers and stall workers will be sensitized on hygienic food preparation, safe water use, and proper waste disposal to prevent food-borne diseases during the festival in multiple languages (Malayalam, Tamil, Hindi, English) since pilgrims arrive from neighboring states.

### ***Surveillance of Migrant Vendors & Seasonal Residents***

The Edathua festival attracts a significant number of migrant workers and temporary shopkeepers from other districts and states who set up stalls for the 15-day period and more. This population often stays in makeshift, overcrowded accommodations with limited access to sanitary facilities, making them vulnerable to water-borne diseases and a potential source of imported infections. Periodic screenings will be conducted to identify any cases of Acute Diarrheal Disease (ADD) or fever. By monitoring this group, we ensure that the "Hidden Population" of the festival is included in the district's overall biosurveillance framework, preventing localized outbreaks from spreading to the visiting devotees.

<b>Risk Area</b>	<b>Risk Factors</b>	<b>Mitigation Measures (Before Festival)</b>
<b>Crowd Management</b>	High footfall, ritual congestion	<ul style="list-style-type: none"><li>• Crowd estimation &amp; zoning</li><li>• One-way movement plans</li><li>• Barricading &amp; queue systems</li></ul>

		<ul style="list-style-type: none"> <li>• Identification of high-risk choke points</li> </ul>
<b>Public Health</b>	Disease transmission	<ul style="list-style-type: none"> <li>• Strengthening disease surveillance (ILI, ADD, fever)</li> <li>• Pre-festival sanitation drive</li> <li>• Water quality testing &amp; chlorination</li> </ul>
<b>Medical Emergencies</b>	Delayed response	<ul style="list-style-type: none"> <li>• Identification of medical aid post locations</li> <li>• Ambulance empanelment &amp; route mapping</li> <li>• Stocking emergency drugs &amp; consumables</li> </ul>
<b>Environmental Risks</b>	Heat, rain	<ul style="list-style-type: none"> <li>• ORS &amp; drinking water points planning</li> <li>• Temporary shelters &amp; shade mapping</li> </ul>
<b>Communicable Diseases</b>	Dengue, Leptospirosis, Hepatitis, ADD, ILI	<ul style="list-style-type: none"> <li>• Source reduction activities</li> <li>• Fogging &amp; larvicidal measures</li> <li>• Awareness on personal protection</li> <li>• Water quality testing</li> <li>• Chlorination</li> </ul>
<b>Temporary Food Stalls &amp; Vendors</b>	Unlicensed vendors <ul style="list-style-type: none"> <li>• Unsafe food handling</li> <li>• Use of contaminated water</li> </ul>	<ul style="list-style-type: none"> <li>• Mandatory registration &amp; licensing of all food stalls</li> <li>• Joint inspection by Health &amp; Food Safety Departments</li> </ul>

	<ul style="list-style-type: none"> <li>• Improper storage of cooked food</li> <li>• Reuse of oil</li> </ul>	<ul style="list-style-type: none"> <li>• Water quality testing for cooking &amp; drinking</li> <li>• Health card mandatory</li> <li>• Ban on high-risk foods</li> <li>• IEC on safe food practices for vendors</li> </ul>
<b>Temporary Shops &amp; Commercial Stalls</b>	<ul style="list-style-type: none"> <li>• Structural instability</li> <li>• Overcrowding of narrow pathways</li> <li>• Electrical overloading</li> </ul>	<ul style="list-style-type: none"> <li>• Structural safety inspection before approval</li> <li>• Regulated spacing between stalls</li> <li>• Electrical safety certification</li> <li>• Removal of unauthorized extensions</li> </ul>
<b>Drinking Water Supply (Shops &amp; Public Points)</b>	Unsafe water, unchlorinated sources	<ul style="list-style-type: none"> <li>• Identification of all drinking water sources used by vendors</li> <li>• Water quality testing (bacteriological &amp; residual chlorine)</li> <li>• Chlorination of temporary tanks &amp; wells</li> <li>• Prohibition of unapproved water sources</li> </ul>
<b>Sanitation Facilities (Toilets &amp; Waste)</b>	<ul style="list-style-type: none"> <li>• Inadequate toilets</li> <li>• Poor waste disposal near shops</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of toilet-to-crowd ratio</li> <li>• Placement of handwash stations near food areas</li> <li>• Solid waste management plan with daily clearance</li> </ul>
<b>Fire &amp; Structural Safety</b>	Temporary structures	<ul style="list-style-type: none"> <li>• Structural safety inspection</li> <li>• Electrical safety audit</li> </ul>

		<ul style="list-style-type: none"> <li>•Fire clearance &amp; extinguisher placement</li> </ul>
<b>Community Awareness</b>	Non-compliance	<ul style="list-style-type: none"> <li>•IEC campaigns on health &amp; safety</li> <li>•Announcements through temple committee</li> </ul>

***B. DURING FESTIVAL PHASE (Response & Control)***

The during-festival phase emphasizes real-time risk management and rapid response. Continuous crowd monitoring, regulated crowd movement, and deployment of police and trained volunteers help prevent overcrowding and panic. Medical aid posts function round-the-clock with trained personnel, essential drugs, and equipment, supported by strategically placed ambulances with clear evacuation routes. Active syndromic surveillance, food safety enforcement, sanitation monitoring, and prompt management of medical emergencies—including trauma, dehydration, cardiac events, seizures, and alcohol-related incidents—are critical during this phase. A centralized control room ensures timely communication, coordinated decision-making, and immediate escalation to higher facilities when required.

<b>Risk Area</b>	<b>Risk Scenario</b>	<b>Mitigation Measures (During Festival)</b>
<b>Crowd Surge</b>	Sudden influx, panic	<ul style="list-style-type: none"> <li>•Real-time crowd monitoring</li> <li>•Police &amp; volunteer deployment</li> <li>• Temporary diversion of crowd flow</li> </ul>

<b>Drowning</b>	Falling into river during peak days	Rescue team, life boys, boats
<b>Medical Emergencies</b>	Collapse, trauma	<ul style="list-style-type: none"> <li>• Functional medical aid posts 24x7</li> <li>• Rapid triage &amp; stabilization</li> <li>• Dedicated ambulance corridors</li> </ul>
<b>Communicable Diseases</b>	Dengue, Leptospirosis, Hepatitis, ADD, ILI	<ul style="list-style-type: none"> <li>• Daily syndromic surveillance</li> <li>• Rapid response teams for clusters</li> <li>• Health education announcements</li> </ul>
<b>Heat &amp; Dehydration</b>	Prolonged rituals	<ul style="list-style-type: none"> <li>• ORS distribution points</li> <li>• Water misting / shaded rest areas</li> </ul>
<b>Fire Incidents</b>	Lamps, fireworks	<ul style="list-style-type: none"> <li>• Fire &amp; Rescue standby teams</li> <li>• Immediate isolation of incident area</li> </ul>
<b>Sanitation</b>	Overuse of toilets	<ul style="list-style-type: none"> <li>• Continuous cleaning &amp; waste removal</li> <li>• Adequate mobile toilets &amp; handwashing</li> </ul>
<b>Traffic &amp; Road Safety</b>	Congestion	<ul style="list-style-type: none"> <li>• Traffic diversions</li> <li>• Ambulance priority lanes</li> </ul>
<b>Information Flow</b>	Delays, confusion	<ul style="list-style-type: none"> <li>• Central control room</li> <li>• Dedicated communication channels</li> </ul>



**C. POST-FESTIVAL PHASE (Recovery & Surveillance)**

The post-festival phase focuses on recovery, surveillance, and system strengthening. Enhanced disease surveillance is continued for at least 7–14 days to detect any delayed onset of communicable diseases. Comprehensive cleaning, waste disposal, drainage clearing, and vector-control measures are carried out to prevent post-event health hazards. Medical follow-up is ensured for reported cases, and all incidents are documented and reviewed through post-event debriefing meetings. Lessons learnt are analysed to identify gaps and best practices, enabling refinement of standard operating procedures and strengthening preparedness for future mass gathering events.

Risk Area	Risk Factors	Mitigation Measures (After Festival)
Disease Outbreaks	Incubation period	<ul style="list-style-type: none"> <li>Post-event disease surveillance (7–14 days)</li> </ul>

		<ul style="list-style-type: none"> <li>• Early outbreak detection &amp; reporting</li> </ul>
<b>Environmental Risks</b>	Waste accumulation	<ul style="list-style-type: none"> <li>• Post-festival cleaning drive</li> <li>• Drainage clearing &amp; disinfection</li> </ul>
<b>Vector Proliferation</b>	Stagnant water	<ul style="list-style-type: none"> <li>• Anti-larval measures</li> <li>• Source reduction inspections</li> </ul>
<b>Data &amp; Learning</b>	Missed gaps	<ul style="list-style-type: none"> <li>• Review meeting &amp; documentation</li> <li>• Analysis of incidents &amp; near-misses</li> </ul>
<b>Community Health</b>	Residual illness	<ul style="list-style-type: none"> <li>• Follow-up care &amp; referrals</li> <li>• Awareness on symptom reporting</li> </ul>
<b>System Strengthening</b>	Future events	<ul style="list-style-type: none"> <li>• Updating SOPs based on lessons learnt</li> </ul>

## COMMAND SYSTEM & SYSTEM COLLABORATION

Effective management of a mass gathering of the scale of Edathua Perunnal requires a clear command structure, defined roles, and seamless inter-departmental collaboration.

### Health Department

- Medical preparedness medical aid posts, ambulances
- Disease surveillance
- Emergency response
- Health education

- Food stall inspection

#### **Local Self Government Institution (LSG)**

- Sanitation
- Waste management
- Cleaning road and drainage
- Water supply
- Safe drinking water

#### **Police Department**

- Crowd control
- Traffic management
- Law & order

#### **LIST OF KEY PEOPLE & CONTACTS**

<b>Sl. No.</b>	<b>Designation</b>	<b>Role During Festival</b>
<b>1</b>	<b>District Medical Officer (Health), Alappuzha</b>	<b>Health Incident Commander</b>
<b>2</b>	<b>Deputy DMO</b>	<b>Surveillance, outbreak response</b>
<b>3</b>	<b>Block Medical Officer, Chempumpuram</b>	<b>Block health operations lead</b>
<b>4</b>	<b>CHC Edathua</b>	<b>Medical Emergency</b>

5	Jubilee hospital Edathua	Medical Emergency
6	Medical Officer, CHC Edathua	On-site health coordination
7	Health Supervisor	Surveillance & IEC
8	Health Inspector	Surveillance & IEC
9	Vicar	Festival Coordination
10	Festival Convenor	Crowd & Support Services
11	S I Police Edathua Station	Field command, crowd control
12	Station Officer, Fire & Rescue	On-ground emergency response
13	Water Authority	Water scarcity
14	KSEB	Electricity related
13	Panchayath President	Local Coordination

**LIST OF HOSPITALS DIRECTLY INVOLVED**

Sl. No	Hospital Category	Distance from Festival Site	Preparedness Requirements
1	CHC Edathua	500 meters	Emergency drugs, observation beds, 24x7 duty, Ambulance
2	Jubilee Hospital Edathua	200 Meter	Emergency drugs, observation beds, 24x7 duty, Ambulance
3	Lourde Matha Hospital Pacha	4KM	Emergency drugs, observation beds, 24x7 duty, Ambulance
4	THQH Thiruvalla	12KM	Emergency drugs, observation beds, 24x7 duty, Ambulance
5	Pushpagiri Medical College Thiruvalla	14 KM	Specialized trauma care, ICU support, and advanced burn management.
6	Medical Mission Hospital, Parumala	14KM	Specialized trauma care, ICU support, and advanced burn management.
7	Medical College Vandanam	30KM	Specialized trauma care, ICU support, and advanced burn management.



### MANDATORY AMBULANCE & MEDICAL AID POSTS

- First Aid Posts within church premises
- Ambulance parking zones with clear ingress/egress
- ALS and BLS ambulances stationed at strategic points
- Mobile medical teams during peak hours

### HUMAN RESOURCE (HR) DEPLOYMENT

Sl. No.	Category	Number Deployed
1	Doctors	2
2	Staff Nurses	2
3	Pharmacists	1
4	Emergency Medical Technicians (EMTs)	1
5	Health Inspectors	3

<b>6</b>	<b>Volunteers</b>	<b>10</b>
----------	-------------------	-----------

**FACILITIES TO BE ARRANGED**

- Drinking water points
- Temporary shelters
- Mobile toilets
- Lighting arrangements
- Public address system
- Signage for emergency exits

**SUPPORT ACCESSORIES**

- Stretchers
- Wheelchairs
- Oxygen cylinders
- Emergency medicines
- Flood rescue equipment (boats/life jackets if required)

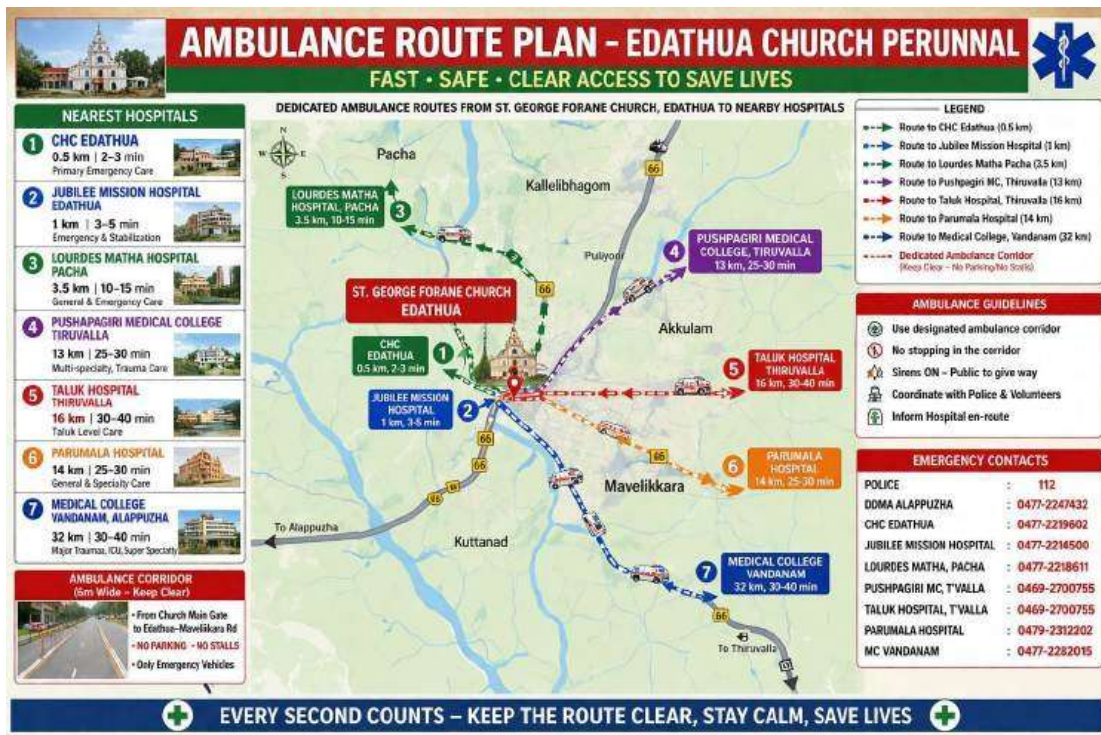
**AMBULANCE PLAN**

Sl. No	Ambulance Provider	Type	No. of Units
1	Govt. 108 Emergency Service	BLS	1
2	Private Empaneled Ambulance Services	BLS	2

4	Advanced Life Support Provider (Govt/Private)	ALS	1-2
---	---	-----	-----

### EVACUATION ROUTE

1. Edathua Church → Main Arch → Thiruvalla - Ambalappuzha road → NH 66 → Vandanam MCH
2. Edathua Church → Main Arch → Ambalappuzha – Thiruvalla road → MC road → Thiruvalla bypass road → Pushpagiri Medical College
3. Edathua Church → Main Arch → Edathua-Parathode-Thiruvalla road → Thiruvalla-Kayamkulam high way → Mannar Parumala Chenganoor road → Parumala Medical Mission Hospital



### HOSPITAL PREPAREDNESS

- Emergency wards on alert during peak days
- Designated nodal officers
- Surge capacity readiness
- Blood bank coordination

#### **ALERT MECHANISM**

- DEOC activation
- Inter-hospital alert system
- Police and Fire control room linkage
- Public announcements for emergency communication

#### **TRAINING & MOCK DRILLS**

- Health department mock drills include first aid and emergency care.
- Crowd management rehearsal
- Fire emergency mock drills
- Volunteer orientation

## **STANDARD OPERATING PROCEDURES (SOP) FOR COMMON POSSIBLE HEALTH HAZARDS**

Large religious gatherings are associated with a higher risk of sudden medical emergencies such as crowd-related injuries, burns, fainting episodes, seizures, and drowning incidents. To ensure rapid and uniform response, the following standardized SOPs will be followed by medical teams, volunteers, and first responders during the festival period.

### **1. SOP FOR MASS CASUALTY INCIDENTS (MCI) & STAMPEDES**

Objective: To ensure rapid and coordinated medical response in the event of crowd congestion, stampede risk, or multiple casualties. In the event of a crowd crush or structural collapse, the goal is "The Greatest Good for the Greatest Number."

#### **IMMEDIATE ACTIONS**

On identification of a crowd crush, stampede risk, or multiple injured persons, the following actions shall be taken immediately:

- Do not run or shout; calm communication shall be maintained through volunteers and public announcement systems.
- Police and volunteers must immediately stop further crowd entry into the affected area.
- Identify injured persons and shift them to a safe zone.
- Create a temporary human corridor for evacuation.
- Inform the nearest medical aid post and ambulance immediately.

#### **MEDICAL MANAGEMENT**

All patients shall be rapidly assessed and classified based on the severity of injury using the START (Simple Triage and Rapid Treatment) method. Triage shall be completed within one minute per patient wherever feasible. Priority shall be given to patients with breathing difficulty, severe bleeding, head injury, or unconsciousness. First aid, oxygen support, haemorrhage control, and stabilization shall be initiated immediately before referral.

#### **MANAGEMENT OF HIGH-RISK COMPLICATIONS**

In cases where victims have been trapped for a prolonged period, medical teams shall monitor for features of crush syndrome. Early identification and rapid referral shall be ensured. Severe bleeding shall be controlled immediately using pressure dressings or tourniquets wherever required. Oxygen support and IV fluids shall be initiated wherever necessary before referral.

### **COMMUNICATION AND REFERRAL**

Upon confirmation of a Mass Casualty Incident, a “Code Red” alert shall be activated. The Medical Officer in charge of the Medical Aid Post shall immediately inform Medical College Hospital, Vandanam to ensure preparedness at referral centres. Ambulances shall be moved only through the designated green corridor, and patient referral shall be prioritized based on triage category.

### **DOCUMENTATION AND REPORTING**

All patients managed during the incident shall be recorded in the emergency register at the medical aid post. The number of critical, moderate, and minor cases shall be documented and reported to the Block Medical Officer and District Control Room without delay.

### **STANDARD TRIAGE COLOUR CODING SYSTEM FOR MASS CASUALTY INCIDENTS**

## **2. SOP FOR BURNS AND FIRE-RELATED INJURIES**

Objective: To ensure immediate and correct first-aid management of burn injuries occurring during the festival due to fireworks, oil lamps, cooking areas, or accidental fire exposure, and to ensure timely referral of serious cases.

### **IMMEDIATE ACTIONS**

- Remove the person from the source of fire.
- Pour clean running water for 15–20 minutes over the affected area.
- Do not apply oil, turmeric, toothpaste, or any local remedies.
- Cover the burn area with a clean cloth or sterile dressing.
- Refer immediately if burns are extensive.

## **MEDICAL RESPONSE**

The patient shall be assessed for the severity of the burn and managed accordingly. Pain relief shall be provided and the wound shall be dressed using sterile materials. In cases where the burn involves more than 10% of the body surface area, intravenous fluids shall be initiated as early as possible.

IV Ringer's Lactate shall be started in moderate to severe burn cases as per standard burn-management protocols. Vital signs shall be monitored continuously, and the patient shall be prepared for early referral if required.

## **ASSESSMENT OF AIRWAY AND BREATHING**

All burn patients shall be assessed for signs of inhalation injury, especially in cases involving fire, smoke exposure, or burns in enclosed spaces. Warning signs such as singed nasal hair, soot around the mouth or nose, hoarseness of voice, or difficulty in breathing shall be treated as medical emergencies.

If inhalation injury is suspected, high-flow oxygen shall be administered immediately, and the patient shall be referred without delay to a higher centre.

## **REFERRAL PROTOCOL**

All patients with facial burns, circumferential burns, burns involving the hands, feet, or eyes, and burns covering more than 10% of the body surface area shall be referred immediately to higher centres. The primary referral centre for severe burn cases shall be Medical College Hospital, Vandanam.

Patients with minor burns may be treated at the medical aid post or the nearest health facility after proper assessment.

## **DOCUMENTATION AND REPORTING**

All burn cases reported during the festival shall be recorded in the emergency register at the medical aid post. The severity of the burn, treatment provided, and referral details shall be documented and reported to the Block Medical Officer.

### **3. SOP FOR FAINTING & SYNCOPE (VASOVAGAL/HEAT)**

Objective: To ensure early recognition and safe management of fainting (syncope) cases, which are common during large gatherings due to prolonged standing, heat exposure, dehydration, and reduced venous return.

#### **IMMEDIATE ACTIONS:**

- Lay the patient flat on their back (supine).
- Elevate the legs 12 inches (30 cm) above the level of the heart. This utilizes gravity to increase venous return to the heart and brain.
- Loosen tight clothing around the neck and waist.
- Ensure adequate ventilation / move to a shaded area.
- Give ORS / water once the person regains consciousness.

#### **MEDICAL RESPONSE**

The patient's pulse and breathing shall be checked immediately. Most patients regain consciousness within a short period once placed in the proper position. After the patient regains consciousness, small quantities of drinking water or ORS may be given, provided the patient is fully conscious and able to swallow.

The patient shall be observed for a few minutes at the medical aid post, especially if the episode occurred in a crowded or hot environment. Vital signs shall be checked before allowing the person to leave.

#### **REFERRAL PROTOCOL**

The patient shall be referred to the nearest health facility if any of the following are present:

- Loss of consciousness lasting more than a few minutes
- Repeated fainting episodes
- Associated injury due to fall
- Abnormal pulse or breathing
- Suspected heat exhaustion or heat stroke

#### **DOCUMENTATION AND REPORTING**

All fainting cases managed at the medical aid post shall be recorded in the emergency register. If multiple fainting cases are reported within a short period, the medical officer shall assess the possibility of heat-related illness and initiate preventive measures such as ORS distribution and crowd ventilation.

#### **4. SOP FOR SEIZURE / FITS**

Objective: To ensure safe, prompt, and standardized management of seizure (fit) cases during mass gatherings, while preventing injury and complications such as aspiration and prolonged seizures.

#### **COMMON SITUATIONS IN MASS GATHERINGS**

Seizures may occur due to:

- Heat exposure / dehydration
- Exhaustion
- Pre-existing epilepsy
- Stress, crowding, or lack of sleep
- Fever or underlying illness

#### **IMMEDIATE ACTIONS:**

- Ensure the crowd does not panic or gather closely around the patient.
- Lay the person on one side (recovery position).
- Remove nearby objects to prevent injury.
- Do not put anything inside the mouth.
- Do not attempt to hold the tongue or forcefully open the mouth.
- Loosen tight clothing around the neck.
- Do not hold the person tightly.
- Wait until the seizure stops.

#### **MEDICAL RESPONSE**

Once the seizure stops, the Medical Team at the Medical Aid Post shall take the following actions:

The patient should be kept in the lateral (side-lying) position to prevent aspiration of saliva or vomit into the lungs. Airway, breathing, and pulse should be checked immediately. Most patients may remain confused, drowsy, or disoriented for a few minutes after the seizure (post-ictal phase), and this should not be mistaken for another emergency unless symptoms persist.

The patient should be shifted to the Medical Aid Post for observation and monitoring. Oral fluids may be given only after the patient has fully regained consciousness and is able to swallow safely.

## PHARMACOLOGICAL MANAGEMENT (BY MEDICAL OFFICER ONLY)

If the seizure lasts more than 5 minutes or repeated seizures occur without recovery of consciousness, the condition shall be treated as Status Epilepticus, which is a medical emergency.

In such cases, the Medical Officer shall administer:

- Inj. Diazepam (0.1 mg/kg IV/IM)
- OR
- Midazolam as per emergency kit protocol

Immediate referral to the nearest hospital shall be arranged through the designated ambulance service.

## REFERRAL CRITERIA

The patient must be referred immediately if:

- Seizure lasts more than 5 minutes
- Repeated seizures occur
- Patient does not regain consciousness
- Head injury occurs during the seizure
- First-time seizure
- Pregnant woman / elderly patient
- Breathing difficulty after seizure

## 5. SOP FOR DROWNING / NEAR-DROWNING INCIDENTS

Objective: To ensure rapid, safe, and standardized response to drowning and near-drowning incidents during mass gatherings and to prevent death, brain injury, and delayed complications.

### BACKGROUND

Drowning and near-drowning incidents are possible during mass gatherings conducted near Pamba river. Such incidents commonly occur due to overcrowding near the water, accidental slipping, panic situations, or attempts by untrained persons to rescue victims. Even when the person appears to have recovered after rescue, there is a significant risk of delayed respiratory complications (secondary drowning / delayed pulmonary edema). Hence, all such cases require immediate medical attention and referral.

## **IMMEDIATE ACTIONS**

- Use a pole or throw a float; do not enter the water unless trained in water rescue.
- Once the person reaches the edge, remove them safely with the help of available staff.
- If a diving injury is suspected, maintain the head and neck in a neutral position while removing the person from the water.
- Check breathing immediately.
- If the person is unconscious but breathing, place in the recovery position.
- If the person is unresponsive and not breathing, initiate CPR (30:2 ratio) immediately. Unlike standard cardiac arrest, in drowning, start with 5 rescue breaths.
- Remove wet clothes and cover with dry blankets to prevent hypothermia.

## **MEDICAL RESPONSE**

All drowning / near-drowning victims must be treated as medical emergencies, even if the person appears normal after rescue.

The Medical Team shall:

- Check airway, breathing, and circulation.
- Provide oxygen support immediately.
- Monitor pulse, breathing, and level of consciousness.
- Observe breathing difficulty, cough, chest discomfort, or altered consciousness.

## **REFERRAL PROTOCOL**

All drowning / near-drowning cases must be referred to the nearest hospital without delay, even if the patient appears recovered.

This is necessary due to the risk of:

- Delayed pulmonary edema
- Aspiration pneumonia
- Secondary drowning
- Hypoxia-related complications

During transport:

- Continue oxygen support
- Monitor breathing and consciousness continuously
- Inform the referral hospital in advance

## **STANDARD REPORTING MANDATE**

Every drowning / near-drowning incident managed during the mass gathering must be entered in the Patient Line-list by the JHI on duty and reported to the Block Medical Officer immediately.

## **CONCLUSION**

The preparedness plan for the Edathua Perunnal reflects a comprehensive and well-structured approach to managing one of the most significant religious gatherings in Kerala. With thousands of devotees participating in the celebrations, the plan prioritizes safety, coordination, and smooth conduct of all religious and associated activities. By integrating administrative planning with spiritual observances, it ensures that the sanctity of the festival is preserved while maintaining public order and discipline.

A key strength of the plan lies in its multi-agency coordination. The active involvement of the Police Department, Health Services, Fire and Rescue teams, and Local Self-Government Institutions ensures a strong support system capable of handling large crowds and emergency situations. Proper communication channels and clearly defined roles enable quick decision-making and effective response during peak hours and critical situations.

The plan also gives significant importance to crowd management and risk mitigation. Measures such as controlled entry and exit points, designated routes for processions, and deployment of trained volunteers help in preventing overcrowding and stampede situations. In addition, traffic regulation and parking arrangements contribute to minimizing congestion in and around the festival area, ensuring accessibility for both devotees and emergency services.

Medical preparedness is another crucial component of the plan. The arrangement of first aid centers, ambulance services, and coordination with nearby hospitals ensures immediate medical attention when required. Public health measures, including sanitation facilities, clean drinking water, and waste management systems, further enhance the safety and comfort of the pilgrims attending the Perunnal.

Fire safety and infrastructure management have also been carefully addressed. The provision of fire safety equipment, safe electrical installations, and monitoring of temporary structures reduces the risk of fire hazards and structural failures. These proactive measures play a vital role in maintaining a secure environment throughout the event. Through effective coordination, risk awareness, and community participation, the plan ensures that the festival is conducted in a safe, organized, and spiritually enriching manner. It stands as a model framework for managing large-scale religious events, ensuring the well-being, dignity, and positive experience of every devotee attending the celebration.

## CHAMPAKULAM BOAT RACE



### PREAMBLE

The Champakkulam Boat Race, held in the picturesque village of Champakkulam in Alappuzha district, is one of the most iconic and oldest snake boat races in Kerala. Typically taking place in June or July, this annual event marks the beginning of the boat race season in the state. The Pampa River provides the perfect setting for this exhilarating race, drawing massive crowds who come to witness the spectacular competition.

The festival surrounding the boat race includes various cultural programs and traditional performances, adding to the festive spirit. The entire region bursts into life with colorful decorations, music, and dance, creating an ambiance of joy and camaraderie. The Champakkulam Boat Race is also a significant event for the local community, providing an opportunity to showcase their traditions and hospitality to visitors from around the world.

The race takes place on Moolam day in the Malayalam month of Mithunam, which corresponds to June or July. The event starts with rituals and ceremonies, followed by the much-anticipated boat race. Spectators from across Kerala and beyond flock to Champakkulam to witness this grand spectacle, which is an integral part of the state's cultural fabric.



### Timelines of the event

Time	Event
Morning	<ul style="list-style-type: none"><li>• Rituals at the temple and Moolakazcha,</li><li>• Offerings and prayers</li></ul>
Midday	<ul style="list-style-type: none"><li>• Inauguration</li><li>• Procession of decorated boats</li><li>• Cultural Programme</li></ul>
Afternoon	Heats and Finals of boats
Evening	Prize distribution

### PREVIOUS DISASTER INCIDENT



## 1. INCIDENT DESCRIPTION (2023 CHAMPAKULAM ACCIDENT)

In 2023, a real accident occurred during the event, providing an important case study for disaster preparedness.

### Ø Event Details

- Date: 3 July 2023
- Location: Pampa River, Alappuzha
- Event: Women's boat race (part of Champakulam Moolam)

### Ø Nature of Disaster

- A women's snake boat capsized during the race
- Around 22–30 participants were onboard
- The boat overturned near the finishing point

### Ø Immediate Impact

- All participants fell into water
- Around 22 participants sustained minor injuries
- All were rescued successfully

## 2. CAUSES OF THE INCIDENT

### Ø Immediate Causes

- Sudden water turbulence (high waves) caused by nearby snake boats
- Simultaneous race error (overlapping events)

### Ø Contributing Factors

- Possible overcrowding (22–30 rowers)

- Poor event coordination timing
- Limited separation between race tracks

### 3. Underlying System Failures

- Lack of strict race sequencing protocol
- Inadequate risk anticipation of water dynamics
- Weak real-time monitoring system

### 4. RESPONSE ANALYSIS

#### ∅ Positive Aspects

- Immediate rescue by locals, boats, and fire force
- Rapid hospital referral of injured persons
- Authorities quickly stopped the race

#### ∅ Gaps Identified

- No prevention of event overlap
- Lack of buffer zone between races
- Absence of strict water traffic control

[Reference:News paper reports,Google]

### RISK ASSESSMENT (BASED ON PAST DATA & PATTERNS)

SI No	Risk	Description	Risk Level	Key Concerns	Mitigation Measures
1	Drowning	Falling into river/boat accidents	Very High	Immediate death risk	Rescue teams, life boys, CPR
2	Heat exhaustion	Long exposure to the sun	High	Collapse	Hydration points
3	Cardiac events	Elderly population	High	Sudden death	Emergency care units

4	Stampede	Crowd surge	High	Mass injuries	Crowd control
5	Falls	Slippery banks	High	Fractures	Safety measures
6	Boat collision injury	Boat accidents	Moderate	Trauma	Regulation, monitoring
7	Overcrowding	Peak event day	High	Access issues	Entry regulation
8	Low light	Fall into river, boat accident	High	Fall and injuries, death	Lighting arrangement on both sides of the river from the starting point to the finishing point
9	Snake Bite	Unclean & food waste at river side and the surrounding	High	Death	Clean the riverside and the surrounding area
10	Delayed medical access	Linear crowd spread	High	Treatment delay	Distributed medical posts
11	Acute Diarrheal Disease (ADD)	Contaminated water exposure	Moderate	Waterborne outbreaks	Safe water, chlorination, ORS
12	Food-borne illness	Street food consumption	Moderate	Cluster cases	Food safety inspection
13	Viral fever / ARI	Crowd gathering	Moderate	Spread among spectators	Surveillance, IEC

14	Water contamination	River pollution during the event	High	Infection risk	Monitoring water quality
15	Slippery riverbanks	Mud and water spillage	High	Falls and injuries	Barricading, sand application
16	Waste accumulation	Plastic & food waste	High	Hygiene issues	Waste management system

### **Preparedness Plan for the event**

The backwater ecosystem of Alappuzha, characterized by canals, high humidity, water stagnation, and dense population clusters along narrow bund roads, presents unique public health challenges. The congregation of large crowds in such a setting increases the risk of communicable diseases, injuries, environmental hazards, and public health emergencies. Hence, a comprehensive and context-specific preparedness plan is essential.

### **PRE-EVENT PHASE (PREPAREDNESS)**

The pre-event phase focuses on detailed planning, coordination, and resource mobilization to minimize risks during the event.

#### **1.1 Planning and Coordination**

A District Level Coordination Committee is constituted under the District Collector to ensure effective interdepartmental coordination. Multiple planning meetings are conducted to finalize roles and responsibilities.

Key activities include:

- Preparation of micro plans
- Mapping of high-risk areas such as galleries, jetties, and food courts
- Coordination with police, fire services, and local bodies

#### **1.2 Medical Preparedness**

Adequate medical infrastructure is established, considering the large crowd and water-based setting.

Arrangements include:

- First Aid Posts at strategic locations
- Mobile medical units for rapid response
- Deployment of trained medical personnel
- Availability of ambulances (both land and water-based)
- Referral linkage with: General Hospital Alappuzha & Medical College Hospital Alappuzha

These facilities ensure immediate stabilization and referral of patients.

### **1.3 Disease Surveillance**

Enhanced surveillance systems are activated to detect and respond to potential outbreaks.

Measures include:

- Timely reporting to IDSP
- Deployment of Rapid Response Teams
- Pre-event fever surveillance in nearby areas
- Monitoring for diseases such as Dengue, Leptospirosis, Acute diarrheal diseases, Amoebic meningoencephalitis, etc

### **1.4 Water, Sanitation, and Hygiene**

Given the backwater setting, WASH interventions are critical.

Key interventions:

- Provision of safe drinking water with chlorination
- Installation of temporary toilets (gender-segregated)
- Handwashing facilities at public points
- Solid waste management systems
- Regular cleaning and disinfection

- Vector control measures such as fogging and larvicidal activities are also implemented.

### **1.5 Food Safety Measures**

Strict food safety protocols are enforced to prevent foodborne illnesses.

Actions include:

- Registration and inspection of food vendors
- Ensuring hygienic food preparation and storage
- Deployment of food safety officers
- Immediate action against violations

### **1.6 Health Awareness and IEC Activities**

Public awareness plays a vital role in prevention.

IEC activities include:

- Awareness of safe water consumption
- Use of footwear to prevent infections
- Personal hygiene practices
- Announcements in multiple languages
- Awareness of drinking and driving on drink with drive both road and water

### **1.7 Emergency Preparedness**

Emergency preparedness is strengthened through structured planning and drills.

Preparedness measures include:

- Mass casualty management plan
- Mock drills for drowning and stampede scenarios
- Establishment of a 24×7 control room
- Coordination with Fire and Rescue Services

## **2. DURING EVENT PHASE (RESPONSE)**

During the event, all systems are activated to ensure real-time response and management.

### **2.1 Medical Services**

Medical teams provide continuous care at all designated points.

Key functions:

- Immediate first aid and stabilization
- Referral of severe cases
- Management of dehydration, injuries, and emergencies

### **2.2 Surveillance and Monitoring**

Real-time surveillance is conducted to detect any unusual health events.

Includes:

- Continuous reporting from medical units
- Monitoring of fever and diarrheal cases
- Immediate outbreak response

### **2.3 Crowd and Environmental Management**

Efforts are made to ensure the safety and comfort of spectators.

Measures include

- Regulation of crowd movement
- Provision of drinking water and shaded areas
- Prevention of overcrowding

### **2.4 Water Safety and Rescue**

Given the aquatic setting, water safety is prioritized.

Arrangements include:

- Deployment of rescue boats and divers

- Availability of life jackets
- Deployment of the Scuba team
- Strict monitoring of water zones
- Not allowing small boats on the track and field

## **2.5 Sanitation and Food Safety Monitoring**

Continuous monitoring ensures compliance with hygiene standards.

Actions include:

- Cleaning of sanitation facilities
- Waste management
- Inspection of food stalls

## **2.6 Communication and Coordination**

A centralized control room ensures seamless coordination among all departments and facilitates rapid decision-making.



### 3. POST-EVENT PHASE (RECOVERY AND EVALUATION)

After the event, efforts focus on surveillance, sanitation, and evaluation.

#### 3.1 Continued Surveillance

Monitoring is continued to detect delayed disease outbreaks.

Focus areas:

- Leptospirosis
- Diarrheal diseases
- Fever surveillance
- Amoebic meningoencephalitis

#### 3.2 Environmental Sanitation

Immediate cleaning and restoration activities are undertaken.

Includes:

- Waste removal
- Disinfection of public areas
- Cleaning of water bodies

### 3.3 Review and Documentation

A detailed evaluation is conducted to assess performance.

- Activities include:
- Analysis of morbidity data
- Review meetings with stakeholders
- Documentation of best practices and challenges

#### LIST OF HOSPITALS DIRECTLY INVOLVED

SI No	Hospital Name	Type (Govt/Private )	Level (Primary/Secondary /Tertiary)	Distance from Venue	Emergency Services Available
1	CHC Champakulam	Govt	Primary	100 meters	Basic emergency care
2	Aby Hospital	PVT	Secondary	5 KM	Emergency, Trauma care
3	GH Alappuzha	Govt	Secondary	14KM	Advanced emergency care
4	MCH Vandanam	Govt	Tertiary	19KM	Specialized care

#### INCIDENT COMMAND SYSTEM

---

### **District Level**

- District Collector – Incident Commander
- DMO – Health Commander

### **Block Level**

- BMO – Operational Lead
- Health Supervisor – Surveillance Lead

### **On-site Structure**

- Medical Officer in charge (Site Incident Officer)
- Sector Officers for:
  - Medical aid
  - Surveillance
  - Ambulance movement

### **LIST OF KEY PEOPLE AND CONTACT**

<b>Sl. No.</b>	<b>Designation</b>	<b>Role During Festival</b>
1	District Collector	Incident Commander
2	District Medical Officer (Health), Alappuzha	Health Incident Commander
3	DDMA Officer	Disaster coordination
4	District Police Chief/SP	Law & Order
5	KSEB,Chambakkulam Section	Electricity Related

6	Water Authority	Safe water support
7	President Block Panchayath	Block Coordination
8	Block Medical Officer, Chempumpuram	Block health operations lead
9	Medical Officer, CHC Champakulam	On-site health coordination
10	Health Supervisor	Surveillance & IEC
11	CHC Champakulam	Medical Emergency
12	Health Inspector	Surveillance & IEC
13	Station Officer, Fire & Rescue	On-ground emergency response
14	Panchayath President Champakulam	Local Coordination
15	Panchayath President Nedumudi	Local Coordination

## AMBULANCE PLAN

### Boat Ambulance

- Life jackets & rescue tubes
- Scuba team
- Basic resuscitation kit
- Oxygen support

Sl. No	Ambulance Provider	Type	No. of Units
--------	--------------------	------	--------------

1	Govt. 108 Emergency Service	BLS	1
2	Private Empaneled Ambulance Services	BLS	2
3	Advanced Life Support Provider (Govt/Private)	ALS	1-2

## EVACUATION PLAN

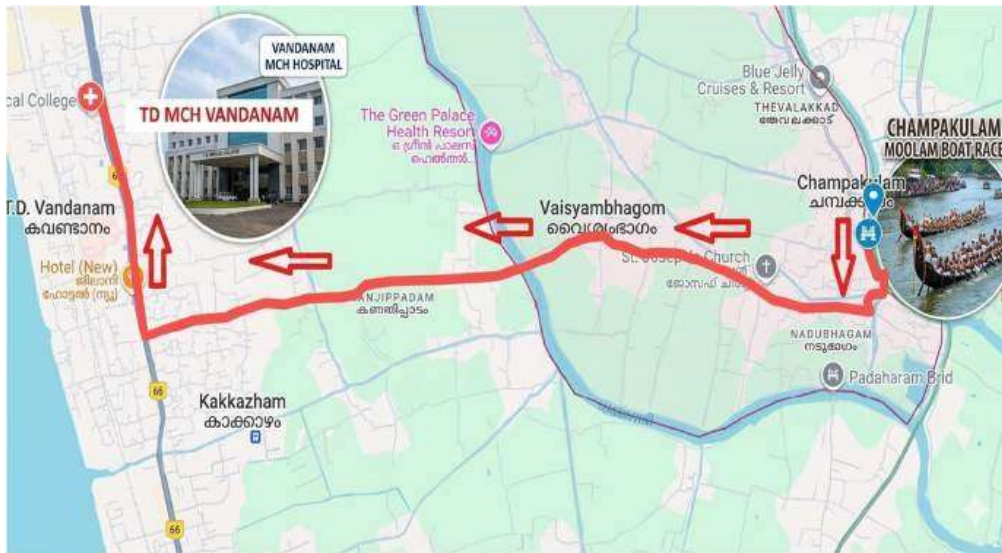


**EVACUATION ROUTE**

1. Champakulam → Champakulam Church → Pooppally → AC Road → GH Alappuzha



2. Champakulam → Vyshambhagam → Kanjippadam → SN Junction → NH66 → MCH Vandanam



### **Medical Team Deployment**

- Medical Officers: 2
- Staff Nurses: 2
- Paramedics:1
- Field Health Workers and Volunteers:15
- Ambulance Drivers: 3

### **FACILITIES TO BE ARRANGED**

- Drinking water points
- Temporary shelters
- Mobile toilets
- Lighting arrangements
- Public address system
- Signage for emergency exits

### **SUPPORT ACCESSORIES**

- Stretchers
- Wheelchairs
- Oxygen cylinders
- Emergency medicines
- Flood rescue equipment (boats/life jackets,rope etc if required)

## **STANDARD OPERATING PROCEDURES (SOP) FOR COMMON POSSIBLE HEALTH HAZARDS**

Large religious gatherings are associated with a higher risk of sudden medical emergencies such as crowd-related injuries, burns, fainting episodes, seizures, and drowning incidents. To ensure rapid and uniform response, the following standardized SOPs will be followed by medical teams, volunteers, and first responders during the festival period.

### **1. SOP FOR MASS CASUALTY INCIDENTS (MCI) & STAMPEDES**

Objective: To ensure rapid and coordinated medical response in the event of crowd congestion, stampede risk, or multiple casualties. In the event of a crowd crush or structural collapse, the goal is "The Greatest Good for the Greatest Number."

#### **IMMEDIATE ACTIONS**

On identification of a crowd crush, stampede risk, or multiple injured persons, the following actions shall be taken immediately:

- Do not run or shout; calm communication shall be maintained through volunteers and public announcement systems.
- Police and volunteers must immediately stop further crowd entry into the affected area.
- Identify injured persons and shift them to a safe zone.
- Create a temporary human corridor for evacuation.
- Inform the nearest medical aid post and ambulance immediately.

#### **MEDICAL MANAGEMENT**

All patients shall be rapidly assessed and classified based on the severity of injury using the START (Simple Triage and Rapid Treatment) method. Triage shall be completed within one minute per patient wherever feasible. Priority shall be given to patients with breathing difficulty, severe bleeding, head injury, or unconsciousness. First aid, oxygen support, haemorrhage control, and stabilization shall be initiated immediately before referral.

#### **MANAGEMENT OF HIGH-RISK COMPLICATIONS**

In cases where victims have been trapped for a prolonged period, medical teams shall monitor for features of crush syndrome. Early identification and rapid referral shall be ensured. Severe bleeding shall be controlled immediately using pressure dressings or tourniquets wherever required. Oxygen support and IV fluids shall be initiated wherever necessary before referral.

### **COMMUNICATION AND REFERRAL**

Upon confirmation of a Mass Casualty Incident, a “Code Red” alert shall be activated. The Medical Officer in charge of the Medical Aid Post shall immediately inform Medical College Hospital, Vandanam to ensure preparedness at referral centres. Ambulances shall be moved only through the designated green corridor, and patient referral shall be prioritized based on triage category.

### **DOCUMENTATION AND REPORTING**

All patients managed during the incident shall be recorded in the emergency register at the medical aid post. The number of critical, moderate, and minor cases shall be documented and reported to the Block Medical Officer and District Control Room without delay.

### **STANDARD TRIAGE COLOUR CODING SYSTEM FOR MASS CASUALTY INCIDENTS**

## **2. SOP FOR BURNS AND FIRE-RELATED INJURIES**

Objective: To ensure immediate and correct first-aid management of burn injuries occurring during the festival due to fireworks, oil lamps, cooking areas, or accidental fire exposure, and to ensure timely referral of serious cases.

### **IMMEDIATE ACTIONS**

- Remove the person from the source of fire.
- Pour clean running water for 15–20 minutes over the affected area.
- Do not apply oil, turmeric, toothpaste, or any local remedies.
- Cover the burn area with a clean cloth or sterile dressing.
- Refer immediately if burns are extensive.

## **MEDICAL RESPONSE**

The patient shall be assessed for the severity of the burn and managed accordingly. Pain relief shall be provided and the wound shall be dressed using sterile materials. In cases where the burn involves more than 10% of the body surface area, intravenous fluids shall be initiated as early as possible.

IV Ringer's Lactate shall be started in moderate to severe burn cases as per standard burn-management protocols. Vital signs shall be monitored continuously, and the patient shall be prepared for early referral if required.

## **ASSESSMENT OF AIRWAY AND BREATHING**

All burn patients shall be assessed for signs of inhalation injury, especially in cases involving fire, smoke exposure, or burns in enclosed spaces. Warning signs such as singed nasal hair, soot around the mouth or nose, hoarseness of voice, or difficulty in breathing shall be treated as medical emergencies.

If inhalation injury is suspected, high-flow oxygen shall be administered immediately, and the patient shall be referred without delay to a higher centre.

## **REFERRAL PROTOCOL**

All patients with facial burns, circumferential burns, burns involving the hands, feet, or eyes, and burns covering more than 10% of the body surface area shall be referred immediately to higher centres. The primary referral centre for severe burn cases shall be Medical College Hospital, Vandanam.

Patients with minor burns may be treated at the medical aid post or the nearest health facility after proper assessment.

## **DOCUMENTATION AND REPORTING**

All burn cases reported during the festival shall be recorded in the emergency register at the medical aid post. The severity of the burn, treatment provided, and referral details shall be documented and reported to the Block Medical Officer.

### **3. SOP FOR FAINTING & SYNCOPE (VASOVAGAL/HEAT)**

---

Objective: To ensure early recognition and safe management of fainting (syncope) cases, which are common during large gatherings due to prolonged standing, heat exposure, dehydration, and reduced venous return.

#### **IMMEDIATE ACTIONS:**

- Lay the patient flat on their back (supine).
- Elevate the legs 12 inches (30 cm) above the level of the heart. This utilizes gravity to increase venous return to the heart and brain.
- Loosen tight clothing around the neck and waist.
- Ensure adequate ventilation / move to a shaded area.
- Give ORS / water once the person regains consciousness.

#### **MEDICAL RESPONSE**

The patient's pulse and breathing shall be checked immediately. Most patients regain consciousness within a short period once placed in the proper position. After the patient regains consciousness, small quantities of drinking water or ORS may be given, provided the patient is fully conscious and able to swallow.

The patient shall be observed for a few minutes at the medical aid post, especially if the episode occurred in a crowded or hot environment. Vital signs shall be checked before allowing the person to leave.

#### **REFERRAL PROTOCOL**

The patient shall be referred to the nearest health facility if any of the following are present:

- Loss of consciousness lasting more than a few minutes
- Repeated fainting episodes
- Associated injury due to fall
- Abnormal pulse or breathing
- Suspected heat exhaustion or heat stroke

#### **DOCUMENTATION AND REPORTING**

All fainting cases managed at the medical aid post shall be recorded in the emergency register. If multiple fainting cases are reported within a short period, the medical officer shall assess the possibility of heat-related illness and initiate preventive measures such as ORS distribution and crowd ventilation.

#### **4. SOP FOR SEIZURE / FITS**

Objective: To ensure safe, prompt, and standardized management of seizure (fit) cases during mass gatherings, while preventing injury and complications such as aspiration and prolonged seizures.

#### **COMMON SITUATIONS IN MASS GATHERINGS**

Seizures may occur due to:

- Heat exposure / dehydration
- Exhaustion
- Pre-existing epilepsy
- Stress, crowding, or lack of sleep
- Fever or underlying illness

#### **IMMEDIATE ACTIONS:**

- Ensure the crowd does not panic or gather closely around the patient.
- Lay the person on one side (recovery position).
- Remove nearby objects to prevent injury.
- Do not put anything inside the mouth.
- Do not attempt to hold the tongue or forcefully open the mouth.
- Loosen tight clothing around the neck.
- Do not hold the person tightly.
- Wait until the seizure stops.

#### **MEDICAL RESPONSE**

Once the seizure stops, the Medical Team at the Medical Aid Post shall take the following actions:

The patient should be kept in the lateral (side-lying) position to prevent aspiration of saliva or vomit into the lungs. Airway, breathing, and pulse should be checked immediately. Most patients may remain confused, drowsy, or disoriented for a few minutes after the seizure (post-ictal phase), and this should not be mistaken for another emergency unless symptoms persist.

The patient should be shifted to the Medical Aid Post for observation and monitoring. Oral fluids may be given only after the patient has fully regained consciousness and is able to swallow safely.

## PHARMACOLOGICAL MANAGEMENT (BY MEDICAL OFFICER ONLY)

If the seizure lasts more than 5 minutes or repeated seizures occur without recovery of consciousness, the condition shall be treated as Status Epilepticus, which is a medical emergency.

In such cases, the Medical Officer shall administer:

- Inj. Diazepam (0.1 mg/kg IV/IM)
- OR
- Midazolam as per emergency kit protocol

Immediate referral to the nearest hospital shall be arranged through the designated ambulance service.

## REFERRAL CRITERIA

The patient must be referred immediately if:

- Seizure lasts more than 5 minutes
- Repeated seizures occur
- Patient does not regain consciousness
- Head injury occurs during the seizure
- First-time seizure
- Pregnant woman / elderly patient
- Breathing difficulty after seizure

## 5. SOP FOR DROWNING / NEAR-DROWNING INCIDENTS

Objective: To ensure rapid, safe, and standardized response to drowning and near-drowning incidents during mass gatherings and to prevent death, brain injury, and delayed complications.

### BACKGROUND

Drowning and near-drowning incidents are possible during mass gatherings conducted near Arthunkal beach, rivers, canals, and other water bodies. Such incidents commonly occur due to overcrowding near the water, accidental slipping, panic situations, or attempts by untrained persons to rescue victims. Even when the person appears to have recovered after rescue, there is a significant risk of delayed respiratory complications (secondary drowning / delayed pulmonary edema). Hence, all such cases require immediate medical attention and referral.

## **POSSIBLE SCENARIO**

Temple ponds (Ambala Kulams), crowd near water bodies, accidental slipping.

## **IMMEDIATE ACTIONS**

- Use a pole or throw a float; do not enter the water unless trained in water rescue.
- Once the person reaches the edge, remove them safely with the help of available staff.
- If a diving injury is suspected, maintain the head and neck in a neutral position while removing the person from the water.
- Check breathing immediately.
- If the person is unconscious but breathing, place in the recovery position.
- If the person is unresponsive and not breathing, initiate CPR (30:2 ratio) immediately. Unlike standard cardiac arrest, in drowning, start with 5 rescue breaths.
- Remove wet clothes and cover with dry blankets to prevent hypothermia.

## **MEDICAL RESPONSE**

All drowning / near-drowning victims must be treated as medical emergencies, even if the person appears normal after rescue.

The Medical Team shall:

- Check airway, breathing, and circulation.
- Provide oxygen support immediately.
- Monitor pulse, breathing, and level of consciousness.
- Observe breathing difficulty, cough, chest discomfort, or altered consciousness.

## **REFERRAL PROTOCOL**

All drowning / near-drowning cases must be referred to the nearest hospital without delay, even if the patient appears recovered.

This is necessary due to the risk of:

- Delayed pulmonary edema
- Aspiration pneumonia
- Secondary drowning
- Hypoxia-related complications

During transport:

- Continue oxygen support
- Monitor breathing and consciousness continuously
- Inform the referral hospital in advance

#### **STANDARD REPORTING MANDATE**

Every drowning / near-drowning incident managed during the mass gathering must be entered in the Patient Line-list by the JHI on duty and reported to the Block Medical Officer immediately.

#### **OPERATING PROCEDURES (SOP) FOR COMMON POSSIBLE HEALTH HAZARDS**

Large religious gatherings are associated with a higher risk of sudden medical emergencies such as crowd-related injuries, burns, fainting episodes, seizures, and drowning incidents. To ensure rapid and uniform response, the following standardized SOPs will be followed by medical teams, volunteers, and first responders during the festival period.

## **1. SOP FOR MASS CASUALTY INCIDENTS (MCI) & STAMPEDES**

Objective: To ensure rapid and coordinated medical response in the event of crowd congestion, stampede risk, or multiple casualties. In the event of a crowd crush or structural collapse, the goal is "The Greatest Good for the Greatest Number."

### **IMMEDIATE ACTIONS**

On identification of a crowd crush, stampede risk, or multiple injured persons, the following actions shall be taken immediately:

- Do not run or shout; calm communication shall be maintained through volunteers and public announcement systems.
- Police and volunteers must immediately stop further crowd entry into the affected area.
- Identify injured persons and shift them to a safe zone.
- Create a temporary human corridor for evacuation.
- Inform the nearest medical aid post and ambulance immediately.

### **MEDICAL MANAGEMENT**

All patients shall be rapidly assessed and classified based on the severity of injury using the START (Simple Triage and Rapid Treatment) method. Triage shall be completed within one minute per patient wherever feasible. Priority shall be given to patients with breathing difficulty, severe bleeding, head injury, or unconsciousness. First aid, oxygen support, haemorrhage control, and stabilization shall be initiated immediately before referral.

### **MANAGEMENT OF HIGH-RISK COMPLICATIONS**

In cases where victims have been trapped for a prolonged period, medical teams shall monitor for features of crush syndrome. Early identification and rapid referral shall be ensured. Severe bleeding shall be controlled immediately using pressure dressings or tourniquets wherever required. Oxygen support and IV fluids shall be initiated wherever necessary before referral.

### **COMMUNICATION AND REFERRAL**

Upon confirmation of a Mass Casualty Incident, a “Code Red” alert shall be activated. The Medical Officer in charge of the Medical Aid Post shall immediately inform Medical College Hospital, Vandanam to ensure preparedness at referral centres. Ambulances shall be moved only through the designated green corridor, and patient referral shall be prioritized based on triage category.

## **DOCUMENTATION AND REPORTING**

All patients managed during the incident shall be recorded in the emergency register at the medical aid post. The number of critical, moderate, and minor cases shall be documented and reported to the Block Medical Officer and District Control Room without delay.

## **STANDARD TRIAGE COLOUR CODING SYSTEM FOR MASS CASUALTY INCIDENTS**

### **2. SOP FOR BURNS AND FIRE-RELATED INJURIES**

Objective: To ensure immediate and correct first-aid management of burn injuries occurring during the festival due to fireworks, oil lamps, cooking areas, or accidental fire exposure, and to ensure timely referral of serious cases.

#### **IMMEDIATE ACTIONS**

- Remove the person from the source of fire.
- Pour clean running water for 15–20 minutes over the affected area.
- Do not apply oil, turmeric, toothpaste, or any local remedies.
- Cover the burn area with a clean cloth or sterile dressing.
- Refer immediately if burns are extensive.

#### **MEDICAL RESPONSE**

The patient shall be assessed for the severity of the burn and managed accordingly. Pain relief shall be provided and the wound shall be dressed using sterile materials. In cases where the burn involves more than 10% of the body surface area, intravenous fluids shall be initiated as early as possible.

IV Ringer's Lactate shall be started in moderate to severe burn cases as per standard burn-management protocols. Vital signs shall be monitored continuously, and the patient shall be prepared for early referral if required.

### **ASSESSMENT OF AIRWAY AND BREATHING**

All burn patients shall be assessed for signs of inhalation injury, especially in cases involving fire, smoke exposure, or burns in enclosed spaces. Warning signs such as singed nasal hair, soot around the mouth or nose, hoarseness of voice, or difficulty in breathing shall be treated as medical emergencies.

If inhalation injury is suspected, high-flow oxygen shall be administered immediately, and the patient shall be referred without delay to a higher centre.

### **REFERRAL PROTOCOL**

All patients with facial burns, circumferential burns, burns involving the hands, feet, or eyes, and burns covering more than 10% of the body surface area shall be referred immediately to higher centres. The primary referral centre for severe burn cases shall be Medical College Hospital, Vandanam.

Patients with minor burns may be treated at the medical aid post or the nearest health facility after proper assessment.

### **DOCUMENTATION AND REPORTING**

All burn cases reported during the festival shall be recorded in the emergency register at the medical aid post. The severity of the burn, treatment provided, and referral details shall be documented and reported to the Block Medical Officer.

### **3. SOP FOR FAINTING & SYNCOPE (VASOVAGAL/HEAT)**

Objective: To ensure early recognition and safe management of fainting (syncope) cases, which are common during large gatherings due to prolonged standing, heat exposure, dehydration, and reduced venous return.

#### **IMMEDIATE ACTIONS:**

- Lay the patient flat on their back (supine).

- Elevate the legs 12 inches (30 cm) above the level of the heart. This utilizes gravity to increase venous return to the heart and brain.
- Loosen tight clothing around the neck and waist.
- Ensure adequate ventilation / move to a shaded area.
- Give ORS / water once the person regains consciousness.

## **MEDICAL RESPONSE**

The patient's pulse and breathing shall be checked immediately. Most patients regain consciousness within a short period once placed in the proper position. After the patient regains consciousness, small quantities of drinking water or ORS may be given, provided the patient is fully conscious and able to swallow.

The patient shall be observed for a few minutes at the medical aid post, especially if the episode occurred in a crowded or hot environment. Vital signs shall be checked before allowing the person to leave.

## **REFERRAL PROTOCOL**

The patient shall be referred to the nearest health facility if any of the following are present:

- Loss of consciousness lasting more than a few minutes
- Repeated fainting episodes
- Associated injury due to fall
- Abnormal pulse or breathing
- Suspected heat exhaustion or heat stroke

## **DOCUMENTATION AND REPORTING**

All fainting cases managed at the medical aid post shall be recorded in the emergency register. If multiple fainting cases are reported within a short period, the medical officer shall assess the possibility of heat-related illness and initiate preventive measures such as ORS distribution and crowd ventilation.

## **4. SOP FOR SEIZURE / FITS**

Objective: To ensure safe, prompt, and standardized management of seizure (fit) cases during mass gatherings, while preventing injury and complications such as aspiration and prolonged seizures.

## **COMMON SITUATIONS IN MASS GATHERINGS**

Seizures may occur due to:

- Heat exposure / dehydration
- Exhaustion
- Pre-existing epilepsy
- Stress, crowding, or lack of sleep
- Fever or underlying illness

**IMMEDIATE ACTIONS:**

- Ensure the crowd does not panic or gather closely around the patient.
- Lay the person on one side (recovery position).
- Remove nearby objects to prevent injury.
- Do not put anything inside the mouth.
- Do not attempt to hold the tongue or forcefully open the mouth.
- Loosen tight clothing around the neck.
- Do not hold the person tightly.
- Wait until the seizure stops.

**MEDICAL RESPONSE**

Once the seizure stops, the Medical Team at the Medical Aid Post shall take the following actions:

The patient should be kept in the lateral (side-lying) position to prevent aspiration of saliva or vomit into the lungs. Airway, breathing, and pulse should be checked immediately. Most patients may remain confused, drowsy, or disoriented for a few minutes after the seizure (post-ictal phase), and this should not be mistaken for another emergency unless symptoms persist.

The patient should be shifted to the Medical Aid Post for observation and monitoring. Oral fluids may be given only after the patient has fully regained consciousness and is able to swallow safely.

**PHARMACOLOGICAL MANAGEMENT (BY MEDICAL OFFICER ONLY)**

If the seizure lasts more than 5 minutes or repeated seizures occur without recovery of consciousness, the condition shall be treated as Status Epilepticus, which is a medical emergency.

In such cases, the Medical Officer shall administer:

- Inj. Diazepam (0.1 mg/kg IV/IM)
- OR
- Midazolam as per emergency kit protocol

Immediate referral to the nearest hospital shall be arranged through the designated ambulance service.

### **REFERRAL CRITERIA**

The patient must be referred immediately if:

- Seizure lasts more than 5 minutes
- Repeated seizures occur
- Patient does not regain consciousness
- Head injury occurs during the seizure
- First-time seizure
- Pregnant woman / elderly patient
- Breathing difficulty after seizure

### **5. SOP FOR DROWNING / NEAR-DROWNING INCIDENTS**

Objective: To ensure rapid, safe, and standardized response to drowning and near-drowning incidents during mass gatherings and to prevent death, brain injury, and delayed complications.

#### **BACKGROUND**

Drowning and near-drowning incidents are possible during mass gatherings conducted near Arthunkal beach, rivers, canals, and other water bodies. Such incidents commonly occur due to overcrowding near the water, accidental slipping, panic situations, or attempts by untrained persons to rescue victims. Even when the person appears to have recovered after rescue, there is a significant risk of delayed respiratory complications (secondary drowning / delayed pulmonary edema). Hence, all such cases require immediate medical attention and referral.

#### **POSSIBLE SCENARIO**

Temple ponds (Ambala Kulams), crowd near water bodies, accidental slipping.

#### **IMMEDIATE ACTIONS**

- Use a pole or throw a float; do not enter the water unless trained in water rescue.

- Once the person reaches the edge, remove them safely with the help of available staff.
- If a diving injury is suspected, maintain the head and neck in a neutral position while removing the person from the water.
- Check breathing immediately.
- If the person is unconscious but breathing, place in the recovery position.
- If the person is unresponsive and not breathing, initiate CPR (30:2 ratio) immediately. Unlike standard cardiac arrest, in drowning, start with 5 rescue breaths.
- Remove wet clothes and cover with dry blankets to prevent hypothermia.

## **MEDICAL RESPONSE**

All drowning / near-drowning victims must be treated as medical emergencies, even if the person appears normal after rescue.

The Medical Team shall:

- Check airway, breathing, and circulation.
- Provide oxygen support immediately.
- Monitor pulse, breathing, and level of consciousness.
- Observe breathing difficulty, cough, chest discomfort, or altered consciousness.

## **REFERRAL PROTOCOL**

All drowning / near-drowning cases must be referred to the nearest hospital without delay, even if the patient appears recovered.

This is necessary due to the risk of:

- Delayed pulmonary edema
- Aspiration pneumonia
- Secondary drowning
- Hypoxia-related complications

During transport:

- Continue oxygen support
- Monitor breathing and consciousness continuously
- Inform the referral hospital in advance

## **STANDARD REPORTING MANDATE**

Every drowning / near-drowning incident managed during the mass gathering must be entered in the Patient Line-list by the JHI on duty and reported to the Block Medical Officer immediately.

## **CONCLUSION**

The preparedness plan for the Champakulam Boat Race ensures a well-coordinated and multi-agency approach to managing one of Kerala's most significant water festivals. By integrating effective crowd management strategies, clearly defined evacuation routes, robust medical support systems, and efficient traffic regulation, the plan prioritizes the safety and well-being of all participants and spectators.

Special emphasis on risk mitigation—such as stampede prevention, water safety measures, and emergency response readiness—enhances the ability to handle unforeseen situations promptly. The deployment of trained personnel, surveillance systems, and public communication networks further strengthens operational control and situational awareness.

Overall, the preparedness framework reflects a proactive and resilient approach, ensuring that the event is conducted smoothly, safely, and successfully while preserving the cultural spirit and public enthusiasm associated with the boat race.

## CHAKKULATHUKAV PONGALA



### PREAMBLE

This is the phenomenally renowned festival that takes place in the temple during the month of 'Vrichikam' (November/December). This is the time when the glory of the Goddess is at its peak. Lakhs of women devotees gather around the temple as early as even one week before the function. The temple premises will be overcrowded and the devotees arrange a place for offering the Pongala on both sides of the main streets. The queue usually extends to a surprising length of 40 km to 50 km.

Rice, coconut and jaggery are bought by women devotees along with round earthen pots for cooking. The Chief Priest lights the main hearth from the divine fire inside the sanctum . This fire is exchanged from one over to another. Every year at the time of lighting the main hearth an eagle is found to circle far above the sky. This is an unfailing blessing of the Goddess. The sight of the bird drives the devotees into an inexplicable feeling of ecstasy. They utter the divine names of the mother and the atmosphere echoes and reverberates with a thousand names of the Goddess.

The origin of this ritual dates back actually to the origin of the temple itself and takes us once again to the story of the hunter and his family detailed into the temple history. The hunter and his family members cooked their food in earthen pots. They always set apart a part of their food as an offering to their goddess. One day they were very late to return home after collecting wood in the jungle. They felt extremely sad that they could not submit the daily part of their food to the Devi. Overtaken by unbearable sorrow they fell upon the feet of the Goddess and asked pardon for the delay. Then they rushed immediately to cook the food. But they found to their utter surprise that all the earthen pots were filled with cooked food and fruits. They knew for certain that it was the Goddess Herself who cooked the food for them. They heard a voice in the atmosphere. My Children, I have prepared this food for you. I will always be too near those who are devoted and pure. Take this food and have a rest. We find the supreme moment of the Goddess Herself preparing food for the devotee. The Pongala in the temple is a symbolic reminder of this age-old incident. Devotees prepare the food as a humble offering to the Mother. It is believed that she accepts this offering in full and blesses each devotee. Pongala is actually an offering that the devotee submits to the Mother. It is believed that the Goddess herself offers her august presence near each pongala hearth as the cooking is done. Several are the instances where the griefs, problems and confusion of the devotees are washed away through the pongala offering. It is also a symbolic reminder that devotion reaches the full circle through complete submission and total surrender at the lotus feet of the mother. The pongala festival in this temple is one of the foremost rituals compared to anything of the same in the whole state of Kerala.



## SUMMARY OF TEMPORAL EVENTS WITH TIMELINE

Time	Phase	Activities	Key Notes
3:00 AM – 6:00 AM	Early Arrival	Devotees arrive, occupy roads & temple premises, hearth setup begins	Traffic congestion starts
6:00 AM – 9:00 AM	Preparation	Firewood & materials distributed, volunteers & medical teams deployed	Crowd density increasing
9:00 AM – 10:30 AM	Main Ritual	Chief priest lights Pandara Aduppu, fire passed to devotees	Ritual start – highly sensitive time
10:30 AM – 1:00 PM	Pongala Cooking	Devotees prepare Pongala offering with prayers & chanting	Peak heat & crowd density
1:00 PM – 2:00 PM	Offering & Blessing	Holy water sprinkled, offering accepted	Most important spiritual phase
2:00 PM – 6:00 PM	Dispersal	Devotees leave in phases, transport activated	High risk of crowd movement issues
Evening onwards	Post Event	Cleanup, medical standby, final rituals	Gradual normalization

## RISK MITIGATION OF GATHERING

### Fire Hazards

- Thousands of hearths (aduppu) using firewood
- Close spacing increase's chance of fire spread

### Overcrowding & Stampede

- Lakhs of women gather in limited space
- Sudden panic or movement can lead to stampede

**Heat & Dehydration**

- Long hours under sun near fire
- Risk of heat exhaustion and fainting

**Medical Emergencies**

- Burns, breathing issues, cardiac events
- Delay in emergency response due to crowd

**Traffic Congestion**

- Blocked roads affecting ambulance movement
- Delay in reaching hospitals

**Crowd Mismanagement**

- Uncontrolled entry/exit
- Confusion in movement routes

**Weather Risks**

- Unexpected rain or strong sun
- Slippery surfaces increasing fall risk

**Missing Persons**

- Devotees getting separated in large crowd

**COMMAND SYSTEM & SYSTEM COLLABORATION****Incident Command Structure (ICS)**

<b>Role</b>	<b>Responsibility</b>	<b>Lead Agency</b>
Incident Commander (IC)	Overall control, decision making, emergency response activation	District Collector
Deputy IC	Supports IC, coordinates field operations	Sub Collector / RDO
Operations Section	Crowd control, traffic, law & order	Police Department
Planning Section	Risk assessment, situation updates, resource planning	DDMA
Logistics Section	Food, water, barricades, lighting, transport	Local Self Government
Medical Section	Emergency care, triage, ambulance services	Health Department
Communication Unit	Information dissemination, control room	Police + IT Cell

### **Inter-Agency Collaboration System**

<b>Agency</b>	<b>Key Roles</b>
Police Department	Crowd management, route control, stampede prevention
Health Department	Medical camps, ambulances, emergency response
Fire & Rescue Services	Fire safety, rescue operations
Motor Vehicles Department (MVD)	Traffic diversion, vehicle regulation
Local Self Government (LSG)	Sanitation, water supply, waste management
Kerala State Electricity Board (KSEB)	Power supply, emergency backup
Kerala Water Authority (KWA)	Drinking water supply
Disaster Management Authority (DDMA)	Overall disaster preparedness & coordination
Volunteers (NSS/NGOs/Kudumbashree)	Crowd guidance, awareness, support services
Temple Authority	Ritual coordination, internal arrangements

## **A. PRE-EVENT PHASE (Preparedness & Prevention)**

Component	Activities	Responsible Agency	Timeline
Risk Assessment	Hazard identification (fire, crowd, heat), GIS mapping	District Administration, DDMA	1 Month Before
Coordination	Inter-department meetings, assign nodal officers	District Collectorate	1 Month Before
Crowd Management	Entry routes (one-way system) Exit routes (separate corridors) Emergency evacuation paths Barricades and crowd flow channels Signboards in Malayalam & English CCTV surveillance and drone monitoring Public announcement systems	Police Department	3 Weeks Before
Traffic Management	Diversion plan Heavy vehicles restricted Parking zones outside main event area	Police, MVD	2-3 Weeks Before
Fire Safety	Fire tenders at strategic points Portable fire extinguishers in all zones	Fire & Rescue	2 Weeks Before

Medical Preparedness	<p>Temporary medical camps every 200–300 meters</p> <p>First aid booths</p> <p>Heatstroke management units</p> <p>ORS distribution points</p> <p>Ambulance plan</p>	Health Department	2 Weeks Before
Hospital Linkages	Tie-up with referral hospitals	Health Dept	2 Weeks Before
Water & Sanitation	<p>Drinking water kiosks</p> <p>Mobile toilets (adequate ratio)</p> <p>Waste collection and disposal teams</p> <p>Cleaning staff deployment</p> <p>Women-friendly sanitation facilities</p>	Local Self Govt	2 Weeks Before
Communicable Diseases	<p>Source reduction activities</p> <ul style="list-style-type: none"> <li>• Fogging &amp; larvicidal measures</li> <li>• Awareness on personal protection</li> <li>• Water quality testing</li> <li>• Chlorination</li> </ul>	Health Department	2 Weeks Before

Temporary Food Stalls & Vendors	<ul style="list-style-type: none"> <li>• Mandatory registration &amp; licensing of all food stalls</li> <li>• Joint inspection by Health &amp; Food Safety Departments</li> <li>• Water quality testing for cooking &amp; drinking</li> <li>• Health card mandatory</li> <li>• Ban on high-risk foods</li> <li>• IEC on safe food practices for vendors</li> </ul>	Health Department	2 Weeks Before
Infrastructure	<p>Lighting (especially early morning/late evening)</p> <p>Power backup systems</p> <p>Safe electrical wiring Generator support</p>	KSEB, LSGD	1-2 Weeks Before
Security & Law Enforcement	<p>Women police officers</p> <p>Rapid response teams</p> <p>Watch towers</p> <p>Missing persons tracking system</p> <p>Anti-harassment squads</p>	Police Department	1-2 Weeks Before
Public Awareness	<p>Safe cooking practices</p> <p>Crowd discipline Help desks &amp; information centers</p>	Information Dept	1 Week Before

Volunteer Training	First aid, crowd control training	District Admin	1 Week Before
Emergency Preparedness	Mock drills (fire, stampede, evacuation)	KSDMA, Police, Fire force	1 Week Before
Control Room	Central & sector control rooms, communication systems	District Admin	3-5 Days Before
Final Inspection	Safety audit, route clearance, readiness check, food stall and temporary hotels	All Departments	1 Day Before

## **B. DURING EVENT PHASE (Response & Control)**

Component	Activities	Action Details	Responsible Agency
Incident Command & Control	Activate EOC	Central control room + sector control units	District Administration
	Command Structure	Incident Commander (Collector/ADM), sector officers	District Admin
	Coordination	Real-time communication system	Kerala Police, Kerala Fire and Rescue Services, Health Dept
Crowd Management	Monitoring	CCTV + drone surveillance	Police Dept
	Entry Regulation	Control inflow during overcrowding	Police & Volunteers
	Crowd Diversion	Redirect to low-density zones	Sector Officers
	Control System	Stop-Go system in congestion points	Police
	Emergency Teams	Quick response for surge/stampede	Police, Volunteers
Medical & Ambulance	Ambulance Deployment	At entry/exit & high-density zones	Health Dept
	Emergency Routes	Dedicated green corridors	Police

	Hospital Linkage	Referral support	Government Medical College Vandanam, Pushpagiri Medical College
	Emergency Care	Treat dehydration, burns, cardiac cases	Medical Teams
Fire Safety	Deployment	Fire units in all sectors	Kerala Fire and Rescue Services
	Patrol	Monitor cooking/hearth areas	Fire Force
	Emergency Action	Fire suppression & hazard control	Fire Teams
	Equipment	Water tankers & extinguishers ready	Fire Dept
Traffic Control	Movement Control	One-way pedestrian system	Police
	Vehicle Restriction	No vehicles near temple zone	Police
	Ambulance Access	Keep routes clear & barricaded	Police
	Updates	Real-time traffic updates	Kerala Motor Vehicles Department
Communication	Announcements	Safety instructions & route guidance	Information Dept

	Alert System	Emergency alerts via PA system	Control Room
	Language	Malayalam & English communication	All Agencies
Welfare Services	Water Supply	Drinking water & ORS distribution	LSGD, Volunteers
	Monitoring	Support elderly & children	Volunteers
	Heat Protection	Provide shade/resting areas	Local Authorities
Emergency Protocol	Fire Response	Evacuate area, activate fire corridor	Fire & Police
	Stampede Control	Stop inflow, open exits, disperse crowd	Police
	Medical Emergency	First aid → stabilize → hospital transfer	Health Dept
Security	Deployment	Women police & anti-harassment squads	Police
	Surveillance	Monitor suspicious activity	Police
	Help Desk	Missing persons & assistance centers	Police & Volunteers

Reporting	Data Collection	Hourly reports from sectors	Sector Officers
	Incident Logging	Record medical, fire & crowd incidents	Control Room
Volunteer Management	Role Assignment	Crowd control, water distribution	District Admin
	Equipment	ID cards & communication tools	Organizing Committee

***C. POST-EVENT PHASE (Recovery & Surveillance)***

Component	Activities	Action Details	Responsible Agency
Crowd Dispersal	Phased Exit	Zone-wise controlled dispersal	District Admin
	Route Management	One-way exit & barricade guidance	Kerala Police
	Crowd Control	Prevent reverse flow, manage boarding points	Police
Medical Follow-up	Medical Support	Keep teams active till dispersal complete	Health Dept
	Ambulance	Continue readiness for delayed cases	Health Dept
	Hospital Referral	Shift serious patients	Government Medical College Vandanam, Pushpagiri Medical College
	Documentation	Maintain patient records & follow-up	Medical Teams
Fire Safety Closure	Fire Control	Ensure all hearths extinguished	Kerala Fire and Rescue Services
	Inspection	Final zone inspection	Fire Force
	Hazard Removal	Remove fuel, embers, hazardous items	Fire Dept

Waste Management	Cleaning	Remove ash, food waste, debris	Local Self Govt
	Deployment	Cleaning teams & waste vehicles	Municipality
	Segregation	Bio & non-bio waste separation	LSGD
	Disinfection	Toilets & water points sanitation	Health Dept
Public Health	Water Safety	Ensure safe drinking water	Health Dept
	Disease Prevention	Monitor outbreak risks	Health Teams
	Surveillance	Heat illness & infections tracking	Health Dept
Traffic Normalization	Road Reopening	Gradual removal of restrictions	Kerala Police
	Barricade Removal	Clear temporary structures	Police
	Coordination	Traffic regulation updates	Kerala Motor Vehicles Department
Infrastructure Removal	Dismantling	Remove camps, shelters, control rooms	District Admin
	Restoration	Restore site to original condition	LSGD

Missing Persons	Help Desk	Continue till all traced	Police & Volunteers
	Verification	Final clearance before closure	Police
Assessment	Documentation	Record incidents & cases	Control Room
	Damage Assessment	Infrastructure & environmental impact	District Admin
Review & Reporting	Review Meeting	Multi-agency evaluation	District Admin
	Reporting	Prepare final report & recommendations	Kerala State Disaster Management Authority
Volunteer Debrief	Feedback	Collect input from volunteers & staff	District Admin
	Analysis	Identify gaps & improvements	All Departments
Public Communication	Information	Issue safety updates	Information Dept
	Awareness	Cleanliness & environment messaging	Local Authorities
Environmental Restoration	Cleaning	Roads, riverbanks, surroundings	Municipality
	Sustainability	Promote eco-friendly practices	District Admin

## STAMPEDE RISK AND MITIGATION MEASURES

The entire event area is first divided into clearly defined zones. The immediate surroundings of the temple form the core zone, where access is strictly controlled to prevent overcrowding during rituals. Surrounding this, large designated Pongala cooking areas are arranged in an organized grid pattern, allowing devotees to occupy space systematically while maintaining safe distances between hearths. Buffer zones are created beyond these areas to absorb excess crowd and prevent congestion from spilling into critical pathways. Importantly, dedicated emergency corridors are maintained throughout the venue, kept completely free for the uninterrupted movement of ambulances and emergency services.

Entry and exit movements are carefully planned to avoid cross-flow and congestion. Multiple entry points are established, each monitored and regulated by security personnel. One-way pedestrian movement is enforced, guiding devotees smoothly toward their designated areas and then out through separate exit routes. Clear signages in Malayalam and English, along with public announcements, help people navigate without confusion.

Security deployment plays a central role in managing such a massive gathering. Police personnel are stationed at key junctions, entry points, and sensitive locations. Specialized units, including women police teams, are deployed to ensure the safety and comfort of female devotees. Surveillance systems such as CCTV cameras and drones provide real-time monitoring, allowing authorities to detect crowd build-up and respond immediately.

Given the nature of the ritual, fire safety is a major concern. Fire and Rescue teams are deployed throughout the cooking zones, supported by water tankers and fire extinguishers. Adequate spacing between cooking units is strictly enforced to reduce the risk of fire spreading. Continuous monitoring ensures that unsafe practices are quickly corrected.

Traffic management is implemented in coordination with crowd control. Roads close to the temple are declared vehicle-free zones to prevent congestion and ensure pedestrian safety. Vehicles are diverted to designated parking areas on the outskirts, and shuttle services are arranged to transport devotees to the venue. Major connecting roads such as those leading from Thiruvalla and Ambalappuzha are regulated to maintain smooth traffic flow and allow emergency vehicles priority access.

A centralized communication system ensures coordination among all agencies, including police, health services, and fire departments. A control room operates throughout the event, supported by a public address system that delivers real-time instructions and safety messages. Emergency helpline numbers are prominently displayed across the venue.

Volunteers form an essential support system for managing the crowd. Trained volunteers assist in guiding devotees, helping elderly participants, and managing lost-and-found situations. Their visible presence and accessibility significantly enhance crowd discipline and response efficiency.

Special attention is given to preventing stampedes. This is achieved through continuous monitoring of crowd density, controlled entry when areas reach capacity, and elimination of bottlenecks such as narrow pathways or unauthorized stalls. The emphasis is on maintaining a steady and controlled flow of people at all times.

After the ritual concludes, a phased dispersal strategy is implemented. Different zones are cleared sequentially to avoid sudden surges. Medical and emergency services remain active until the majority of the crowd has safely exited. Cleanup and restoration activities follow immediately to return the area to normal conditions.

Overall, the plan focuses on ensuring the safety of devotees, especially women, minimizing risks, and enabling a coordinated response system that can handle emergencies efficiently while maintaining the sanctity and smooth conduct of the Pongala festival.

## LIST OF KEY PEOPLE & CONTACTS

Sl. No.	Designation	Role During Festival
1	District Medical Officer (Health), Alappuzha	Health Incident Commander
2	Deputy DMO	Surveillance, outbreak response
3	Block Medical Officer, Chempumpuram	Block health operations lead
4	Medical Officer, FHC Thalavadi	On-site health coordination
5	Medical Officer, CHC Edathua	On-site health coordination
6	CHC Edathua	Medical Emergency
7	Jubilee hospital Edathua	Medical Emergency
8	Lourde Matha Hospital Pacha	Medical Emergency
9	Health Supervisor	Surveillance & IEC
10	Health Inspector	Surveillance & IEC
11	Temple Devaswom	Festival Coordination
12	Temple Administrative head	Crowd & Support Services
13	S I Police Edathua Station	Field command, crowd control

14	Station Officer, Fire & Rescue	On-ground emergency response
15	Water Authority	Water scarcity
16	KSEB	Electricity related
17	Panchayath President, Thalavadi	Local Coordination

## LIST OF HOSPITALS DIRECTLY INVOLVED

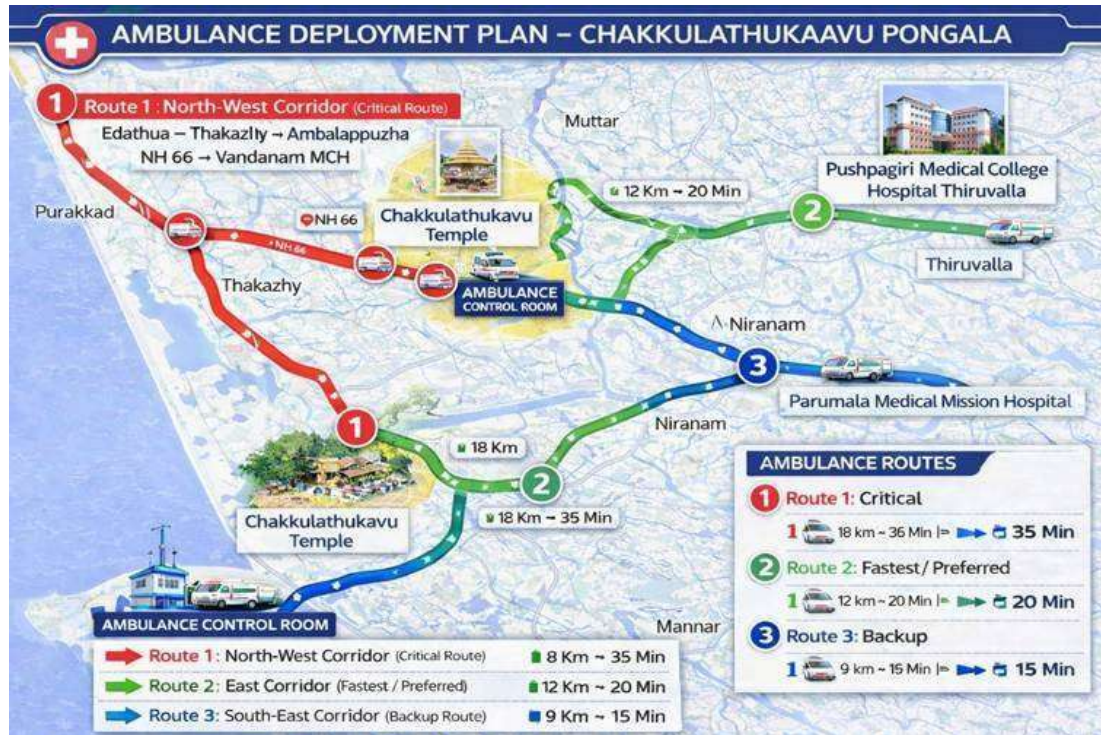
Sl. No	Hospital Category	Distance from Festival Site	Preparedness Requirements
1	CHC Edathua	4.5 KM	Emergency drugs, observation beds, 24×7 duty, Ambulance
2	Jubilee Hospital Edathua	4.6 KM	Emergency drugs, observation beds, 24×7 duty, Ambulance
3	Lourde Matha Hospital Pacha	7.5 KM	Emergency drugs, observation beds, 24×7 duty, Ambulance
4	THQH Thiruvalla	7.6 KM	Emergency drugs, observation beds, 24×7 duty, Ambulance
5	Pushpagiri Medical College Thiruvalla	10.7 KM	Specialized trauma care, ICU support, and advanced burn management.
6	Medical Mission Hospital, Parumala	10 KM	Specialized trauma care, ICU support, and advanced burn management.
4	Medical College Vandanam	22 KM	Specialized trauma care, ICU support, and advanced burn management.

## AMBULANCE PLAN

Sl. No	Ambulance Provider	Type	No. of Units
1	Govt. 108 Emergency Service	BLS	1
2	Private Empaneled Ambulance Services	BLS	2
4	Advanced Life Support Provider (Govt/Private)	ALS	3-5

#### EVACUATION ROUTE

1. Chakkulathkav Temple → Thiruvalla - Ambalappuzha road → NH 66 → Vandanam MCH
2. Chakkulathkav Temple → Ambalappuzha – Thiruvalla road → MC road → Thiruvalla bypass road → Pushpagiri Medical College
3. Chakkulathkav Temple → Ambalappuzha – Thiruvalla road -Podiyadi → Thiruvalla-Kayamkulam high way → Mannar Parumala Chenganoor road → Parumala Medical Mission Hospital



### HUMAN RESOURCE (HR) DEPLOYMENT

Sl. No.	Category	Number Deployed
1	Doctors	2
2	Staff Nurses	2
3	Pharmacists	1
4	Emergency Medical Technicians (EMTs)	1
5	Health Inspectors	3
6	Volunteers	10

### FACILITIES TO BE ARRANGED

- Drinking water points

- Temporary shelters
- Mobile toilets
- Lighting arrangements
- Public address system
- Signage for emergency exits

#### **SUPPORT ACCESSORIES**

- Stretchers
- Wheelchairs
- Oxygen cylinders
- Emergency medicines

## **STANDARD OPERATING PROCEDURES (SOP) FOR COMMON POSSIBLE HEALTH HAZARDS**

Large religious gatherings are associated with a higher risk of sudden medical emergencies such as crowd-related injuries, burns, fainting episodes, seizures, and drowning incidents. To ensure rapid and uniform response, the following standardized SOPs will be followed by medical teams, volunteers, and first responders during the festival period.

### **1. SOP FOR MASS CASUALTY INCIDENTS (MCI) & STAMPEDES**

Objective: To ensure rapid and coordinated medical response in the event of crowd congestion, stampede risk, or multiple casualties. In the event of a crowd crush or structural collapse, the goal is "The Greatest Good for the Greatest Number."

## **IMMEDIATE ACTIONS**

On identification of a crowd crush, stampede risk, or multiple injured persons, the following actions shall be taken immediately:

- Do not run or shout; calm communication shall be maintained through volunteers and public announcement systems.
- Police and volunteers must immediately stop further crowd entry into the affected area.
- Identify injured persons and shift them to a safe zone.
- Create a temporary human corridor for evacuation.
- Inform the nearest medical aid post and ambulance immediately.

## **MEDICAL MANAGEMENT**

All patients shall be rapidly assessed and classified based on the severity of injury using the START (Simple Triage and Rapid Treatment) method. Triage shall be completed within one minute per patient wherever feasible. Priority shall be given to patients with breathing difficulty, severe bleeding, head injury, or unconsciousness. First aid, oxygen support, haemorrhage control, and stabilization shall be initiated immediately before referral.

## **MANAGEMENT OF HIGH-RISK COMPLICATIONS**

In cases where victims have been trapped for a prolonged period, medical teams shall monitor for features of crush syndrome. Early identification and rapid referral shall be ensured. Severe bleeding shall be controlled immediately using pressure dressings or tourniquets wherever required. Oxygen support and IV fluids shall be initiated wherever necessary before referral.

## **COMMUNICATION AND REFERRAL**

Upon confirmation of a Mass Casualty Incident, a “Code Red” alert shall be activated. The Medical Officer in charge of the Medical Aid Post shall immediately inform Medical College Hospital, Vandanam to ensure preparedness at referral centres. Ambulances shall be moved only through the designated green corridor, and patient referral shall be prioritized based on triage category.

## **DOCUMENTATION AND REPORTING**

All patients managed during the incident shall be recorded in the emergency register at the medical aid post. The number of critical, moderate, and minor cases shall be documented and reported to the Block Medical Officer and District Control Room without delay.

## **STANDARD TRIAGE COLOUR CODING SYSTEM FOR MASS CASUALTY INCIDENTS**

### **2. SOP FOR BURNS AND FIRE-RELATED INJURIES**

Objective: To ensure immediate and correct first-aid management of burn injuries occurring during the festival due to fireworks, oil lamps, cooking areas, or accidental fire exposure, and to ensure timely referral of serious cases.

#### **IMMEDIATE ACTIONS**

- Remove the person from the source of fire.
- Pour clean running water for 15–20 minutes over the affected area.
- Do not apply oil, turmeric, toothpaste, or any local remedies.
- Cover the burn area with a clean cloth or sterile dressing.
- Refer immediately if burns are extensive.

#### **MEDICAL RESPONSE**

The patient shall be assessed for the severity of the burn and managed accordingly. Pain relief shall be provided and the wound shall be dressed using sterile materials. In cases where the burn involves more than 10% of the body surface area, intravenous fluids shall be initiated as early as possible.

IV Ringer's Lactate shall be started in moderate to severe burn cases as per standard burn-management protocols. Vital signs shall be monitored continuously, and the patient shall be prepared for early referral if required.

#### **ASSESSMENT OF AIRWAY AND BREATHING**

All burn patients shall be assessed for signs of inhalation injury, especially in cases involving fire, smoke exposure, or burns in enclosed spaces. Warning signs such as singed nasal hair, soot around the mouth or nose, hoarseness of voice, or difficulty in breathing shall be treated as medical emergencies.

If inhalation injury is suspected, high-flow oxygen shall be administered immediately, and the patient shall be referred without delay to a higher centre.

### **REFERRAL PROTOCOL**

All patients with facial burns, circumferential burns, burns involving the hands, feet, or eyes, and burns covering more than 10% of the body surface area shall be referred immediately to higher centres. The primary referral centre for severe burn cases shall be Medical College Hospital, Vandanam.

Patients with minor burns may be treated at the medical aid post or the nearest health facility after proper assessment.

### **DOCUMENTATION AND REPORTING**

All burn cases reported during the festival shall be recorded in the emergency register at the medical aid post. The severity of the burn, treatment provided, and referral details shall be documented and reported to the Block Medical Officer.

### **3. SOP FOR FAINTING & SYNCOPE (VASOVAGAL/HEAT)**

Objective: To ensure early recognition and safe management of fainting (syncope) cases, which are common during large gatherings due to prolonged standing, heat exposure, dehydration, and reduced venous return.

#### **IMMEDIATE ACTIONS:**

- Lay the patient flat on their back (supine).
- Elevate the legs 12 inches (30 cm) above the level of the heart. This utilizes gravity to increase venous return to the heart and brain.
- Loosen tight clothing around the neck and waist.
- Ensure adequate ventilation / move to a shaded area.
- Give ORS / water once the person regains consciousness.

### **MEDICAL RESPONSE**

The patient's pulse and breathing shall be checked immediately. Most patients regain consciousness within a short period once placed in the proper position. After the patient regains consciousness, small quantities of drinking water or ORS may be given, provided the patient is fully conscious and able to swallow.

The patient shall be observed for a few minutes at the medical aid post, especially if the episode occurred in a crowded or hot environment. Vital signs shall be checked before allowing the person to leave.

### **REFERRAL PROTOCOL**

The patient shall be referred to the nearest health facility if any of the following are present:

- Loss of consciousness lasting more than a few minutes
- Repeated fainting episodes
- Associated injury due to fall
- Abnormal pulse or breathing
- Suspected heat exhaustion or heat stroke

### **DOCUMENTATION AND REPORTING**

All fainting cases managed at the medical aid post shall be recorded in the emergency register. If multiple fainting cases are reported within a short period, the medical officer shall assess the possibility of heat-related illness and initiate preventive measures such as ORS distribution and crowd ventilation.

### **4. SOP FOR SEIZURE / FITS**

Objective: To ensure safe, prompt, and standardized management of seizure (fit) cases during mass gatherings, while preventing injury and complications such as aspiration and prolonged seizures.

### **COMMON SITUATIONS IN MASS GATHERINGS**

Seizures may occur due to:

- Heat exposure / dehydration
- Exhaustion
- Pre-existing epilepsy
- Stress, crowding, or lack of sleep
- Fever or underlying illness

**IMMEDIATE ACTIONS:**

- Ensure the crowd does not panic or gather closely around the patient.
- Lay the person on one side (recovery position).
- Remove nearby objects to prevent injury.
- Do not put anything inside the mouth.
- Do not attempt to hold the tongue or forcefully open the mouth.
- Loosen tight clothing around the neck.
- Do not hold the person tightly.
- Wait until the seizure stops.

**MEDICAL RESPONSE**

Once the seizure stops, the Medical Team at the Medical Aid Post shall take the following actions:

The patient should be kept in the lateral (side-lying) position to prevent aspiration of saliva or vomit into the lungs. Airway, breathing, and pulse should be checked immediately. Most patients may remain confused, drowsy, or disoriented for a few minutes after the seizure (post-ictal phase), and this should not be mistaken for another emergency unless symptoms persist.

The patient should be shifted to the Medical Aid Post for observation and monitoring. Oral fluids may be given only after the patient has fully regained consciousness and is able to swallow safely.

**PHARMACOLOGICAL MANAGEMENT (BY MEDICAL OFFICER ONLY)**

If the seizure lasts more than 5 minutes or repeated seizures occur without recovery of consciousness, the condition shall be treated as Status Epilepticus, which is a medical emergency.

In such cases, the Medical Officer shall administer:

- Inj. Diazepam (0.1 mg/kg IV/IM)
- OR
- Midazolam as per emergency kit protocol

Immediate referral to the nearest hospital shall be arranged through the designated ambulance service.

**REFERRAL CRITERIA**

The patient must be referred immediately if:

- Seizure lasts more than 5 minutes
- Repeated seizures occur
- Patient does not regain consciousness
- Head injury occurs during the seizure
- First-time seizure
- Pregnant woman / elderly patient
- Breathing difficulty after seizure

## **5. SOP FOR DROWNING / NEAR-DROWNING INCIDENTS**

Objective: To ensure rapid, safe, and standardized response to drowning and near-drowning incidents during mass gatherings and to prevent death, brain injury, and delayed complications.

### **BACKGROUND**

Drowning and near-drowning incidents are possible during mass gatherings conducted near Arthunkal beach, rivers, canals, and other water bodies. Such incidents commonly occur due to overcrowding near the water, accidental slipping, panic situations, or attempts by untrained persons to rescue victims. Even when the person appears to have recovered after rescue, there is a significant risk of delayed respiratory complications (secondary drowning / delayed pulmonary edema). Hence, all such cases require immediate medical attention and referral.

### **POSSIBLE SCENARIO**

Temple ponds (Ambala Kulams), crowd near water bodies, accidental slipping.

### **IMMEDIATE ACTIONS**

- Use a pole or throw a float; do not enter the water unless trained in water rescue.
- Once the person reaches the edge, remove them safely with the help of available staff.
- If a diving injury is suspected, maintain the head and neck in a neutral position while removing the person from the water.
- Check breathing immediately.
- If the person is unconscious but breathing, place in the recovery position.
- If the person is unresponsive and not breathing, initiate CPR (30:2 ratio) immediately. Unlike standard cardiac arrest, in drowning, start with 5 rescue breaths.

- Remove wet clothes and cover with dry blankets to prevent hypothermia.

## **MEDICAL RESPONSE**

All drowning / near-drowning victims must be treated as medical emergencies, even if the person appears normal after rescue.

The Medical Team shall:

- Check airway, breathing, and circulation.
- Provide oxygen support immediately.
- Monitor pulse, breathing, and level of consciousness.
- Observe breathing difficulty, cough, chest discomfort, or altered consciousness.

## **REFERRAL PROTOCOL**

All drowning / near-drowning cases must be referred to the nearest hospital without delay, even if the patient appears recovered.

This is necessary due to the risk of:

- Delayed pulmonary edema
- Aspiration pneumonia
- Secondary drowning
- Hypoxia-related complications

During transport:

- Continue oxygen support
- Monitor breathing and consciousness continuously
- Inform the referral hospital in advance

## **STANDARD REPORTING MANDATE**

Every drowning / near-drowning incident managed during the mass gathering must be entered in the Patient Line-list by the JHI on duty and reported to the Block Medical Officer immediately.

## **CONCLUSION**

The Chakkulathukavu Pongala is one of the largest and most spiritually significant gatherings of women devotees. The successful conduct of the festival reflects the deep-rooted faith,

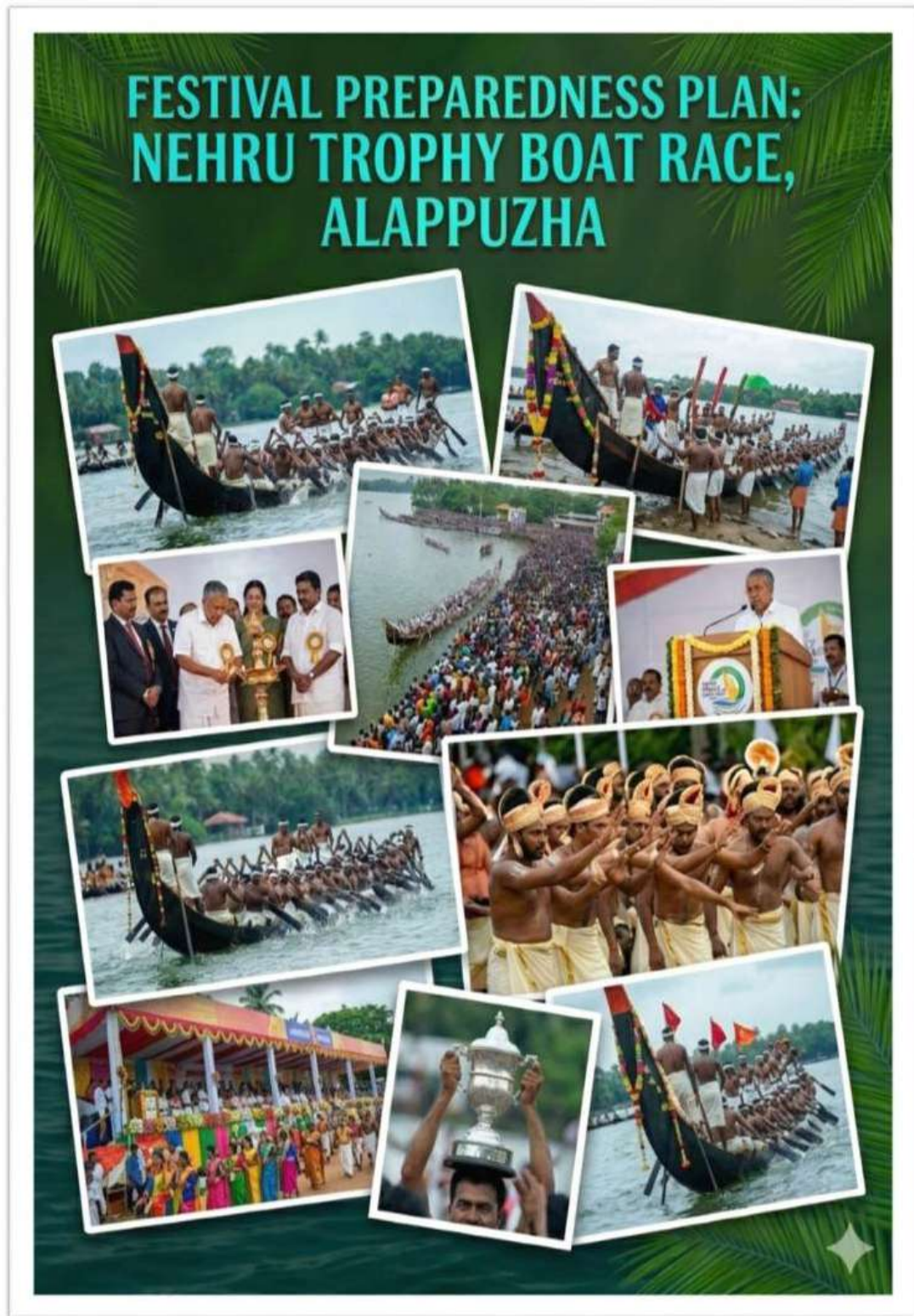
devotion, and cultural unity of the participants, while also highlighting the importance of meticulous planning and coordinated efforts by multiple agencies.

The pre-event preparedness, including risk assessment, infrastructure setup, and inter-departmental coordination, plays a crucial role in laying a strong foundation for the event. Effective planning ensures that potential hazards such as fire, overcrowding, and health emergencies are minimized, thereby creating a safe and organized environment for lakhs of devotees to participate peacefully.

During the event phase, real-time monitoring, efficient crowd management, and prompt emergency response systems are essential to maintain order and safety. The coordinated functioning of departments such as Kerala Police, Kerala Fire and Rescue Services, and health services ensures quick response to any incidents, thereby preventing escalation and ensuring the well-being of the public.

The post-event phase is equally important, focusing on safe crowd dispersal, sanitation, environmental restoration, and proper documentation. Timely waste management, restoration of normalcy, and evaluation of the event contribute to sustainable practices and improved planning for future editions of the festival. The successful management of Chakkulathukavu Pongala is a result of comprehensive planning across all phases—pre-event, during-event, and post-event. It demonstrates how effective coordination, community participation, and preparedness can ensure the smooth and safe conduct of a large-scale religious event while preserving its spiritual essence and cultural significance.

## Nehru Trophy Boat Race



## Preamble

The Nehru Trophy Boat Race, hosted annually on the quiet expanse of Alappuzha's Punnamada Lake, stands as Kerala's premier aquatic festival. The regatta's legacy began in 1952 when India's first Prime Minister, Pandit Jawaharlal Nehru, was so moved by the spectacle that he gifted a silver trophy to the winners. Over the decades, this gesture has blossomed into a powerful symbol of the region's unity, heritage, and competitive fire.

On the day of the race, the calm backwaters erupt with vibrant energy. The stars of the show are the massive *chundan valloms* (snake boats)—vessels exceeding 100 feet in length—powered by over a hundred rowers moving in perfect harmony to traditional rhythms and chants. The excitement is palpable as more than 200,000 spectators from around the world line the shores to catch a glimpse of this high-speed tradition.

Ultimately, the Nehru Trophy is much more than a mere race; it is a profound cultural landmark.

- For Locals: A victory brings immense prestige to the villages of Kuttanad, with celebrations often lasting for months.
- For Tourists: It offers a rare, immersive look at the intersection of athleticism and community spirit, all framed by Kerala's picturesque landscape.

Now a world-renowned attraction, the event serves as a gateway to the soul of Kerala. It remains a living tradition that bridges communities and honors the enduring magic of "God's Own Country."



### **Geographical Context**

The Nehru Trophy Boat Race is a premier cultural and sporting event held annually on the waters of Punnamada Lake in the Alappuzha district of Kerala, India. Often called the "Olympics on Water," its geographical context is defined by the unique landscape of the Kuttanad region, characterized by low-lying backwaters and a vast network of interconnected canals and rivers.

- Punnamada Lake : The race takes place on Punnamada Lake, which is a portion of the Vembanad Lake, the largest lake in Kerala and the longest in India.
- Kuttanad Region: Known as the "Rice Bowl of Kerala," this region is geologically significant as one of the few places in the world where farming is practiced below sea level (approximately 0.6 to 2.2 meters below). The area's resemblance to the polders of Holland highlights its unique wetland ecosystem.
- Backwater Ecosystem: The race course is a 1.4 km (approx. 1370 meters) stretch of calm backwaters, which are shallow inlets formed by rivers parallel to the coastline.
- Monsoon Timing: Traditionally held on the second Saturday of August, the event coincides with the peak of the Southwest monsoon, when the water levels are high and the landscape is at its lushest.

Feature	Description
Primary Waterbody	Punnamada Lake (part of Vembanad Lake)
Regional Setting	Kuttanad, Alappuzha, Kerala
Race Course Length	~1.4 km (1370–1380 meters)
Topography	Low-lying wetlands, often below sea Level
Accessibility	5 km from Alappuzha Railway Station; 85 km from Cochin International Airport

**Route map for Nehru Trophy Boat Race**



### Cultural Geography

- Village Identity: The race is a competition between different villages (e.g., Kainakari, Kavalam, Karichal), where each Chundan Vallam (snake boat) represents the pride and identity of its respective local community.
- Thaneermukkom Bund: This nearby regulator is a significant geographic landmark that prevents salt water from entering the low-lying Kuttanad fields, maintaining the freshwater environment necessary for the region's agriculture and the backwater ecology.

### Organogram of Nehru Trophy Boat Race



## NEHRU TROPHY BOAT RACE



### Timelines of the event

Time	Event
11:00 AM	Small Boat Heats & Preliminary Races
2:00 PM	Official Inauguration Ceremony
2:30 PM (approx.)	Mass Drill & Boat Procession

Immediately After	Snake Boat ( <i>Chundan Vallom</i> ) Heats
5:00 PM (approx.)	Grand Finale races and the prize distribution ceremony.

### **Specific Types of Boats**

The Chundan Vallam (Snake Boat) is the most iconic type of boat in the race, but the event also features several other categories of traditional Kerala vessels. Tickets are primarily booked through the Official NTBR Website or at authorized government offices in and around Alappuzha. While the "Snake Boat" race is the main event, over 70 boats typically participate across nine distinct categories.

- Chundan Vallam (Snake Boat): These are the stars of the show, measuring over 100 feet long. They feature a high, curving stern that resembles a cobra's hood and can carry 100–150 oarsmen.
- Iruttukuthy Vallam: Narrower and faster boats traditionally used by pirates at night; they are categorized into grades 'A', 'B', and 'C'.
- Veppu Vallam: Often called "Cook Boats," these were historically used to carry food for the larger crews. They also participate in grades 'A' and 'B'.
- Other Categories: Include Churulan Vallam (known for its circular prow/stern), Thekkanodi (often rowed by women), and Odi Vallam

### **Ticket Booking**

Ticket Booking & Pricing

Tickets are usually released a few weeks before the event (held on the second Saturday of August).

Ticket Category	Price (approx.)	Description
Luxury Box / Platinum	₹10,000	Premium individual seat in the Nehru Pavilion.
Family Ticket	₹25,000	Admits 4 people; includes food and special boat transfer.
Tourist Gold	₹3,000	Popular with tourists; separate chairs in the Island Pavilion.
Tourist Silver	₹2,000 – ₹2,500	Shaded area with good visibility.
Rose Corner	₹1,500	Concrete pavilion seating.
General/Wooden Gallery	₹100 – ₹500	Budget-friendly options like Victory Lane or Lawn seating.

#### How to Book

- Online: Use the Official NTBR Website or authorized portals like South Indian Bank.

- Offline: Available at District Tourism Information Centres (DTPC) and major government offices in Alappuzha, Ernakulam, and Kottayam.
- Important: Online bookings must be exchanged for physical tickets at designated counters (like the Matha Boat Jetty or near KSRTC station) on the day of the event.

### Preparedness Plan for the event

The backwater ecosystem of Alappuzha, characterized by canals, high humidity, water stagnation, and dense population clusters along narrow bund roads, presents unique public health challenges. The congregation of large crowds in such a setting increases the risk of communicable diseases, injuries, environmental hazards, and public health emergencies. Hence, a comprehensive and context-specific preparedness plan is essential.



### 1. PRE-EVENT PHASE (PREPAREDNESS)

The pre-event phase focuses on detailed planning, coordination, and resource mobilization to minimize risks during the event.

### **1.1 Planning and Coordination**

A District Level Coordination Committee is constituted under the District Collector to ensure effective interdepartmental coordination. Multiple planning meetings are conducted to finalize roles and responsibilities.

- Key activities include:

Preparation of microplans with zone-wise allocation

Mapping of high-risk areas such as galleries, jetties, and food courts

Coordination with police, fire services, and local bodies.

### **1.2 Medical Preparedness**

Adequate medical infrastructure is established considering the large crowd and water-based setting.

Arrangements include:

- First Aid Posts at strategic locations
- Mobile medical units for rapid response
- Deployment of trained medical personnel
- Availability of ambulances (both land and water-based)
- Referral linkage with: General Hospital Alappuzha & Medical College Hospital Alappuzha

These facilities ensure immediate stabilization and referral of patients.

### **1.3 Disease Surveillance**

Enhanced surveillance systems are activated to detect and respond to potential outbreaks.

Measures include:

- Timely reporting to IDSP

- Deployment of Rapid Response Teams
- Pre-event fever surveillance in nearby areas
- Monitoring for diseases such as: Dengue, Leptospirosis, Acute diarrheal diseases.

#### **1.4 Water, Sanitation and Hygiene (WASH)**

Given the backwater setting, WASH interventions are critical.

Key interventions:

- Provision of safe drinking water with chlorination
- Installation of temporary toilets (gender-segregated)
- Handwashing facilities at public points
- Solid waste management systems
- Regular cleaning and disinfection
- Vector control measures such as fogging and larvicidal activities are also implemented.

#### **1.5 Food Safety Measures**

Strict food safety protocols are enforced to prevent foodborne illnesses.

Actions include:

- Registration and inspection of food vendors
- Ensuring hygienic food preparation and storage
- Deployment of food safety officers
- Immediate action against violations

#### **1.6 Health Awareness and IEC Activities**

Public awareness plays a vital role in prevention.

IEC activities include:

- Awareness on safe water consumption
- Use of footwear to prevent infections
- Personal hygiene practices
- Announcements in multiple languages

## **1.7 Emergency Preparedness**

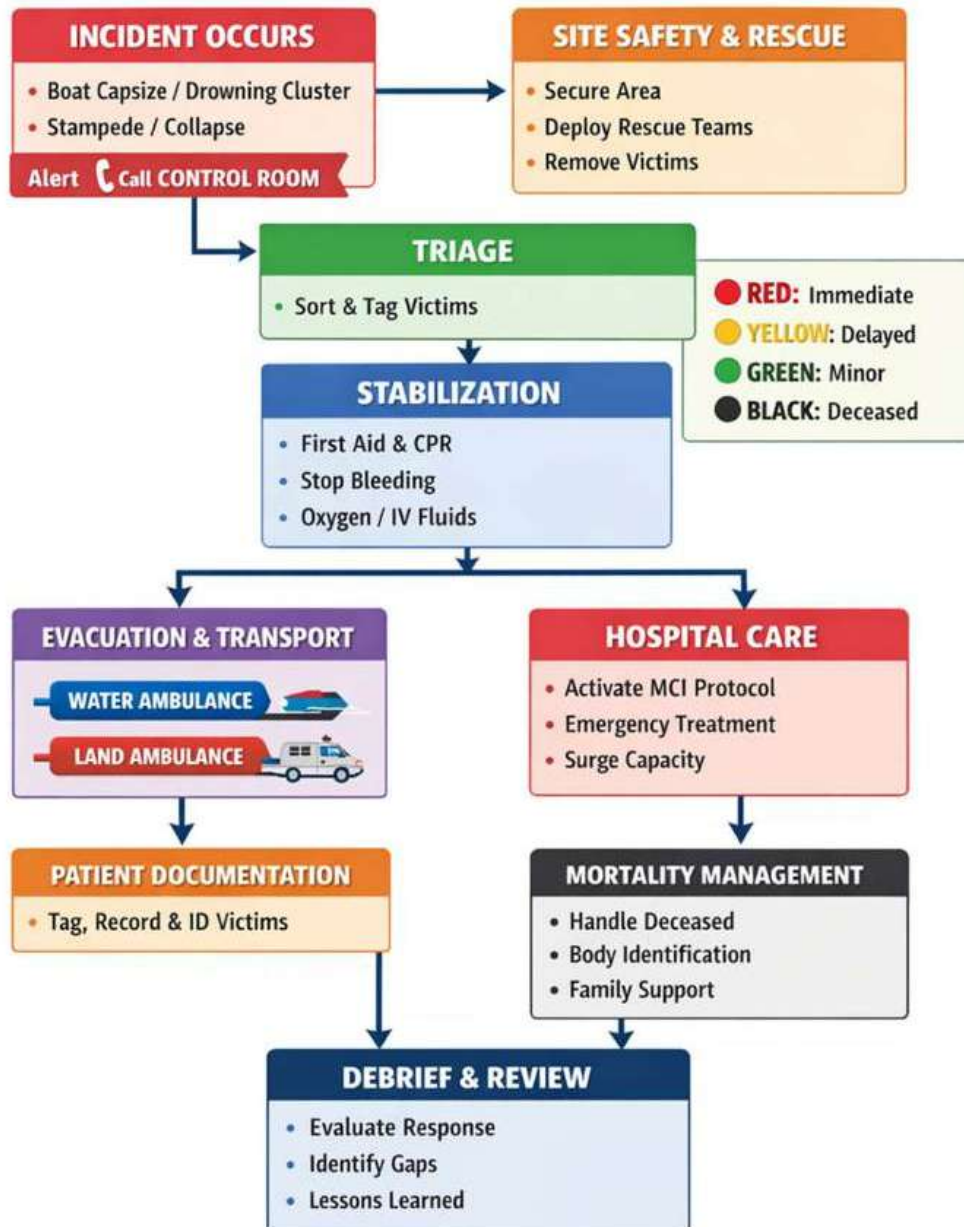
Emergency preparedness is strengthened through structured planning and drills.

Preparedness measures include:

- Mass casualty management plan (Annexure – 9)
- Mock drills for drowning and stampede scenarios
- Establishment of a 24x7 control room
- Coordination with Fire and Rescue Services

# MASS CASUALTY MANAGEMENT FLOW

Nehru Trophy Boat Race – Alappuzha



## **2. DURING EVENT PHASE (RESPONSE)**

During the event, all systems are activated to ensure real-time response and management.

### **2.1 Medical Services**

Medical teams provide continuous care at all designated points.

Key functions:

- Immediate first aid and stabilization
- Referral of severe cases
- Management of dehydration, injuries, and emergencies

### **2.2 Surveillance and Monitoring**

Real-time surveillance is conducted to detect any unusual health events.

Includes:

- Continuous reporting from medical units
- Monitoring of fever and diarrheal cases
- Immediate outbreak response

### **2.3 Crowd and Environmental Management**

Efforts are made to ensure safety and comfort of spectators.

Measures include:

- Regulation of crowd movement
- Provision of drinking water and shaded areas
- Prevention of overcrowding

### **2.4 Water Safety and Rescue**

Given the aquatic setting, water safety is prioritized.

Arrangements include:

- Deployment of rescue boats and divers

- Availability of life jackets
- Strict monitoring of water zones

## **2.5 Sanitation and Food Safety Monitoring**

Continuous monitoring ensures compliance with hygiene standards.

Actions include:

- Cleaning of sanitation facilities
- Waste management
- Inspection of food stalls

## **2.6 Communication and Coordination**

A centralized control room ensures seamless coordination among all departments and facilitates rapid decision-making.

## **3. POST-EVENT PHASE (RECOVERY AND EVALUATION)**

After the event, efforts focus on surveillance, sanitation, and evaluation.

### **3.1 Continued Surveillance**

Monitoring is continued to detect delayed disease outbreaks.

Focus areas:

- Leptospirosis
- Diarrheal diseases
- Fever surveillance
- Amoebic meningoencephalitis

### **3.2 Environmental Sanitation**

Immediate cleaning and restoration activities are undertaken.

Includes:

- Waste removal
- Disinfection of public areas

- Cleaning of water bodies

### **3.3 Review and Documentation**

A detailed evaluation is conducted to assess performance.

Activities include:

- Analysis of morbidity data
- Review meetings with stakeholders
- Documentation of best practices and challenges

### **Risk Assessment & Mitigation Plan**

This outlines a comprehensive multi-sectoral risk management strategy for a large-scale water-based public event.

- Safety is prioritized through strict water traffic control, active rescue systems, and crowd surveillance.
- Public health preparedness is ensured via strategically placed ambulances and hospital integration.
- Infrastructure risks are minimized by enforcing structural certification and controlled entry.
- Environmental protection is addressed through a strict no-plastic policy and waste management systems.
- Inclusive measures are incorporated for vulnerable populations with dedicated support systems.
- Weather preparedness and logistics planning ensure minimal disruption during monsoon conditions.
- Legal safeguards are included to manage liability and ensure regulatory compliance.

Overall, the plan demonstrates a well-coordinated approach involving law enforcement, health services, environmental management, and disaster preparedness to ensure a safe and successful event.

Category	Key Risk Identification	Mitigation Strategies & Actions
<b>Water Safety</b>	Drowning, boat capsizes (100 ft snake boats with 100+ rowers), and vessel collisions	<b>Exclusion Zones:</b> No small/ad boats on tracks after 10:00 AM. <b>Active Rescue:</b> Continuous patrolling by Coastal Police and specialized “Life Guard” boats
<b>Crowd &amp; Security</b>	Stampedes in galleries, falls into the lake, pickpocketing, anti-social behavior	<b>Barricading:</b> Strict cordoning at Dock Chira and both banks <b>Personnel:</b> 2000+ Police (including Shadow Police) and CCTV monitoring
<b>Public Health</b>	Heat exhaustion, water-borne diseases, trauma/medical emergencies	<b>Medical Stations:</b> 7 ambulances at key points (Start, Finish, Matha, Rajiv Jetties) Integration with Alappuzha General Hospital
<b>Infrastructure</b>	Structural failure of temporary pavilions (e.g., Rose Corner, Victory Lane)	<b>Certification:</b> Mandatory fitness certification for galleries <b>Access Control:</b> Barcoded ticketing to prevent overloading
<b>Sanitation &amp; Environment</b>	Lake pollution, drainage clogging, plastic waste hazards	<b>Green Protocol:</b> Strict “No Plastic” policy Waste managed by Green Volunteers; no dumping into lake

<b>Vulnerable Groups</b>	Distress to senior citizens, children, and differently-abled individuals	<b>Specialized Care:</b> Dedicated seating and jersey-coded volunteers (Red–Seniors, Blue–Disabled, Yellow–Women/Children)
<b>Weather &amp; Logistics</b>	Monsoon-related illnesses (Aug/Sept), delays in emergency access	<b>Logistics:</b> Traffic diversions for emergency vehicles Public advised to carry rain gear and arrive early (by 12:00 PM)
<b>Legal &amp; Insurance</b>	Financial and legal liability for mass-casualty incidents	<b>Compliance:</b> Adherence to Travancore-Cochin Public Health Act 1955 Mandatory Public Liability Insurance coverage

### Major public health challenges and its action plan

Health Risk / Disease	Specific Location	Mitigation Measures	Preparedness	Public Health Notices & Compliance
<b>Leptospirosis (Rat Fever)</b>	Punnamada Lake & Kuttanad Villages	Pre-event chemoprophylaxis for oarsmen; post-flood epidemiological surveillance in low-lying residential clusters.		
<b>Water-borne (Hepatitis A, Typhoid)</b>	Finishing Point & Public Pavilions	Mandatory Green Protocol enforcement (no plastic) to prevent drainage clogging; Safety at SWTD Boat Jetty.		Sanitary Notices: Vendors must use clean water for washing utensils and raw materials (fruits/vegetables).

			Open-space cooking is prohibited.
<b>Vector-borne (Dengue, Malaria)</b>	Thathampally & Lakefront Environs	Intensive mosquito source reduction and larvicidal spraying in stagnant water areas near the Nehru Trophy Finishing Point.	Active vector survey in the areas surrounding the event one month before and after the event.
<b>Food-borne Diseases (Typhoid, Cholera, Dysentery)</b>	Punnamada Lakefront & Stall Areas	Mandatory Licensing: All food establishments must have FSSAI registration or a licence from the Food Safety Department visibly displayed.	Health Cards: All individuals handling food must possess valid health cards. Notices prohibit the sale of stale food and reuse of frying oil.
<b>Trauma &amp; Critical Care</b>	Starting/Finishing Points	7 Ambulance Units stationed at Rajiv Jetty and Matha Jetty for rapid evacuation to GH Alappuzha.	
<b>Waste &amp; Environmental Health</b>	Vendor Zones & Roadways	Green Protocol: A total ban on single-use plastics is enforced for all food donors and commercial vendors.	Scientific Processing: Notices mandate that all solid and liquid waste be scientifically processed on the same day

## Operational Preparedness & Enforcement

---

**Intensive Raids:** In preparation for major events, health officials typically inspect hundreds of units including hotels, bakeries, and catering units serving notices to those failing hygiene standards.

**Punitive Action:** Establishments found violating norms (e.g., unhygienic kitchens, selling stale food) face heavy fines and potential prosecution.

**Authorized Vending:** Spectators are advised to purchase food and snacks only from Authorized Counters, which are identifiable by the official NTBR logo.

**Public Cooperation:** Spectators bringing their own refreshments are charged a nominal fee (e.g., ₹10) for plastic bottles/packets, which is refunded upon return of the item with its official sticker to ensure clean pavilions.

## **Ambulance Preparedness Plan**

### **A. Number and Types**

- 7–10 Ambulances Minimum
  - ALS (Advanced Life Support): 2–3
  - BLS (Basic Life Support): 4–5
  - Boat Ambulances / Water Rescue Units: 2

### **B. Human Resources**

Each Ambulance should include:

- ALS Ambulance: Doctor + Staff Nurse + Driver + EMT
- BLS Ambulance: Nurse/EMT + Driver
- Boat Ambulance: Lifeguard + EMT + Driver

Additional:

- Rapid Response Medical Teams at critical points
- Coordination with Kerala Police and Fire & Rescue

### **C. Equipment Checklist**

### **ALS Ambulance**

- Cardiac monitor & defibrillator
- Ventilator
- Emergency drugs (Adrenaline, Atropine, etc.)
- Oxygen support
- Airway management kit

### **BLS Ambulance**

- Oxygen cylinder
- First aid kit
- Splints and bandages
- AED

### **Boat Ambulance**

- Life jackets & rescue tubes
- Basic resuscitation kit
- Oxygen support

### **D. Communication & Control**

- Central Command and Control Room at event site
- Dedicated wireless/VHF communication system
- Ambulances linked with:
  - Medical stations
  - Police control room
  - District emergency response system
- Single emergency helpline integration (108 services)

### **E. Referral Linkages**

Primary referral hospitals:

- Alappuzha General Hospital
- Taluk hospitals and nearby private hospitals

System:

- Pre-identified referral routes

- Green corridors for emergency transport
- Bed availability tracking before transfer

#### F. Traffic & Access Management

- Dedicated ambulance corridors
- No-parking emergency lanes near galleries
- Traffic diversion plan coordinated with police
- Signages for emergency exits

#### G. Strategic Positioning

Location	Ambulance Type	Purpose
Starting Point	1 ALS + 1 BLS	Immediate response to crew emergencies
Finishing Point	1 ALS + 1 BLS	High-risk crowd & race-end incidents
Punnamada Lake Mid-Section	2 Boat Ambulances	Rapid water rescue
Main Galleries (e.g., Victory Lane, Rose Corner)	2 BLS	Crowd-related emergencies
Matha Jetty	1 BLS	Evacuation support
Rajiv Jetty	1 BLS	Backup and referral transport

### Ambulance Deployment for Nehru Trophy Boat Race, Alappuzha



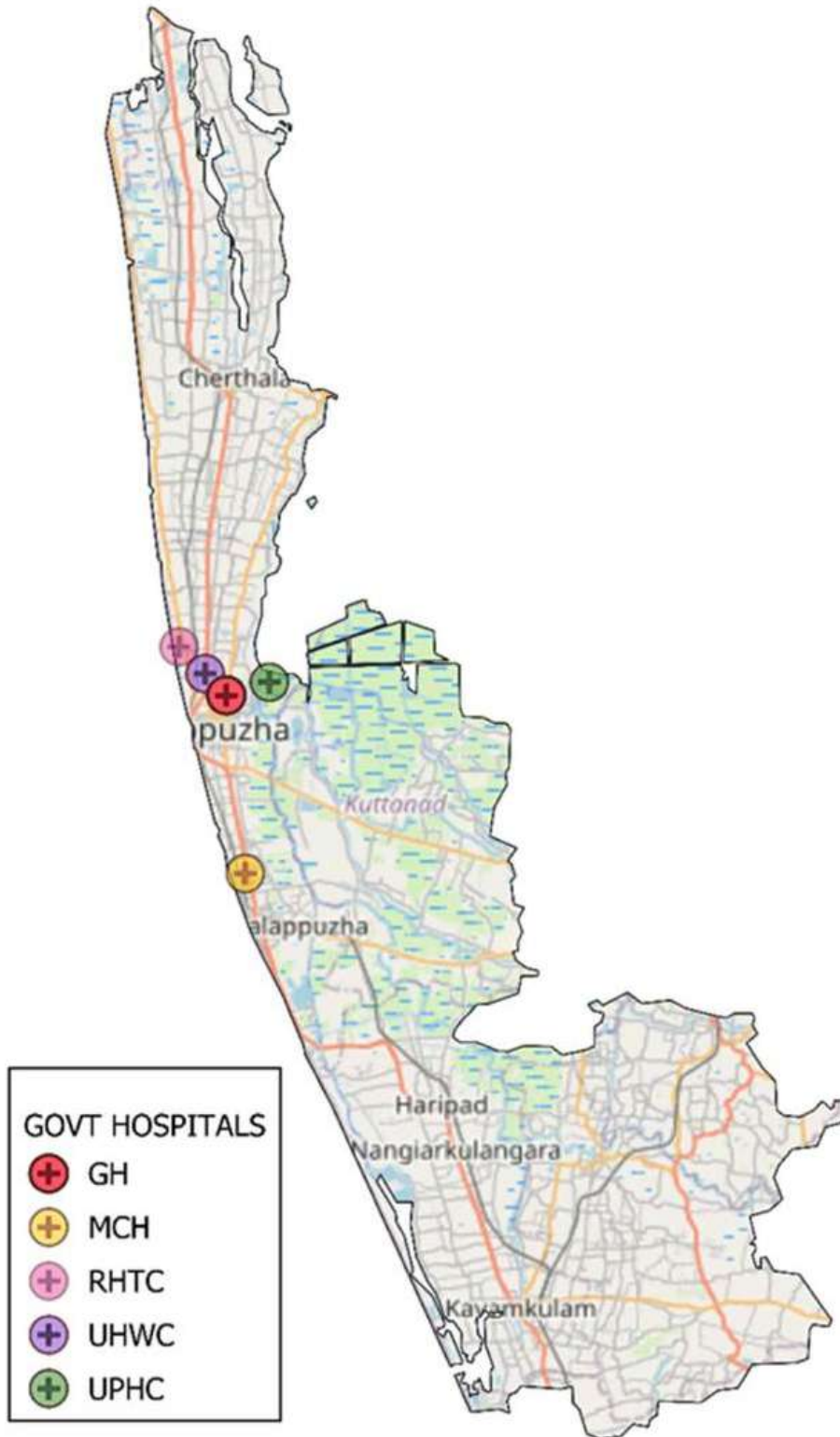
#### Public Health Facilities Near by

Initial medical intervention begins directly at the trackside, where patients are stabilized at the Finishing Point Medical Hub or the Matha and Rajiv Jetties for immediate issues like heatstroke or minor injuries. If the condition requires more advanced care, patients are evacuated via designated "Green Channels"—police-cleared traffic corridors—to the General Hospital Alappuzha, located approximately 3.1 km away. In extreme cases involving major trauma or life-threatening emergencies, patients are transported directly to Govt. T.D. Medical College (MCH) Vandanam, situated 9.5 km south of the venue. As the district's largest tertiary care provider, the MCH is the essential final link in the chain for managing severe injuries sustained by high-intensity snake boat rowers.

Facility Name	Category	Distance	Travel Time (Race Day)	Key Role & Capacity
---------------	----------	----------	------------------------	---------------------

<b>Finishing Point Medical Hub</b>	On-Site Outpost	0 km	Immediate	Central triage for on-track heatstroke and injuries.
<b>Matha / Rajiv Jetties</b>	On-Site Outpost	< 0.5 km	1–2 mins	Immediate stabilization for spectators in the galleries.
<b>UPHC Nehru Trophy</b>	Urban PHC	~0.8 km	2–5 mins	Closest permanent clinic for non-emergency ailments.
<b>General Hospital Alappuzha</b>	Secondary Hub	~3.1 km	7–10 mins	Main government referral for trauma and accidents.
<b>UHWC Power House</b>	Urban Wellness	~4.2 km	10–12 mins	Decentralized primary care and fever surveillance.
<b>RHTC Chettikad</b>	Support Unit	~6.5 km	15–20 mins	Backup facility for the northern track sector.
<b>Govt. T.D. Medical College (MCH)</b>	Tertiary Care	~9.5 km	20–25 mins	Advanced surgery, ICU, and major trauma (Vandanam).

## Government Health Facility Mapping



**HOSPITAL PREPARDNESS PLAN**

---

The huge gatherings during the time of boat race significantly increase the risk of medical emergencies due to overcrowding, environmental exposure, and water-based activities. Common anticipated health issues include trauma, drowning, dehydration, heat exhaustion, communicable diseases, and cardiac events. Therefore, a robust hospital preparedness plan is essential to ensure timely medical care and prevent avoidable morbidity and mortality.

It ensures:

- **Ensure timely emergency care:** The primary objective is to provide rapid and effective medical response at all levels, from on-site first aid to tertiary care management. This ensures that critical cases are stabilized and referred without delay.
- **Strengthen referral linkages:** A well-defined referral pathway between field medical units and hospitals helps avoid confusion and reduces delays during emergencies.
- **Reduce morbidity and mortality:** Through early intervention, adequate staffing, and proper infrastructure, the plan aims to minimize complications and deaths.
- **Enhance public health safety:** Surveillance and preventive measures are incorporated to detect and control any potential outbreaks during the event.

## 1. Hospital Network and Role Allocation

### A. On-site Medical Facilities

#### Finishing Point Medical Hub & Matha/Rajiv Jetties Medical Posts

These are the first points of medical contact for patients. They are strategically located near the event area to ensure immediate access.

- These centers will handle first aid, triage, and basic life support.
- Patients with minor injuries will be treated on-site to reduce hospital burden.
- Severe cases will be stabilized (airway, breathing, circulation) before referral.
- These hubs will act as triage and referral gateways, ensuring appropriate patient distribution to higher centers.

### B. Peripheral Health Facilities

- UPHC Nehru Trophy

- UHWC Power House
- RHTC Chettikad

These facilities form the second level of care and help reduce overload at major hospitals.

- They will manage mild to moderate cases such as minor injuries, fever, dehydration, and minor infections.
- Short-term observation beds will be used to monitor patients who may not need referral.
- These centers will also support public health surveillance, reporting syndromic data to higher authorities.
- They act as buffer centers, preventing unnecessary crowding at tertiary hospitals.

#### C. Secondary Care Facility

- General Hospital Alappuzha

This hospital serves as the main secondary-level referral center.

- It will handle moderate to severe cases, including trauma, fractures, and acute medical emergencies.
- Emergency operation theatres will be kept ready for urgent surgical interventions.
- Additional beds will be arranged to accommodate increased patient load.
- Cases requiring advanced care will be stabilized and referred to tertiary care.

#### D. Tertiary Care Facility

- Government T.D. Medical College Hospital (MCH)

This is the apex referral center with advanced facilities.

- It will manage critical and life-threatening cases, including polytrauma, ICU admissions, and cardiac emergencies.
- Specialized departments such as surgery, orthopedics, cardiology, and neurology will be on standby.
- Intensive Care Units (ICUs) will be prepared for surge capacity.
- It will act as the central command for advanced clinical management.

#### E. Special Care Facility

- Women & Children (W & C) Hospital

- This facility will handle maternal and pediatric emergencies.
- Neonatal care units will be prepared for infant emergencies.
- It ensures that vulnerable populations receive specialized and focused care.

## **2. Triage and Referral Mechanism**

A structured triage system is essential for prioritizing patients based on severity.

- Red (Immediate): Life-threatening conditions requiring urgent intervention.
- Yellow (Urgent): Serious but stable cases needing early treatment.
- Green (Minor): Minor injuries that can be treated and discharged.
- Black (Dead): No signs of life.

Patients will be referred in a stepwise manner, starting from on-site hubs to peripheral centers, then to General Hospital, and finally to Medical College if needed. This systematic approach prevents overcrowding and ensures optimal utilization of resources.

## **3. Human Resource Deployment**

Adequate staffing is critical for efficient service delivery.

- Medical hubs will have doctors, nurses, and paramedics trained in emergency care.
- Peripheral centers will have sufficient staff to manage outpatient and observation cases.
- General Hospital and MCH will implement surge staffing, including specialists on call.
- Specialists such as surgeons, anesthesiologists, orthopedicians, and cardiologists will be available round the clock.

This ensures that all levels of care are equipped to handle increased patient load.

## **4. Infrastructure and Logistics**

Emergency Infrastructure

- Temporary medical camps will be established at key locations.
- Emergency wards in hospitals will be expanded.
- Dedicated trauma care areas will be prepared.

Equipment

- Defibrillators for cardiac emergencies
- Oxygen supply systems
- Ventilators in higher centers
- Trauma and drowning management kits

#### Drugs

- Emergency medications (e.g., adrenaline, IV fluids)
- ORS for dehydration
- Antibiotics and analgesics
- Anti-snake venom if required

Proper logistics ensure uninterrupted care during peak hours.

#### **5. Infection Prevention and Control**

- Hand hygiene facilities will be installed at all centers.
- PPE kits will be available for healthcare workers.
- Isolation areas will be identified in hospitals.
- Biomedical waste will be managed as per protocol.

These measures reduce the risk of infection spread.

#### **6. Communication and Coordination**

- A central control room will coordinate all activities.
- Communication between field teams, ambulances, and hospitals will be maintained via wireless or mobile networks.
- Emergency helpline numbers will be widely publicized.

Effective communication ensures seamless coordination during emergencies.

#### **7. Mass Casualty Management**

- Disaster management protocols will be activated if needed.
- Hospitals will create surge capacity by increasing beds and postponing elective procedures.
- Triage zones will be established within hospitals.

This ensures preparedness for worst-case scenarios.

### **8. Training and Mock Drills**

- Mock drills will be conducted before the event.
- Staff will be trained in Basic Life Support (BLS) and Advanced Cardiac Life Support (ACLS).
- Disaster preparedness training will be provided.

Training improves response efficiency and reduces panic during real events.

### **9. Health Awareness**

- Public announcements will promote hydration and safety.
- Information on medical aid points will be displayed.
- Awareness on crowd behavior and emergency response will be provided.

## **EMERGENCY EVACUATION PLAN**

The purpose of this evacuation plan is to ensure the safe, rapid, and organized movement of spectators, participants, and officials from the event area during any emergency. Given the large crowd and water-based setting, evacuation planning must address both land and water-based risks such as drowning, stampede, fire, structural collapse, or extreme weather events.

It ensures;

- Life safety: The primary goal is to minimize casualties by enabling quick evacuation from danger zones.
- Prevent panic and stampede: Structured evacuation reduces chaos in high-density crowd situations.
- Facilitate rapid medical response: Ensure injured individuals are quickly transported to medical facilities.
- Coordinate multi-agency response: Synchronize actions of police, health, fire, and disaster management teams.

### **1. Risk Assessment and Scenarios**

The evacuation plan is based on the following potential emergency scenarios:

- Water-related emergencies: Boat capsizing, drowning incidents, or collisions.
- Fire hazards: Electrical short circuits in temporary structures or food stalls.
- Crowd-related incidents: Stampede, overcrowding, or structural collapse of temporary stands.
- Medical emergencies: Sudden cardiac arrest, mass casualty incidents.
- Weather-related risks: Heavy rain, lightning, or strong winds.

Each scenario requires a predefined evacuation trigger and response protocol.

## 2. Evacuation Zones and Mapping



The map illustrates a comprehensive emergency evacuation system integrating both road and water transport networks around Punnamada Lake, the main venue of the Nehru Trophy Boat Race. It highlights evacuation zones, routes, medical facilities, assembly points, and traffic control locations to ensure rapid response during emergencies.

The event area is divided into four operational zones:

· Zone A (High-Risk Core Area):

Covers the Finishing Point and central Punnamada Lake where the race occurs. This zone has the highest crowd density and risk of water-related incidents.

· Zone B (VIP & Jetty Zone):

Includes Matha Jetty, Rajiv Jetty, and VIP gallery areas. This zone requires controlled evacuation due to restricted access and high-profile presence.

· Zone C (East Side / Medical Access Zone):

Located along East Bank Road and Kalavoor Road, this zone provides the fastest access to tertiary care.

· Zone D (Town Side Zone):

Covers Boat Jetty, Mullakkal area, and town-side crowd zones with access to secondary care facilities.

### **3. Evacuation Routes**

#### Land Routes

- Multiple wide, obstruction-free exit pathways will be identified.
- Routes will be clearly marked with arrows and signage.
- Separate entry and exit routes will be maintained to avoid congestion.
- Police personnel will regulate movement and prevent bottlenecks.

#### Water Routes

- Rescue boats will be deployed along the race track.
- Boats will be used to evacuate individuals from water or inaccessible areas.
- Coordination with inland water transport authorities is essential.

All routes must be kept clear at all times and monitored continuously.

### **EVACUATION ROUTE THROUGH ROADWAYS**

---

Zone	Starting Point	Evacuation Route (Road/Water)	Destination Hospital	Approx. Distance	Estimated Time	Type of Cases	Remarks
<b>Zone A</b>	Finishing Point	Finishing Point → Punnamada Road → NH66 Bypass	Government T.D. Medical College Hospital	8–10 km	15–20 min (with green corridor)	Critical (trauma, drowning, cardiac)	Primary emergency corridor; ambulance priority
<b>Zone A (Alt)</b>	Finishing Point	Finishing Point → Boat Jetty Road → Mullakkal → Town	General Hospital Alappuzha	4–5 km	15–25 min (traffic dependent)	Moderate emergencies	Secondary route; prone to congestion
<b>Zone B</b>	Matha Jetty	Matha Jetty → Beach Road → YMCA Junction → Town	General Hospital	3–4 km	10–15 min	Moderate cases, VIP evacuation	Shortest urban route
<b>Zone B (Alt)</b>	Rajiv Jetty	Rajiv Jetty → Canal Road → Mullakkal Road → NH66	Medical College	7–9 km	20–25 min	Severe cases	Bypasses town congestion

<b>Zone C</b>	East Bank (Punnamada side)	East Bank Road → Kalavoor Road → NH66	Medical College	6–8 km	15–20 min	Critical referrals	Dedicated ambulance corridor
<b>Zone D</b>	Boat Jetty (Town side)	Boat Jetty → Mullakkal Road → Civil Station Road	General Hospital	3 km	10–15 min	Minor to moderate	High pedestrian density
<b>Mass Evacuation</b>	Town Area	Town → NH66 → Relief Camps / Open Grounds	Safe Zones	Variabl e	Variable	Crowd evacuatio n	Used in disaster scenarios

#### EVACUATION ROUTE THROUGH WATERWAYS

Rescue Location	Water Route	Landing Point (Jetty)	Linked Road Route	Hospital Referral	Time	Remarks
Race Track (Punnamada Lake)	Direct rescue boat corridor	Finishing Point Jetty	Punnamada Road → NH66	Medical College	10–15 min total	Fastest for critical drowning cases

Race Track (Mid-section)	Lateral boat transfer	Rajiv Jetty	Canal Road → Mullakkal → NH66	Medical College	15–20 min	Avoids crowd-heavy areas
Near Gallery	VIP Short boat transfer	Matha Jetty	Beach Road → Town	General Hospital	10–15 min	Ideal for VIP/nearby spectators
Remote lake edges	Canal-based evacuation	Alternate small jetties	Linked local roads	Nearest facility	Variable	Backup route if main jetties blocked

#### 4. Assembly Points (Safe Areas)

Designated safe assembly points will be established at a safe distance from the event area.

- These areas should be spacious, accessible, and well-ventilated.
- Basic facilities such as drinking water and first aid will be available.
- Security personnel will ensure orderly gathering and prevent overcrowding.

Assembly points act as temporary holding areas until further movement or dispersal.

#### 5. Transportation and Evacuation Support

- Ambulances (ALS & BLS) will be stationed at strategic points.
- Dedicated green corridors will be created for emergency vehicles.
- Buses or other transport vehicles will be arranged for mass evacuation if required.
- Boats will assist in evacuating people from water-bound areas.

Transport coordination will be managed through a central control room.

#### 6. Roles and Responsibilities

Incident Command System (ICS)

- Incident Commander: District Collector / designated authority responsible for overall decision-making.
- Operations Team: Police, Fire Force, Health Department, and Disaster Response teams.
- Medical Team: Handles triage, stabilization, and hospital referral.
- Rescue Team: Includes fire force, NDRF/SDRF, and trained volunteers.

Each team will have clearly defined roles to avoid confusion during emergencies.

### **7. Communication System**

- A central control room will coordinate all evacuation activities.
- Public Address (PA) systems will be used for crowd instructions.
- Wireless communication and mobile networks will connect all response teams.
- Emergency messages should be clear, calm, and multilingual (Malayalam & English).

Effective communication is critical to prevent panic.

### **8. Crowd Management During Evacuation**

- Crowd movement will be guided by trained personnel and volunteers.
- Barricades will be used to channel movement in specific directions.
- Panic situations will be controlled through continuous announcements.
- Special attention will be given to vulnerable groups such as children, elderly, and persons with disabilities.

Proper crowd control minimizes the risk of stampede.

### **9. Special Evacuation Measures**

- VIP evacuation plan: Separate secure routes for dignitaries.
- Differently-abled access: Dedicated assistance teams and accessible routes.
- Women and children: Priority evacuation support where needed.

### **10. Medical Evacuation Linkages**

Evacuated injured individuals will be transported through a structured referral system:

- On-site stabilization → Peripheral centers →

- General Hospital Alappuzha →
- Government T.D. Medical College Hospital

This ensures continuity of care and efficient patient flow.

### **11. Mock Drills and Preparedness**

- Full-scale evacuation drills will be conducted prior to the event.
- All stakeholders will be trained on evacuation protocols.
- Gaps identified during drills will be corrected.

Mock drills improve coordination and readiness.

### **12. Post-Evacuation Management**

- Headcount and accountability of evacuated individuals.
- Medical assessment at assembly points.
- Psychological support if needed.
- Documentation and reporting of the incident.

### **13. Monitoring and Evaluation**

- Continuous monitoring during the event by control room.
- Feedback from field teams.
- Post-event evaluation to improve future planning.

## **CONCLUSION**

The public health preparedness plan for the Nehru Trophy Boat Race represents a comprehensive and multi-sectoral approach to managing health risks associated with a large-scale mass gathering event. By integrating preventive, promotive, and curative services, the plan ensures that all potential health emergencies—ranging from trauma and drowning incidents to communicable diseases and environmental hazards—are effectively anticipated and addressed.

A key strength of the plan lies in its multi-tier healthcare system, linking on-site medical hubs, peripheral health centres, secondary care facilities, and tertiary care institutions. This structured referral mechanism ensures timely stabilization and appropriate management of

cases, thereby reducing morbidity and mortality. The inclusion of a well-defined emergency evacuation system, utilizing both road networks such as NH66 and water-based rescue routes, further enhances rapid response capacity, especially in critical situations.

The emphasis on public health surveillance, sanitation, food safety, and water quality monitoring plays a crucial role in preventing disease outbreaks. Additionally, strong infection prevention and control measures safeguard both the public and healthcare workers. Effective interdepartmental coordination among health services, police, fire force, disaster management authorities, and local administration ensures seamless communication and operational efficiency.

Capacity building through training and mock drills, along with the deployment of adequate human resources, equipment, and logistics, strengthens the overall preparedness and resilience of the system. Furthermore, community awareness and clear risk communication contribute to responsible public behavior and reduced panic during emergencies.

In conclusion, this preparedness plan establishes a robust framework that prioritizes safety, rapid response, and coordinated action. Its successful implementation will be instrumental in ensuring that the Nehru Trophy Boat Race is conducted in a safe and health-secure environment, thereby protecting the well-being of participants, spectators, and the community at large.

## ANNEXURES

### Annexure -1

#### HR Deployment Plan

Sl. No	Category of Staff	Number Required	Deployment Area	Responsibilities
1	Medical Officers	20–30	First Aid Posts, Mobile Units	Emergency care, triage, referral
2	Staff Nurses	40–60	FAPs, Ambulances	Patient care, IV fluids, monitoring
3	Pharmacists	10–15	FAPs	Drug dispensing
4	Health Inspectors	15–20	Food stalls, sanitation zones	Inspection, enforcement
5	JPHNs / JHIs	30–50	Field areas	Surveillance, reporting

6	ASHA Workers	50–100	Community crowd areas &	Awareness, early reporting
7	Volunteers (NSS/others)	100+	All zones	Crowd guidance, first aid support

## Annexure -2

### Medical post and Ambulance Distribution Plan

Medical posts should be strategically located to ensure accessibility within 5–10 minutes.

#### Key Guidelines

- One First Aid Post per 5,000–10,000 population
- At least one Water Ambulance per critical canal stretch
- Dedicated ambulance corridor to referral hospitals: General Hospital & Alappuzha Medical College Hospital Alappuzha

#### Distribution Plan

Location	Facility Type	No. Required	Remarks
Main Gallery Area	First Aid Post	4–6	High crowd density
Boat Jetty Areas	First Aid Post	2–3	Water-related risk
Parking Areas	First Aid Post	2–3	Entry/exit points

Along Race Track	Water Ambulance	4–6	Rescue readiness
Road Access Points	Land Ambulance	8–10	Referral transport

### **Annexure -3**

#### **Essential Drug and Equipment Checklist**

Each First Aid Post must be equipped to handle common emergencies.

#### **Essential Drugs**

- ORS packets
- IV fluids (NS, RL, DNS)
- Paracetamol, antihistamines
- Antibiotics (as per protocol)
- Anti-snake venom (if applicable)
- Tetanus toxoid

#### **Equipment**

- BP apparatus, stethoscope
- Glucometer
- Oxygen cylinder
- Defibrillator (at major centers)
- Stretchers and wheelchairs
- Emergency resuscitation kit

**Annexure -4**

**Disease Surveillance Format**

Daily reporting from all medical units is mandatory.

<b>Date</b>	<b>Location</b>	<b>Fever Cases</b>	<b>Diarrhea Cases</b>	<b>Injury Cases</b>	<b>Suspected Dengue</b>	<b>Other Remarks</b>

**Key Instructions**

- Zero reporting must be ensured
- Immediate reporting of clusters
- Rapid Response Team activation if threshold crossed

**Annexure - 5****Food Safety Inspection Checklist**

Food safety officers shall use this checklist during inspections.

**Checklist Points**

- Valid license/registration
- Clean water usage
- Proper waste disposal
- Food covered and protected from flies
- Personal hygiene of food handlers
- Safe storage (especially fish/meat items)

I. No	Vendor Name	Location	Hygiene Status	Violations Found	Action Taken
-------	-------------	----------	----------------	------------------	--------------

---


**Annexure -6**

**Water Quality Monitoring Format**

Regular monitoring of drinking water is essential.

<b>Date</b>	<b>Source Location</b>	<b>Chlorine Level</b>	<b>Potability Status</b>	<b>Action Taken</b>


## **Annexure -7**

### **Sanitation and Waste Management Plan**

#### Key Components

- Temporary toilets (1 per 100–200 persons)
- Separate facilities for men and women
- Continuous cleaning staff deployment
- Waste segregation (biodegradable/non-biodegradable)
- Tie-up with municipality for disposal

#### Monitoring Checklist

- Cleanliness of toilets
- Availability of water
- Waste overflow status
- Frequency of cleaning

**Annexure -8**

**Emergency Contact Directory**

**A. DISTRICT LEVEL CONTROL**

Sl. No	Department / Unit	Designation	Name	Contact Number
1	District Administration	District Collector		
2	Health Department	District Medical Officer (DMO)		
3	Surveillance Unit	District Surveillance Officer (DSO)		
4	NHM	District Programme Manager		
5	Emergency Control Room	Control Room In-charge		

**B. HEALTH FACILITIES (ALAPPUZHA)**

Facility	Nodal Officer	Contact
General Hospital, Alappuzha	Superintendent	
Medical College Hospital, Vandanam	Superintendent	
Taluk Hospital (Nearest)	Medical Officer	
Urban PHC (Concerned Area)	Medical Officer	

**C. EMERGENCY SERVICES**

Service	Contact Person	Number
Ambulance (108 Service)	Emergency Response	108
Fire & Rescue (Alappuzha)	Station Officer	101
Police Control Room	Duty Officer	100
Water Transport Authority	Officer	
Disaster Management	District Officer	

**D.**

#### E. FIELD LEVEL CONTACTS

Area / Zone	JHI / JPHN	ASHA Coordinator	Contact
Zone 1 (Main Gallery)			
Zone 2 (Boat Jetty)			
Zone 3 (Parking Area)			

#### Annexure -9

#### Mass Casualty Management Flow

A mass casualty incident (MCI) refers to any situation where the number of casualties exceeds the immediate capacity of available healthcare resources. During the Nehru Trophy Boat Race, potential MCIs may arise due to boat collisions, capsizing, drowning incidents, stampede in galleries, structural collapse of temporary stands, or fire hazards.

Given the water-based geography and large crowd concentration, a **rapid, well-coordinated response system** is essential to minimize morbidity and mortality.

**Incident → Alert → Site Safety → Triage → Stabilization → Transport → Hospital Care → Documentation → Review**

#### **STEP 1: INCIDENT OCCURRENCE & ALERT**

The process begins immediately when an incident such as boat capsize, drowning cluster, or stampede occurs.

##### **Key Actions:**

- First observer (public/volunteer/police) informs:
  - Control Room
  - Nearest First Aid Post (FAP)
- Activate Emergency Response System
- Inform:
  - Health Department
  - Fire & Rescue (for water incidents)
  - Police

##### **Alappuzha Context:**

- Use wireless communication due to crowd congestion
- Alert water rescue teams immediately in case of canal incidents.

#### **STEP 2: FIRST RESPONSE & SITE SAFETY**

The first trained responders reach the site and ensure safety before rescue.

##### **Key Actions:**

- Secure the area (prevent further casualties)
- Stop crowd movement toward incident site
- Deploy:
  - Police for crowd control
  - Fire & Rescue for water rescue

- Use life jackets, rescue boats, and ropes

**Important Note:**

In water-related incidents, rescue takes priority over treatment.

**STEP 3: TRIAGE (ON-SITE PRIORITIZATION)**

Triage is the most critical step where victims are categorized based on severity.

**Triage Categories:**

Category	Colour	Condition	Priority
Immediate	RED	Life-threatening (breathing difficulty, unconscious)	Highest
Delayed	YELLOW	Serious but stable	Moderate
Minor	GREEN	Walking wounded	Low
Dead	BLACK	No signs of life	No priority

**Process:**

- Conduct rapid assessment (within 30–60 seconds per victim)
- Use START triage method

**Alappuzha Context:**

- Drowning victims → always prioritize (Red category)
- Hypothermia risk due to prolonged water exposure

**STEP 4: ON-SITE STABILIZATION**

After triage, immediate life-saving interventions are provided.

**Key Interventions:**

- Airway management
- CPR (for drowning victims)
- Control bleeding

- Oxygen administration
- IV fluids

**At First Aid Posts:**

- Stabilize before shifting
- Maintain triage tagging

**STEP 5: TRANSPORT & EVACUATION**

Efficient evacuation is crucial to reduce mortality.

**Transport Strategy:**

- **Water Ambulances:**
  - For victims near canals or race track
- **Land Ambulances:**
  - For transport to hospitals via road

**Referral Linkages:**

- General Hospital Alappuzha
- Medical College Hospital Alappuzha

**Transport Prioritization:**

- Red → Immediate transfer
- Yellow → After stabilization
- Green → Delayed or on-site care

**STEP 6: HOSPITAL RESPONSE**

Hospitals activate their internal disaster management plans.

**Key Actions:**

- Activate Mass Casualty Protocol
- Arrange:
  - Emergency beds
  - ICU readiness
  - Blood bank support

- Deploy additional staff
- Separate triage area at hospital

#### **STEP 7: COMMUNICATION & COORDINATION**

Effective communication ensures smooth functioning.

##### **Coordination Between:**

- Control Room
- Field teams
- Ambulance services
- Hospitals

##### **Key Functions:**

- Real-time updates on casualties
- Resource allocation
- Media communication (through authorized personnel only)

#### **STEP 8: DOCUMENTATION & IDENTIFICATION**

Proper documentation is essential for medico-legal and administrative purposes.

##### **Key Actions:**

- Maintain casualty records
- Tag patients with:
  - Name (if known)
  - Triage category
  - Location found
- Photograph unidentified victims (if required)

#### **STEP 9: DEAD BODY MANAGEMENT**

Handled with dignity and proper protocol.

##### **Steps:**

- Transfer to designated mortuary

- Identification and tagging
- Inform police for medico-legal procedures
- Support families

#### **STEP 10: POST-INCIDENT REVIEW**

After the incident, evaluation is conducted.

##### **Key Activities:**

- Debriefing of teams
- Identification of gaps
- Documentation of lessons learned
- Psychological support for responders

#### **3. SPECIAL CONSIDERATIONS FOR ALAPPUZHA**

- High dependence on water rescue systems
- Need for divers and trained swimmers
- Risk of leptospirosis exposure after water incidents
- Crowd congestion delaying ambulance movement → need for predefined evacuation routes

A well-structured Mass Casualty Management Flow is critical for minimizing loss of life during emergencies at the Nehru Trophy Boat Race. Emphasis on rapid rescue, efficient triage, coordinated evacuation, and strong hospital preparedness ensures effective disaster response in the unique backwater setting of Alappuzha.

## **Annexure -10**

### **IEC (Information, Education & Communication Plans)**

#### **Key Messages**

- Drink safe and clean water
- Avoid contact with contaminated water (prevent Leptospirosis)
- Use toilets and maintain hygiene
- Follow safety instructions near water

#### **Modes of Communication**

- Public announcements
- Posters and banners
- Social media updates
- Local cable networks



## **ANNEXURE-12**

### **STANDARD OPERATING PROCEDURE (SOP) FOR DROWNING MANAGEMENT DURING Nehru Trophy Boat Race**

#### **1. Introduction**

The Nehru Trophy Boat Race is a major mass gathering event conducted annually in Alappuzha, involving large crowds and extensive water-based activities in Punnamada Lake. Such conditions increase the risk of drowning incidents due to accidental falls, overcrowding, and boat-related mishaps. This Standard Operating Procedure (SOP) outlines the systematic approach for prevention, rescue, resuscitation, and referral of drowning cases during the event.

#### **2. Objectives**

- 2.1 To ensure rapid identification and rescue of drowning victims.
- 2.2 To provide immediate and effective resuscitation at the site.
- 2.3 To establish a clear referral mechanism for appropriate medical care.
- 2.4 To minimize morbidity and mortality associated with drowning incidents.

#### **3. Scope**

This SOP is applicable to all stakeholders involved in event management, including:

- Water rescue teams (Fire & Rescue Services, SDRF/NDRF, boat marshals)
- Health department personnel
- Ambulance services

- Police and volunteers
- Referral healthcare institutions

#### **4. Definitions**

4.1 **Drowning:** Process resulting in respiratory impairment from submersion/immersion in liquid.

4.2 **Near Drowning:** Survival following a drowning event.

#### **5. Organizational Structure and Responsibilities**

##### **5.1 Incident Command**

- Overall supervision by District Administration.
- Central control room to coordinate all emergency responses.

##### **5.2 Rescue Teams**

- Responsible for immediate retrieval of victims from water.
- Ensure safe transport to the nearest jetty.

##### **5.3 Medical Teams**

- Provide triage, resuscitation, and stabilization at:
  - Finishing Point Medical Hub
  - Matha Jetty
  - Rajiv Jetty

##### **5.4 Ambulance Services**

- Provide pre-hospital care and safe transport.

##### **5.5 Referral Hospitals**

- **General Hospital Alappuzha** – Secondary care
- **Government T.D. Medical College Hospital** – Tertiary care

#### **6. Risk Assessment**

- 6.1 High crowd density near Finishing Point and jetties.
- 6.2 Continuous movement of race boats.
- 6.3 Limited access in water zones requiring boat-based rescue.
- 6.4 Risk of hypothermia and aspiration complications.

## **7. Preparedness and Deployment**

### **7.1 Water Rescue Deployment**

- Rescue boats positioned along the race track.
- Personnel equipped with life-saving equipment and communication devices.

### **7.2 Medical Deployment**

- Medical hub at Finishing Point.
- First aid posts at Matha and Rajiv Jetties.

### **7.3 Ambulance Deployment**

- ALS/BLS ambulances stationed at key points.

## **8. Standard Operating Procedure**

### **8.1 Identification and Alert**

- Incident identified by field personnel.
- Immediate alert to the control room and nearest rescue team.

### **8.2 Rescue Operation**

- Rapid approach using rescue boats.
- Safe extraction of victims.
- Transfer to the nearest jetty.

### **8.3 Primary Assessment**

Assess:

- Consciousness

- Breathing
- Pulse

#### **8.4 Triage Classification**

- **Red:** Unconscious / not breathing
- **Yellow:** Breathing with distress
- **Green:** Stable

#### **8.5 Resuscitation**

##### **8.5.1 Unresponsive and Not Breathing**

- Initiate CPR immediately (30:2 ratio).
- Continue until recovery or handover.

##### **8.5.2 Breathing but Unconscious**

- Place in the recovery position.
- Monitor continuously.

##### **8.5.3 Breathing and Conscious**

- Observe and reassure.

#### **8.6 Airway and Breathing Management**

- Clear airway.
- Administer oxygen.
- Use bag-valve-mask if required.

#### **8.7 Hypothermia Management**

- Remove wet clothing.
- Keep patients warm using blankets.

#### **8.8 Transport and Referral**

- Shift via ambulance using designated routes.

- Referral based on severity:
  - Moderate → General Hospital
  - Severe → Medical College

## 9. Special Event Protocols

9.1 Dedicated rescue boat lanes along the race track.

9.2 Continuous surveillance during race hours.

9.3 Pre-alert to hospitals for emergency readiness.

## 10. Equipment and Logistics

- Rescue boats
- Life jackets
- Oxygen cylinders
- Bag-valve-mask
- Suction apparatus
- Emergency drugs

## 11. Communication Protocol

- Continuous communication between:
  - Rescue teams
  - Control room
  - Medical units
  - Ambulance services

## 12. Documentation and Reporting

- Maintain records of:
  - Time of incident and rescue
  - Clinical condition
  - Treatment provided
  - Referral details
- Submit reports to the control room.

### **13. Monitoring and Supervision**

- Field supervision by designated officers.
- Real-time monitoring through the control room.
- Post-event evaluation for improvement.

### **14. Do's and Don'ts**

#### **Do's**

- Initiate CPR immediately
- Use nearest evacuation point
- Refer all cases

#### **Don'ts**

- Do not delay rescue
- Do not overcrowd rescue area
- Do not ignore observation

### **15. Conclusion**

Effective drowning management during the Nehru Trophy Boat Race requires coordinated action, rapid response, and adherence to standardized protocols. Proper implementation of this SOP will ensure timely care, reduce complications, and enhance overall event safety.

# PAYIPPAD BOAT RACE



## PREAMBLE

The Payippad Boat Race is a three-day spectacle unlike most other single-day events. The days of Thiruvonam, Avittam and Chathayam in the month of Chingam are selected for the race. Payippad is a locality in the Alappuzha district of Kerala, and Achankovilaar is the water body in which the race is held.

There is a legend that connects the Payippad Boat Race to Sree Subramanya Swami Temple, Harippad. A Muruga temple named Keezhthrikkovil in Harippad was being renovated. It is said the priest of the temple had a divine dream. The dream was that there is a whirlwind on the surface of the Kayamkulam lake and an idol of Lord Subramanya can be found under the water where the whirlwind is. It has to be secured from there and dedicated in the Harippad temple. The dream became true; there indeed was an idol of Lord Subramanya in the Kayamkulam Govindamuttam Lake.

People gave a warm welcome to the idol on their way back at Payippad and continued as a water procession. The idol was received at Aranazhika Nelpurakadavu. Once the works of the Harippad temple was over, the idol was carried to the temple and dedicated to the lord there. It is in remembrance of this event that the Payippad Boat Race is conducted annually.

On the day of Thiruvonam, Chundan boats arrive at Aranazhika Nelpurakadavu. Singing Vanjippattu in rhythmic beats, they row all the way to the Harippad temple. By afternoon, in Payippad Lake, the boat race will be officially underway. On Avittam, which is the second day, a water procession that includes floats and art forms is organised. Finally, on the day of Chathayam, the dazzling final of the boat race is conducted. Apart from snakeboats, competitions for Iruttukuthi, Veppu, and Churulan boats are also held. The Travancore Devaswom Board is in charge of conducting the Payippad Boat Race.

Unlike temple festivals, this is a high-risk aquatic mass gathering, with:

- Immediate life-threatening emergencies (drowning)
- Limited access zones
- High dependency on response time (golden minutes)

**RISK ASSESSMENT (BASED ON PAST DATA & PATTERNS)**

Sl No	Category	Risk	Description	Risk Level	Key Concerns	Mitigation Measures
1	Medical Emergency	Drowning	Fall into river/boat accidents	Very High	Immediate death risk	Rescue teams, life boys, CPR
2	Medical Emergency	Heat exhaustion	Long exposure to sun	High	Collapse	Hydration points
3	Medical Emergency	Cardiac events	Elderly population	High	Sudden death	Emergency care units

4	Injury	Stampede	Crowd surge	High	Mass injuries	Crowd control
5	Injury	Falls	Slippery banks	High	Fractures	Safety measures
6	Injury	Boat collision injury	Boat accidents	Moderate	Trauma	Regulation, monitoring
7	Crowd-related	Overcrowding	Peak event day	High	Access issues	Entry regulation
8	Crowd-related	Delayed medical access	Linear crowd spread	High	Treatment delay	Distributed medical posts
9	Communicable Disease	Acute Diarrheal Disease (ADD)	Contaminated water exposure	Moderate	Waterborne outbreaks	Safe water, chlorination, ORS
10	Communicable Disease	Food-borne illness	Street food consumption	Moderate	Cluster cases	Food safety inspection
11	Communicable Disease	Viral fever / ARI	Crowd gathering	Moderate	Spread among spectators	Surveillance, IEC
12	Environmental	Water contamination	River pollution during event	High	Infection risk	Monitoring water quality
13	Environmental	Slippery riverbanks	Mud and water spillage	High	Falls and injuries	Barricading, sand application

14	Environmental	Waste accumulation	Plastic & High food waste	Hygiene issues	Waste management system
----	---------------	--------------------	---------------------------	----------------	-------------------------

### 3. SUMMARY OF TEMPORAL EVENTS WITH TIMELINE

#### DAY 1 – THIRUVONAM (BUILD-UP PHASE)

Time	Activity	Crowd Behaviour	Risk Level	Operational Focus
8:00 AM – 12:00 PM	Arrival of snake boats at Aranazhika Nelpurakadavu	Gradual crowd formation	Low– Moderate	Initial monitoring, zone identification
1:00 PM – 2:00 PM	Official inauguration	Crowd begins concentrating near riverbanks	Moderate	Activate medical aid, crowd control
2:00 PM – 5:00 PM	Public gathering and movement	Increased presence along riverbanks	Moderate	Surveillance, sanitation, safety checks
Evening	Dispersal	Controlled movement	Moderate	Maintain basic services

#### DAY 2 – AVITTAM (ESCALATION PHASE)

Time	Activity	Crowd Behaviour	Risk Level	Operational Focus
------	----------	-----------------	------------	-------------------

8:00 AM – 12:00 PM	Spectator inflow	Increasing crowd along riverbanks	Moderate	Monitoring and preparation
1:00 PM onwards	Grand water procession	Dense crowd along river stretch	High	Strengthen crowd control
2:00 PM – 4:30 PM	Peak gathering	Continuous crowd pressure	High	Hydration, safety monitoring
Evening	Partial dispersal	Residual crowd	Moderate	Maintain services

### DAY 3 – CHATHAYAM (MAIN RACE – PEAK PHASE)

Time	Activity	Crowd Behaviour	Risk Level	Operational Focus
8:00 AM – 12:00 PM	Early arrival crowd positioning	Dense crowd & formation	High	Pre-position teams, route clearance
1:00 PM – 2:30 PM	Preliminary heats & mass drill	Very dense crowd, excitement	Very High	Full deployment, emergency readiness
2:30 PM – 4:30 PM	Final competitive races	Maximum crowd density	Very High (Critical)	Rescue readiness, strict control
Late Afternoon	Prize distribution	Crowd movement and shifting	High	Monitoring and safety

Evening	Dispersal	Congestion and High fatigue	Traffic and evacuation support
---------	-----------	-----------------------------	--------------------------------

#### KEY CRITICAL TIME WINDOW

Time	Risk Level	Remarks
1:00 PM – 4:30 PM	High to Very High	Active event period
2:30 PM – 4:30 PM	Very High (Peak)	Final race – maximum risk

#### 4. COMMAND SYSTEM AND SYSTEM COLLABORATION

##### A. INCIDENT COMMAND HIERARCHY

Level	Authority	Designation	Role in Event	Key Responsibilities
1	District Administration	District Collector	Incident Commander	Overall coordination, decision making, interdepartmental control
2	Health	District Medical Officer (DMO)	Health Lead	Medical preparedness, hospital coordination
2	Police	District Police Chief / SP	Law & Order Lead	Crowd control, traffic management
2	Fire & Rescue	Station Officer / District Officer	Water Rescue Lead	Drowning rescue, emergency evacuation
3	Health	Block Medical Officer (BMO)	Field Operations Lead	Medical aid posts, ambulance coordination

<b>3</b>	<b>Health</b>	<b>Health Supervisor</b>	<b>Surveillance Lead</b>	<b>Disease surveillance, outbreak detection</b>
----------	---------------	--------------------------	--------------------------	---

## B. FUNCTIONAL FLOW OF OPERATIONS

<b>Function</b>	<b>Lead Department</b>	<b>Field Units</b>	<b>Role</b>
<b>Rescue Operations</b>	<b>Fire &amp; Rescue</b>	<b>Boats, divers, rescue teams</b>	<b>Immediate rescue from water</b>
<b>Medical Management</b>	<b>Health Department</b>	<b>Medical aid posts</b>	<b>Stabilization and first aid</b>
<b>Crowd Management</b>	<b>Police</b>	<b>CI, SI, field officers</b>	<b>Crowd control and movement</b>
<b>Evacuation</b>	<b>Health + Police</b>	<b>Ambulance services</b>	<b>Patient transport</b>
<b>Surveillance</b>	<b>Health</b>	<b>Field staff</b>	<b>Monitoring of health events</b>

## C. FIELD-LEVEL EXECUTION FLOW

<b>Step</b>	<b>Activity</b>	<b>Responsible Agency</b>	<b>Output</b>
<b>1</b>	<b>Incident (drowning/trauma) occurs</b>	<b>Field / Public</b>	<b>Alert generated</b>
<b>2</b>	<b>Immediate rescue</b>	<b>Fire &amp; Rescue</b>	<b>Victim retrieved</b>
<b>3</b>	<b>On-site stabilization</b>	<b>Medical Team</b>	<b>Basic life support</b>

4	Ambulance transfer	Health Dept	Shift to hospital
5	Referral care	Hospital	Advanced treatment

#### D. CONTROL ROOM & COORDINATION SYSTEM

Component	Responsibility	Function
Control Room	District Administration	Central coordination
Communication	All departments	Real-time information sharing
Reporting	Field teams	Incident reporting
Decision Making	Collector / Control Room	Resource allocation

#### E. INTER-DEPARTMENTAL COLLABORATION

Department	Role	Key Responsibility
Health	Medical care	Treatment, surveillance
Fire & Rescue	Rescue operations	Drowning response
Police	Crowd control	Movement regulation
LSGD	Sanitation	Waste management

<b>Food Safety</b>	<b>Inspection</b>	<b>Food safety</b>
<b>KSEB</b>	<b>Power</b>	<b>Electrical safety</b>
<b>Water Authority</b>	<b>Supply</b>	<b>Drinking water</b>

**List of key people and contacts**

**DISTRICT LEVEL OFFICIALS**

SI No	Department	Designation	Role in Event
1	District Administration	District Collector	Incident Commander
2	Health	District Medical Officer (DMO)	Health Lead
3	Police	District Police Chief/SP	Law & Order
4	Disaster Management	DDMA Officer	Disaster coordination
5	Fire & Rescue	Station Officer	Emergency rescue

**BLOCK LEVEL (CORE TEAM)**

SI No	Department	Designation	Role
1	Health	Block Medical Officer (BMO)	Field Operations Lead

2	Health	Health Supervisor	Surveillance Lead
3	Health	Health Inspector	Field supervision
4	Health	JPHN/JHI	Field surveillance

#### MEDICAL & EMERGENCY RESPONSE TEAM

Sl No	Facility/Unit	Designation	Role
1	Taluk Hospital	Medical Superintendent	Referral coordination
2	District Hospital	Superintendent	Emergency care
3	Ambulance Services	Nodal Officer	Ambulance coordination
4	Medical Aid Post 1	Medical Officer	On-site care
5	Medical Aid Post 2	Medical Officer	On-site care

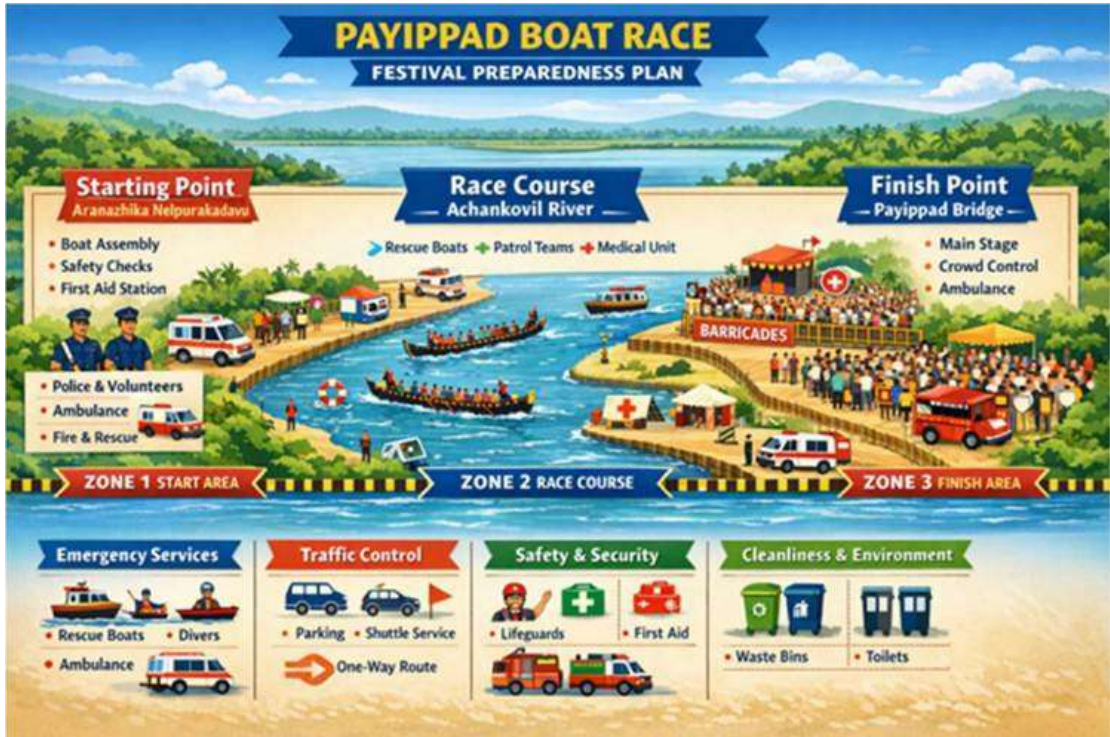
#### INTER-DEPARTMENTAL COORDINATION

Sl No	Department	Designation	Role
1	Police	Circle Inspector	Crowd control

2	Local Self Govt (Panchayath)	Secretary	Sanitation
3	Food Safety	Food Officer	Safety Food inspection
4	KSEB	Electrical Officer	Power safety
5	Water Authority	Engineer	Water supply

#### CONTROL ROOM & EMERGENCY CONTACTS

Sl No	Service	Contact Number	Remarks
1	Health Control Room		24x7
2	Police Control Room	112	
3	Ambulance (108)	108	Emergency
4	Fire & Rescue	101	Emergency
5	District Emergency Ops Centre		24x7





**LIST OF HOSPITALS DIRECTLY INVOLVED**  
**A. PRIMARY REFERRAL HOSPITALS (NEAREST)**

Sl No	Hospital Name	Type	Location	Approx Distance from Site	Role
1	Taluk Head Quarters Hospital Haripad	Government	Haripad	~6 km	Primary referral centre for all cases
2	FHC Veeyapuram	Government	Haripad	~1km	Primary referral centre for all cases
3	FHC Cheruthana	Government	Haripad	~2 km	Primary referral centre for all cases

4	Deepa Hospital		Private	Danapady, Haripad	~5–7 km	Secondary support for emergency care
5	Huda Hospital	Trust	Private	Haripad	~5–6 km	Backup emergency management
6	Care Hospital	Craft	Private	Haripad	~5–6 km	Backup emergency management

## B. SECONDARY REFERRAL HOSPITALS

SI No	Hospital Name	Type	Location	Approx Distance	Role
1	General Alappuzha Hospital	Government	Alappuzha	~30–35 km	Advanced care, stabilization
2	Nearby Private Hospitals (Haripad/Kayamkulam belt)	Private	Local area	Variable	Additional load sharing

## C. TERTIARY REFERRAL HOSPITAL

SI No	Hospital Name	Type	Location	Approx Distance	Role
1	Government Medical College Vandanam	Government	Alappuzha	~35 km	Critical care, ICU, trauma management

#### D. REFERRAL STRATEGY (IMPORTANT)

- All cases from event site → Taluk Hospital Haripad (First contact)
- Moderate cases → Managed locally / private hospitals
- Severe cases →
  - General Hospital Alappuzha
  - Medical College Vandanam

#### E. SPECIAL PREPAREDNESS FOR BOAT RACE

- Hospitals must be ready for:
  - Drowning cases (CPR, ventilation support)
  - Trauma and fractures
  - Cardiac emergencies
- Ensure:
  - Emergency beds reserved
  - Oxygen and IV fluids available
  - Casualty staff on alert

#### 8. AMBULANCE PLAN

##### A. LIST OF EMPANELED AMBULANCES AVAILABLE

Source	Type	Deployment Area	Remarks
Health Department	BLS Ambulance	Main access road near event site	Primary evacuation vehicle

108 Emergency Service	ALS/BLS	On-call / nearest standby	For critical emergencies
Private Ambulance (e.g., Seva Bharathi)	BLS Ambulance	Secondary support points	Backup during peak hours
Nearby Private Hospitals	BLS Ambulance	On request	Additional surge capacity

#### B. ALS AND BLS AVAILABILITY

Type	Availability	Use
BLS (Basic Life Support)	Readily available (Govt + Private)	Routine referrals, dehydration, trauma
ALS (Advanced Life Support)	Limited / On-call	Drowning, cardiac arrest, severe trauma

In this event, BLS is primary, but ALS is critical for drowning cases

#### C. AMBULANCE STAFF PATTERN

- Minimum Staffing per Ambulance
- Driver
- Emergency Medical Technician (EMT) / trained staff
- Additional Support (if required)
- Nursing staff accompanying critical patients

## D. EVACUATION ROUTE BRIEFING AND TRAINING



### Route Planning

#### o Primary route:

- Riverbank → Local road → Haripad → NH66

#### o Alternate routes:

- Interior Panchayath roads

### Driver Briefing

#### o Entry and exit points

#### o Nearest hospitals (Taluk Hospital Haripad – primary)

#### o Alternate diversion routes

### Training

o Pre-event orientation for drivers and field staff

o Communication protocol with:

- Medical teams
- Control room
- Police

#### **E. DEPLOYMENT STRATEGY (VERY IMPORTANT)**

o Ambulances to be positioned at:

- Main entry/exit points
- High crowd density zones

o Ensure:

- Quick access from riverbank to ambulance
- No obstruction in evacuation route

#### **F. SPECIAL CONSIDERATION FOR BOAT RACE**

Due to drowning risk:

o Ambulance must be ready for:

- CPR continuation during transport
- Oxygen support

Golden time:

o First 5–10 minutes critical

### **9. HOSPITAL PREPAREDNESS**

a. LIST OF HOSPITALS WITH KEY CONTACT NUMBERS (INCIDENT COMMANDERS)

Sl No	Hospital Name	Type	Level	Approx Distance	Incident Commander
1	Taluk Head Quarters Hospital Haripad	Govt	Primary Referral	~6 km	Medical Superintendent
2	General Hospital Alappuzha	Govt	Secondary	~30–35 km	Superintendent
3	Govt Medical College, Vandanam	Govt	Tertiary Referral	~35 km	Medical Superintendent
4	FHC Veeyapuram	Govt	Primary Referral	~2 km	Medical Officer
5	FHC Cheruthana	Govt	Primary Referral	~2 km	Medical Officer
4	Deepa Hospital, Danappady	Private	Secondary	~5–7 km	Hospital Administrator
5	Huda Trust Hospital, Danappady	Private	Secondary	~5–6 km	Hospital Administrator
6	Care Craft Hospital, Danappady	Private	Secondary	~5–6 km	Hospital Administrator

**b. PREPARATION OF PROTOCOL OF ALL HOSPITALS**

All hospitals to be alerted at least 3–5 days before event

- o Emergency departments to activate:
- o Triage protocol (Red–Yellow–Green system)
- o Dedicated emergency beds

Special preparedness for:

- o Drowning cases (CPR, airway management, oxygen/ventilation)
- o Trauma management (fractures, head injury)
- o Cardiac emergencies

Ensure availability of:

- o Oxygen supply
- o IV fluids
- o Emergency drugs

**c. CRISIS TEAM – EACH HOSPITAL ON RED ALERT**

Each hospital is to constitute a Crisis Management Team:

- o Medical Superintendent – Team Lead
- o Casualty Medical Officer
- o Nursing Superintendent
- o Emergency staff

### **Operational Instructions**

- o 24×7 emergency services during event days**
- o Additional staff on standby duty**
- o Casualty and ambulance entry kept clear**

### **d. BASE REFERRAL HOSPITAL – DETAILED PLAN**

#### **Base Referral Hospital**

- o Taluk Hospital Haripad**

#### **Role**

- o First point of referral for all cases**
- o Immediate stabilization and treatment**

#### **Referral Flow**

- o Event Site (Riverbank)**
- o → Medical Aid Post**
- o → Taluk Hospital Haripad (Primary)**
- o → General Hospital Alappuzha (Secondary)**
- o → Medical College Vandanam (Tertiary)**

### **Operational Strategy**

- o All ambulances to prefer Taluk Hospital, Haripad, first**

o Direct referral to higher centres only if:

o ICU required

o Severe trauma / cardiac emergency

**Special Focus (Boat Race)**

o Rapid handling of:

o Drowning victims

o Polytrauma cases

**10. TEMPORAL DYNAMIC PLAN BASED ON MASS GATHERING EVENTS**

**a. EVENT-WISE DETAILED PLAN**

Day / Time	Event	Risk Level	Key Risks	Operational Plan
Day 1 – Morning	Arrival of boats at Aranazhika	Low–Moderate	Minor crowd clustering	Basic monitoring, initial deployment
Day 1 – 1–2 PM	Official inauguration	Moderate	Crowd formation near riverbanks	Activate medical posts, police presence
Day 1 – Afternoon	Public gathering	Moderate	Slippery banks, minor injuries	Surveillance, sanitation
Day 2 – Morning	Spectator inflow	Moderate	Increasing density	Monitoring, readiness

Day 2 – 1 PM onwards	Water procession	High	Overcrowding, falls	Crowd regulation, hydration
Day 2 – 2– 4:30 PM	Peak gathering	High	Congestion, access difficulty	Strengthen deployment
Day 3 – Morning	Early crowd positioning	High	Dense riverbank occupation	Pre-position teams
Day 3 – 1– 2:30 PM	Preliminary heats & mass drill	Very High	Overcrowding, fall into water	Full deployment, rescue readiness
Day 3 – 2:30– 4:30 PM	Final race (Peak Event)	Very High (Critical)	Drowning, trauma, delayed rescue	Maximum alert, rescue teams active
Day 3 – Late Afternoon	Prize distribution	High	Movement pressure	Monitoring, control
Day 3 – Evening	Dispersal	High	Traffic congestion, fatigue	Traffic management, ambulance support
Post-event (1–7 days)	Surveillance period	Moderate	ADD/ARI clusters	Active surveillance

## b. CONTACT COORDINATORS & INCIDENT LEADS

- o District Collector → Incident Commander
- o District Medical Officer → Health Lead
- o District Police Chief → Crowd control
- o Fire & Rescue Officer → Water rescue lead

- o Block Medical Officer → Field coordination
- o Health Supervisor → Surveillance

All contacts to be:

- o Available in control room
- o Shared in WhatsApp coordination group

#### **c. EVACUATION ROUTE & BASE HOSPITAL PLAN**

Evacuation Route

- o Riverbank → Access point → Main Road → Harippad → NH66

Base Referral Hospital

- o Taluk Hospital Harippad

Referral Flow

- o Rescue → Medical Aid Post → Taluk Hospital → Higher centres

Focus:

- o Quick transfer from riverbank to ambulance
- o Police-assisted route clearance

#### **d. ALERT MECHANISM TO SECONDARY REFERRALS**

Pre-event

- o Hospitals alerted 3–5 days before
- o Placed on standby

### **During Event**

- o Real-time communication via:
- o Mobile
- o WhatsApp groups
- o Control room

### **Trigger Situations**

- o Drowning cases
- o Multiple trauma cases
- o Cluster of medical emergencies
- o Any mass casualty incident

### **Action**

- o Immediate intimation to:
- o DMO
- o Control room
- o Activation of:
- o Ambulance surge
- o Hospital preparedness
- o Rapid Response Team (if required)

### **CRITICAL TIME-BASED STRATEGY**

**1:00 PM – 4:30 PM**

- o Full deployment
- o Maximum readiness

**2:30 PM – 4:30 PM**

- o Peak emergency risk
- o Rescue teams must be fully active

**11. CAPACITY BUILDING PLANS AND MEETING DETAILS FOR DISASTER PREPAREDNESS**

**MEETING DETAILS (NAME, DATE, STAKEHOLDERS)**

Sl No	Name of Meeting	Tentative Date	Stakeholders Attending
1	District Level Planning Meeting	3 weeks before event	District Collector, DMO, Police, Fire & Rescue, LSGD
2	Interdepartmental Coordination Meeting	2 weeks before	Health, Police, Fire & Rescue, Food Safety, KSEB, Water Authority
3	Block Level Microplanning Meeting	1–2 weeks before	BMO, Block Epidemiologist, Health Inspectors, Panchayath
4	Field Staff Orientation Meeting	3–5 days before	JHI, JPHN, ASHA, volunteers
5	Final Review Meeting	1 day before	All departments and incident leads

**d. TRAINING AND MOCK DRILL**

**Training Activities**

- Basic Life Support (BLS) & CPR training
  - Health staff

- Field workers
- Volunteers
- **Drowning management training**
  - Fire & Rescue coordination
  - Immediate response techniques
- **First aid training**
  - Police personnel
  - Volunteers
- **Orientation on:**
  - Crowd-related emergencies
  - Trauma management
  - Communication protocol

#### **Mock Drill Plan**

- **Conduct 1 full-scale mock drill before event (3–5 days prior)**

#### **Mock Drill Scenarios**

- **Drowning incident (primary scenario)**
- **Fall injury in crowd**
- **Mass casualty (multiple victims)**
- **Emergency evacuation from riverbank**

#### **Mock Drill Components**

- **Rescue operation simulation (Fire & Rescue)**
- **CPR and stabilization at site**
- **Ambulance movement and evacuation**
- **Coordination between:**

- Health
- Police
- Fire & Rescue

**Expected Outcomes**

- Identify gaps in:
  - Rescue response time
  - Evacuation pathways
  - Communication system
- Improve:
  - Coordination
  - Field-level response efficiency

**12. STANDARD OPERATING PROCEDURES (SOP TABLE)**

SI No	Health Hazard	Identification	Immediate Action at Site	Referral Criteria	Remarks
1	Drowning (Primary Risk)	Unconscious, no breathing, water aspiration	Immediate rescue → CPR → airway support → oxygen	All cases	Golden minutes critical (3–5 min)
2	Near-drowning	Cough, breathing difficulty	Oxygen, monitor vitals	All cases	Observe for delayed complications
3	Trauma (Falls/Injury)	Fracture, bleeding, head injury	Immobilize, control bleeding	Moderate–severe cases	Common on slippery banks

4	Stampede-related injury	Multiple injuries, panic	Triage, stabilize	All serious cases	Rapid response required
5	Syncope (Fainting)	Giddiness, loss of consciousness	Lay flat, elevate legs, fluids	Non-recovery	Due to crowd/heat
6	Dehydration / Heat exhaustion	Weakness, dizziness	ORS, IV fluids	Severe cases	Common in afternoon heat
7	Cardiac emergency	Chest pain, collapse	Basic life support, oxygen	Immediate referral	Time-critical
8	Acute Diarrheal Disease	Loose stools, vomiting	ORS, fluids	Severe dehydration	Monitor clusters
9	Food poisoning	Multiple vomiting cases	Symptomatic care, inform RRT	Cluster cases	Immediate reporting
10	ARI / Viral fever	Fever, cough	Symptomatic care	Severe cases	Low priority risk
11	Water exposure infection	Skin irritation	Cleaning, symptomatic care	Severe cases	Preventive IEC needed

#### GENERAL SOP PRINCIPLES

- Rescue first, treatment next (for drowning cases)
- Immediate on-site stabilization
- Do not delay referral in critical cases
- Maintain case documentation and reporting

- Ensure continuous communication with control room

#### **DROWNING-SPECIFIC SOP**

1. Immediate retrieval from water
2. Check breathing and pulse
3. Start CPR immediately if needed
4. Provide oxygen support
5. Shift to ambulance without delay
6. Inform hospital before arrival

#### **OUTBREAK RESPONSE**

- If  $\geq 2$  similar cases (diarrhea/food poisoning):
  - Inform Block Epidemiologist / DMO
  - Activate Rapid Response Team (RRT)
  - Collect exposure details

#### **REFERRAL PRINCIPLES**

Immediate referral for:

- Drowning / near-drowning
- Trauma
- Cardiac events
- Severe dehydration

#### **13. CONSOLIDATION SHEET – TEMPORAL EVENTS QUICK SUMMARY**

## A. TEMPORAL EVENT SUMMARY (QUICK REFERENCE)

Day / Time	Event	Risk Level	Key Risks	Immediate Action	Contact Point
Day 1 – Morning	Arrival of boats	Low–Moderate	Minor crowd formation	Monitoring	MO / Police
Day 1 – 1–2 PM	Inauguration	Moderate	Riverbank crowd clustering	Activate medical posts	BMO / Police
Day 1 – Afternoon	Public gathering	Moderate	Slippery banks, minor injuries	Surveillance	Health Team
Day 2 – Morning	Spectator inflow	Moderate	Increasing density	Monitoring	Police / Health
Day 2 – 1 PM onwards	Water procession	High	Overcrowding	Crowd regulation	Police
Day 2 – 2–4:30 PM	Peak gathering	High	Access difficulty	Strengthen deployment	Control Room
Day 3 – Morning	Crowd positioning	High	Dense crowd	Pre-position teams	BMO
Day 3 – 1–2:30 PM	Heats & mass drill	Very High	Falls, water entry	Full deployment	Police / Fire
Day 3 – 2:30–4:30 PM	Final race (Peak)	Very High	Drowning, trauma	Rescue readiness	Fire & Rescue
Day 3 – Late Afternoon	Prize distribution	High	Movement pressure	Monitoring	Police

<b>Day 3 – Evening</b>	<b>Dispersal</b>	<b>High</b>	<b>Traffic congestion</b>	<b>Traffic control</b>	<b>Police</b>
<b>Post-event (1–7 days)</b>	<b>Surveillance</b>	<b>Moderate</b>	<b>ADD/ARI</b>	<b>Active surveillance</b>	<b>Health Supervisor</b>

## **B. KEY CONTACT POINTS (QUICK ACCESS)**

### **Health**

- **District Medical Officer (DMO)**
- **Block Medical Officer (BMO)**
- **Medical Officer – Medical Aid Post**
- **Health Supervisor**
- **Block Epidemiologist**

### **Emergency Services**

- **Ambulance (Health Dept)**
- **108 Ambulance – 108**
- **Private Ambulance (Seva Bharathi)**

### **Core Emergency (MOST IMPORTANT)**

- **Fire & Rescue (Water rescue) – 101**
- **Police Control Room – 100**

### **Administration & Coordination**

- **District Collector**

- Police CI (Field level)
- Panchayath Secretary

#### Technical & Support

- Food Safety Officer
- Water Authority
- KSEB

#### C. EVACUATION & REFERRAL QUICK LINK

- Rescue from water → Medical Aid Post
- → Taluk Hospital Haripad (Primary)
- → General Hospital Alappuzha (Secondary)
- → Medical College Vandanam (Tertiary)

#### D. ALERT TRIGGERS (CRITICAL)

Immediate reporting required if:

- Any drowning incident
- Multiple trauma cases
- Cluster of vomiting/diarrhea
- Any mass casualty situation

Inform:

- Control Room
- DMO
- Fire & Rescue

#### 14. CONCLUSION

---

The Payippad Boat Race is a high-risk aquatic mass gathering event characterised by large crowd congregations along riverbanks, dynamic boat movement, and time-sensitive emergency situations, particularly during the peak race hours. Unlike conventional festivals, the risk profile is dominated by drowning, trauma, and delayed access to emergency care, making rapid rescue and coordinated response the most critical components of preparedness.

This plan has been developed based on detailed risk assessment, temporal event dynamics, and field realities specific to the Payippad locality. Special emphasis has been placed on afternoon peak preparedness (1:00 PM – 4:30 PM), with maximum alert during the final race period. The strategy prioritises immediate rescue, on-site stabilisation, and rapid evacuation, supported by a clearly defined ambulance and referral system.

Effective implementation depends on strong interdepartmental coordination involving health, fire & rescue, police, local self-government, and other supporting agencies. Capacity building through targeted training and mock drills, especially in drowning response and CPR, enhances system readiness. Continuous communication through a centralized control room and real-time surveillance further strengthens the response mechanism.

With structured planning, timely deployment, and coordinated action, the system aims to ensure the safe conduct of the event, prevention of avoidable deaths, and efficient management of emergencies, thereby safeguarding public health during the festival.

## Mannarasala Ayilyam



## **PREAMBLE**

Mannarasala Ayilyam is the most significant annual festival of the Mannarasala Sree Nagaraja Temple, one of the largest and most prominent serpent worship centers in India. The festival is celebrated on the Ayilyam Nakshathra in the Malayalam month of Thulam (October–November) and holds immense religious, cultural, and ecological significance in Kerala’s traditional belief system.

The temple, located in a sacred forest ecosystem with thousands of serpent idols, represents a unique interface between religion, ecology, and community practices, attracting devotees from across Kerala and other parts of India. The festival is particularly associated with fertility rituals, protection from serpent-related afflictions, and prosperity, leading to a steady inflow of pilgrims including vulnerable groups such as elderly individuals, women seeking fertility blessings, and families.

Mannarasala Ayilyam is characterized by high-density crowd gatherings and continuous ritual activities starting from early morning hours, including Nirmalyam, special poojas, and the grand Ezhunnallathu procession, during which serpent idols from the temple grove are ceremonially taken to the ancestral Illam led by the temple priestess (Valiya Amma). The ritual of Noorum Palum (a mixture of rice flour and milk) and other offerings further involves mass participation and congregation at specific points within the temple premises.

Historically, the festival gained prominence with royal patronage from the Travancore kingdom, contributing to its scale and continued mass participation over generations. In recent years, the event has been reported to attract thousands of

devotees, resulting in temporary population surges within a confined geographical area.

Mannarasala Ayilyam is a major religious mass gathering conducted annually at the Mannarasala Sree Nagaraja Temple, attracting thousands of devotees from across Kerala and other states .

The festival occurs in the Malayalam month of Thulam (October–November) and involves large-scale rituals such as Ezhunnallathu procession, Noorum Palum, Sarpa Bali, and mass feeding (Annadanam) .

Due to:

- High crowd density
- Early morning to late-night rituals
- Cultural practices involving food, offerings, and barefoot movement
- Forest-like ecological setting

There is a significant public health risk, requiring a comprehensive preparedness and response plan.

#### RISK ASSESSMENT (BASED ON PAST DATA & PATTERNS)

SI No	Category	Risk	Description	Risk Level	Key Concerns	Mitigation Measures
1	Communicable Disease	Acute Diarrheal	Mass feeding, unsafe water	High	Outbreak potential	Food safety inspection, chlorination, ORS corners

		Disease (ADD)				
2	Communicable Disease	Food-borne illness	Improper handling during Annadanam	High	Cluster outbreaks	Hygiene monitoring, food safety officers
3	Communicable Disease	Viral fever / ARI	Close contact in crowd	Moderate	Spread among pilgrims	Surveillance, IEC
4	Communicable Disease	Outbreak potential	Inter-district mixing	High	Rapid spread	Syndromic surveillance, RRT standby
5	Environmental	Snake habitat exposure	Forest ecosystem	Moderate	Delayed treatment	Awareness, ASV readiness
6	Environmental	Slippery surfaces	Milk/turmeric spills	High	Falls, injuries	Cleaning, sand application
7	Environmental	Waste accumulation	Food waste, plastic	High	Hygiene issues	Waste disposal system
8	Environmental	Poor sanitation	Overcrowding	Moderate	Disease spread	Toilets, sanitation monitoring

9	Medical Emergency	Syncope	Fasting + crowding	High	Sudden collapse	ORS, rest areas
10	Medical Emergency	Dehydration / Heat exhaustion	Long waiting time	High	Weakness, collapse	Hydration points, IEC
11	Medical Emergency	Elderly collapse	Vulnerable population	High	Severe outcomes	Fast-track care
12	Medical Emergency	Snake bite	Rare but serious	Moderate	Delayed care	Referral protocol
13	Injury	Stampede	During procession	High	Multiple injuries	Crowd control, barricading
14	Injury	Falls	Narrow/slippery pathways	High	Fractures, injuries	Pathway management
15	Injury	Burns	Oil lamps/rituals	Low	Minor injuries	Fire safety
16	Injury	Minor injuries	Overcrowding	Moderate	First aid cases	First aid posts
17	Crowd-related	Overcrowding	Peak day surge	High	Access issues	Entry regulation

<b>18</b>	<b>Crowd-related</b>	<b>Delayed medical access</b>	<b>Congested pathways</b>	<b>High</b>	<b>Treatment delay</b>	<b>Multiple medical posts</b>
<b>19</b>	<b>Crowd-related</b>	<b>Panic situations</b>	<b>Sudden crowd movement</b>	<b>Moderate</b>	<b>Chaos, injuries</b>	<b>Public announcements</b>

## EVENT MAPPING & TIMELINE

### DAY 1 – PUNARTHAM (PRELIMINARY PHASE)

Component	Details
Phase	Preliminary (Build-up)
Key Events	Maha Deepakazhcha, Pulluvan Pattu
Crowd Pattern	Gradual increase, evening peak crowd
Risk Level	Moderate
Major Risks	Fire hazard (oil lamps), mild congestion, initial food safety issues
Medical Preparedness	Activate 50–60% medical posts, ensure first aid, ORS, essential drugs
Crowd & Safety Measures	Basic crowd control, fire safety monitoring, Fire & Rescue coordination
Food Safety	Begin inspection of Annadanam kitchens, ensure hygiene

Sanitation Environment	& Toilets functional, waste bins placed, cleaning initiated
Surveillance	Start baseline syndromic surveillance

## DAY 2 – POOYAM (INTERMEDIATE PHASE)

Component	Details
Phase	Escalation Phase
Key Events	Pooyam Thozhal, continuous darshan, Annadanam
Crowd Pattern	Increasing crowd, long queues, sustained inflow
Risk Level	High
Major Risks	Overcrowding, dehydration, syncope, slippery pathways, food safety risk
Medical Preparedness	Scale up to 80–90% capacity, additional staff, ORS points, resting areas
Crowd & Safety Measures	Queue regulation, entry-exit control, increased police deployment

<b>Food Safety</b>	<b>Continuous monitoring of cooking and serving hygiene</b>
<b>Sanitation Environment</b>	<b>&amp; Regular cleaning of slippery areas, strengthened waste management</b>
<b>Surveillance</b>	<b>Real-time surveillance from medical camps and hospitals</b>

**DAY 3 – AYILYAM (MAIN FESTIVAL – PEAK PHASE)**

<b>Component</b>	<b>Details</b>
<b>Phase</b>	<b>Peak / Emergency Response Phase</b>
<b>Key Events</b>	<b>Ezhunnallathu, Noorumpalum, Sarppa Bali, Mahaprasadamootu</b>
<b>Crowd Pattern</b>	<b>Peak crowd (&gt;50% of ~1 lakh), early morning surge</b>
<b>Risk Level</b>	<b>Very High</b>
<b>Major Risks</b>	<b>Stampede, food poisoning, dehydration, delayed emergency access</b>
<b>Medical Preparedness</b>	<b>100% deployment, emergency care, oxygen, IV fluids</b>

<b>Crowd &amp; Safety Measures</b>	<b>Strict barricading, one-way movement, real-time monitoring</b>
<b>Food Safety</b>	<b>Continuous inspection of Annadanam and water quality</b>
<b>Sanitation &amp; Environment</b>	<b>Intensive cleaning, strict waste management</b>
<b>Surveillance</b>	<b>Hourly reporting, RRT standby, rapid response</b>

<b>Time Phase</b>	<b>Activity</b>	<b>Risk Level</b>
<b>Early morning (3–6 AM)</b>	<b>Temple opening, Nirmalyam</b>	<b>High crowd surge</b>
<b>Morning (6–11 AM)</b>	<b>Darshan peak</b>	<b>Overcrowding</b>
<b>Noon</b>	<b>Ezhunnallathu procession</b>	<b>Stampede risk</b>
<b>Afternoon</b>	<b>Annadanam</b>	<b>Food safety risk</b>
<b>Evening</b>	<b>Cultural programmes</b>	<b>Moderate crowd</b>

## **INCIDENT COMMAND SYSTEM**

---

### District Level

- District Collector – Incident Commander
- DMO – Health Commander

### Block Level

- BMO – Operational Lead
- Health Supervisor – Surveillance Lead

### On-site Structure

- Medical Officer in charge (Site Incident Officer)
- Sector Officers for:
  - Medical aid
  - Surveillance
  - Ambulance movement

## List of key people and contacts

### DISTRICT LEVEL OFFICIALS

SI No	Department	Designation	Role in Event
1	District Administration	District Collector	Incident Commander
2	Health	District Medical Officer (DMO)	Health Lead
3	Police	District Police Chief/SP	Law & Order
4	Disaster Management	DDMA Officer	Disaster coordination

5	Fire & Rescue	Station Officer	Emergency rescue
---	---------------	-----------------	------------------

Sl No	Department	Designation	Role
1	Health	Block Medical Officer (BMO)	Field Operations Lead
2	Health	Health Supervisor	Surveillance Lead
3	Health	Health Inspector	Field supervision
4	Health	JPHN/JHI	Field surveillance

#### MEDICAL & EMERGENCY RESPONSE TEAM

Sl No	Facility/Unit	Designation	Role
1	Taluk Hospital	Medical Superintendent	Referral coordination
2	District Hospital	Superintendent	Emergency care
3	Ambulance Services	Nodal Officer	Ambulance coordination
4	Medical Aid Post 1	Medical Officer	On-site care
5	Medical Aid Post 2	Medical Officer	On-site care

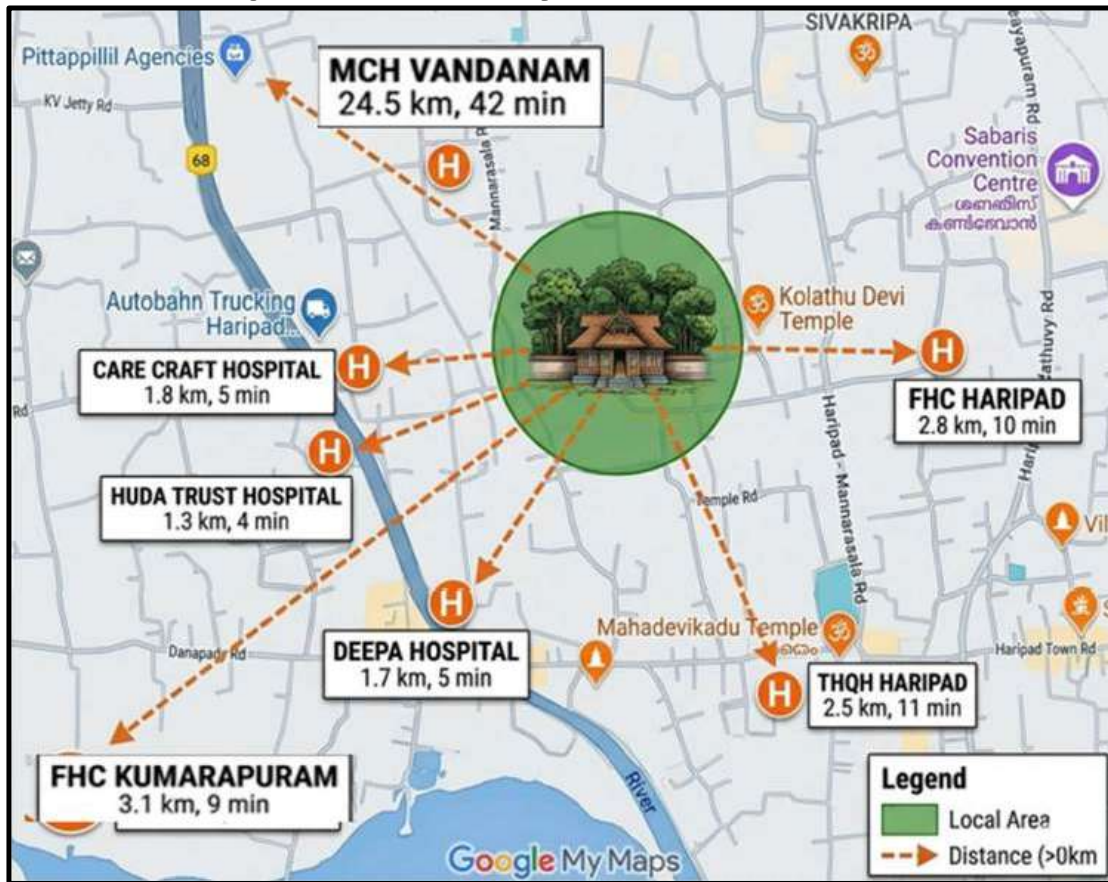
## INTER-DEPARTMENTAL COORDINATION

Sl No	Department	Designation	Role
1	Police	Circle Inspector	Crowd control
2	Local Self Govt (Panchayath)	Secretary	Sanitation
3	Food Safety	Food Safety Officer	Food inspection
4	KSEB	Electrical Officer	Power safety
5	Water Authority	Engineer	Water supply

## CONTROL ROOM & EMERGENCY CONTACTS

Sl No	Service	Contact Number	Remarks
1	Health Control Room		24x7
2	Police Control Room	112	
3	Ambulance (108)	108	Emergency
4	Fire & Rescue	101	Emergency
5	District Emergency Ops Centre		24x7

# List of Hospitals directly involved



SI No	Hospital Name	Type (Govt/Private)	Level (Primary/Secondary/Tertiary)	Distance from Venue	Emergency Services Available	ICU Facility
1	CHC / Nearby PHC	Govt	Primary	2.8-3.1km	Basic emergency care	No
2	Taluk Hospital Haripad	Govt	Secondary	2.5 km	Emergency, Trauma care	Yes
3	District Hospital Alappuzha	Govt	Secondary		Advanced emergency care	Yes
4	Medical College (if mapped)	Govt	Tertiary	24.5 km	Specialized care	Yes
5	Huda trust Hospital	Private	Secondary	1.3 km	Emergency care	Yes
6	Care craft Hospital	Private	Secondary	1.3 km	Emergency care	Yes

## MANDATORY AMBULANCE AND MEDICAL AID POSTS ON SITE

### A. GEOSPATIAL LOCATION

SI No	Location	Type	Remarks
1	Temple Main Entrance / Near main access road	Medical Aid Post	Centrally accessible to temple, queue & procession route
2	Same location	Ambulance Point	Easy entry & exit for referral

### B. HUMAN RESOURCE (HR) AVAILABLE

Category	Number
Medical Officer	1
Staff Nurse	1
Nursing Assistant	1
Grade II Attender	1
Ambulance Driver	1

### ***C. Facilities at Medical Aid Post***

- First aid and basic emergency care
- ORS distribution
- IV fluid administration for dehydration/syncope
- Basic vital monitoring (BP, Pulse)
- Patient stabilization before referral

### ***D. Support Accessories***

- Oxygen cylinder
- Emergency drug kit
- IV fluids and sets
- Stretcher / wheelchair
- BP apparatus and glucometer
- ORS packets

### ***E. Ambulance Arrangement***

- Ambulance from **Health Department (primary referral vehicle)**
- Additional ambulance support from **private agencies (e.g., Seva Bharathi)**
- Backup support especially during **peak Ayilyam day crowd**

## AMBULANCE PLAN

### a. List of Empaneled Ambulances Available

Sl No	Source	Type	Remarks
1	Health Department	BLS Ambulance	Primary referral vehicle at site
2	108 Service (if available)	ALS/BLS	On-call support
3	Seva Bharathi / Private	BLS Ambulance	Backup during peak crowd
4	Nearby Private Hospitals	BLS Ambulance	Additional support if needed

### b. ALS and BLS Availability

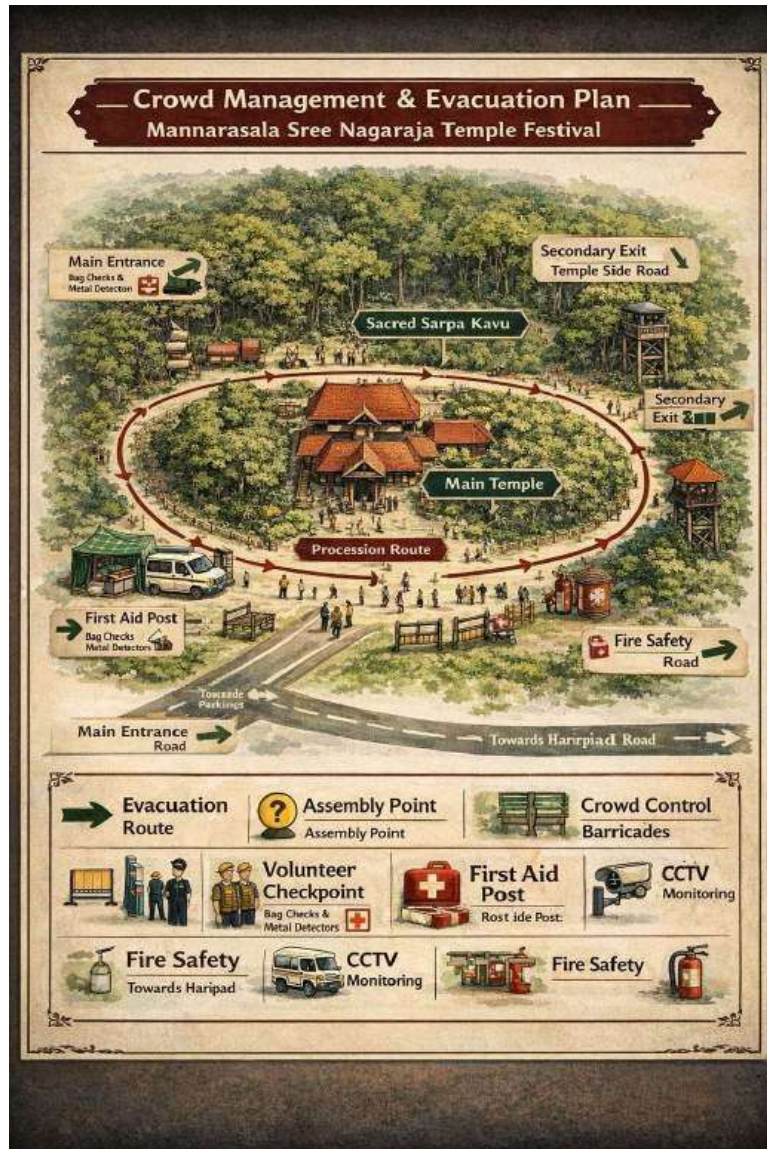
Type	Availability	Use
<b>BLS (Basic Life Support)</b>	Readily available (Govt + Private)	Routine referrals, dehydration, syncope, minor emergencies

<b>ALS (Advanced Life Support)</b>	Limited / On-call	Critical cases (cardiac, collapse, severe emergencies)
------------------------------------	-------------------	--

### c. Ambulance Staff Pattern

- Each ambulance will have:
  - Driver
  - Emergency Medical Technician (EMT) (if available)
- In case of requirement:
  - Support from **nursing staff/health staff** during patient transfer
- Minimum requirement:
  - **A driver and basic trained personnel must be ensured**

## d. Evacuation Route Briefing and Training



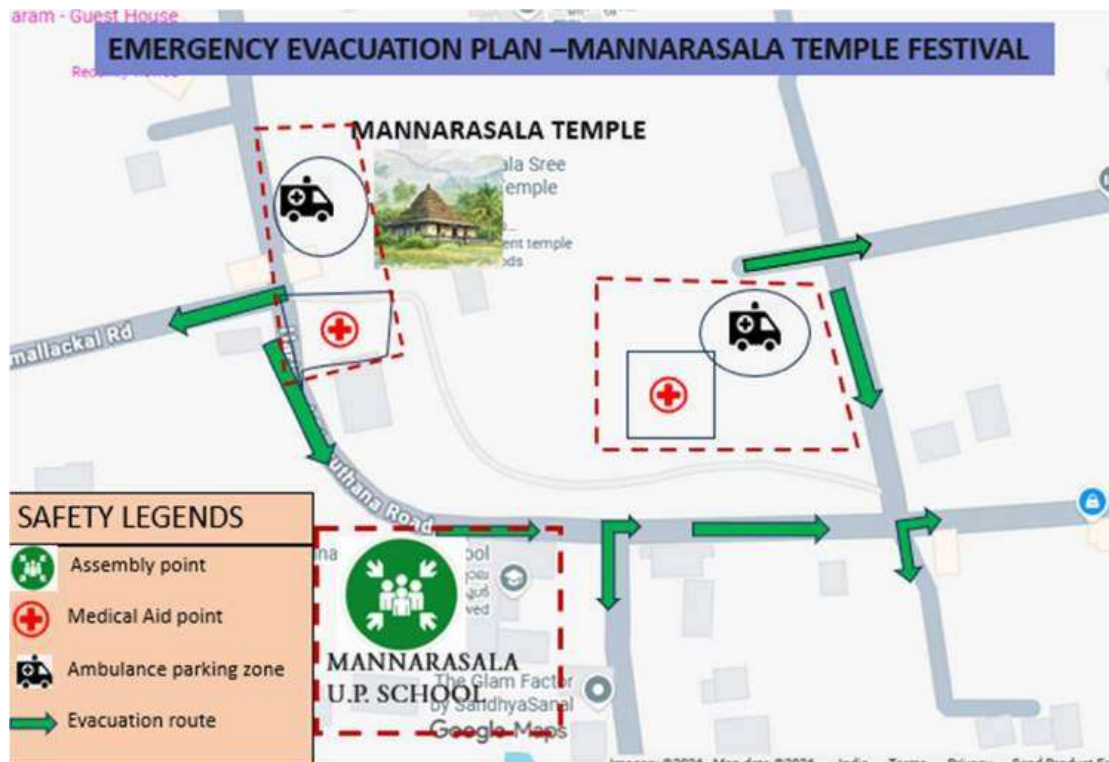
- Mannarasala Sree Nagaraja Temple is located
  - ~2–3 km from Haripad
  - Connected by Mannarasala Puthenpurayil Road / temple access road
- Haripad lies on National Highway 66, a major north–south corridor

- Temple is:
  - ~2–2.8 km from Haripad KSRTC Bus Stand
  - ~2 km from NH66

Key issue:

Temple is inside a narrow interior road → connects to NH66 via Haripad town

## PRIMARY EVACUATION ROUTE (MAIN LIFE-SAVING ROUTE)



### Route Flow (STEP-BY-STEP)

- Temple Gate
- Mannarasala Temple Road (narrow internal road)
- Junction near local residential area
- Haripad Town Main Road

- NH66 Junction (Haripad)
- Referral Hospital (Taluk Hospital / onward)

***Ground Reality***

- Distance: ~2–3 km to NH66
- Travel time (normal): 10–15 min
- During Ayilyam: can extend to 30–45 min due to crowd

***Critical Bottlenecks***

- Temple entrance gate
- Narrow internal road (single vehicle movement possible)
- Junction entering Haripad town

***Operational Strategy***

- Declare this as “PRIMARY MEDICAL EVACUATION ROUTE”
- No parking allowed
- Police stationed at:
  - Temple gate
  - Road junction
  - Town entry

**SECONDARY / ALTERNATE ROUTE (BACKUP LIFE-SAVING ROUTE)**

***Route Flow***

- Temple backside / local road
- Interior Panchayath roads (through nearby wards)
- Join NH66 at alternate junction (towards Cheppad / Karuvatta side)

## **EVACUATION CORRIDOR (GREEN CORRIDOR SYSTEM)**

### *Most Critical Component*

🚶 From Temple → Main Road

### *Implementation*

- Police + volunteers create:
  - Temporary clear lane
- Continuous crowd diversion

### *Why Important*

- Temple is inside forest-like, narrow pathway zone
- Delay here = major mortality risk

## **REFERRAL ROUTE LINKAGE**

### *Level 1 (Nearest)*

→ Temple → Haripad → Taluk Hospital

### *Level 2*

→ Haripad → NH66 → Alappuzha

**Level 3**

→ NH66 → Medical College

## 9. HOSPITAL PREPAREDNESS

### a. List of Hospitals with Key Numbers of Incident Commander

#### Primary & Secondary Referral Hospitals (Nearby)

SI No	Hospital Name	Type	Level	Approx Distance
1	Taluk Head Quarters Hospital Haripad	Govt	Primary Referral	~2–3 km
2	General Hospital Alappuzha	Govt	Secondary	~25 km
3	Govt Medical College, Vandanam	Govt	Tertiary Referral	~30 km
4	Deepa Hospital, Danapady (Haripad)	Private	Secondary	~2–4 km
5	Huda Trust Hospital, Haripad	Private	Secondary	~2–3 km
6	Care Hospital, Danappady	Private	Secondary	~2–3 km

## **b. Preparation of Protocol of All Hospitals**

- All identified hospitals to be alerted at least 3–5 days prior
- Each hospital should:
  - Activate emergency triage system
  - Reserve beds for festival-related cases
  - Ensure oxygen and IV fluids availability
- Standard protocol to include:
  - Management of dehydration, syncope
  - Food poisoning cases
  - Minor trauma and crowd-related injuries

## **c. Crisis Team – Each Hospital on Red Alert**

- Each hospital to form a Crisis Management Team, including:
  - Medical Superintendent (Lead)
  - Casualty Medical Officer
  - Nursing Supervisor
  - Emergency staff
- During Ayilyam day:
  - Emergency departments to be on 24×7 alert mode
  - Additional staff to be kept on standby duty
  - Ambulance receiving area to be kept clear

## **d. Base Referral Hospital Detail Plan**

Base Referral Hospital

📍 Taluk Hospital Haripad

Role:

- First referral centre for all cases from festival site

- Immediate stabilization and treatment

### Referral Flow

1. Medical Aid Post (Temple site)
2. → Taluk Hospital Haripad (Primary)
3. → General Hospital Alappuzha (if required)
4. → Medical College Vandanam (critical cases)

### Operational Plan

- All ambulances to first prefer Taluk Hospital Haripad
- Direct referral to higher centres only if:
  - ICU required
  - Severe emergency

## 10. TEMPORAL DYNAMIC PLAN BASED ON MASS GATHERING EVENTS

### a. Event-wise Detailed Plan

Time / Event	Description	Risk Level	Key Risks	Operational Plan
Early morning (3.30–6 AM)	Nirmalyam, temple opening, initial darshan	<b>Very High</b>	Sudden crowd surge, syncope	Full activation of medical team, ambulance ready, crowd control at entrance
Morning (6–11 AM)	Continuous poojas and darshan	<b>Very High</b>	Overcrowding, dehydration	Queue regulation, ORS distribution, continuous surveillance

Late morning– Noon	Nivedyam Annadanam (mass feeding)	<b>High</b>	Food poisoning, clustering	Food safety inspection, hygiene monitoring
Noon– Afternoon	Ezhunnallathu procession to Illom	<b>Very High</b>	Stampede, falls, movement blockage	Police barricading, mobile monitoring, ambulance alert
Afternoon	Noorumpalum, Sarppa Bali rituals	<b>High</b>	Crowd clustering, slippery surfaces	Cleaning, crowd dispersal control
Evening	Continued darshan & dispersal	<b>Moderate</b>	Fatigue, delayed care	Maintain minimal medical support, ambulance standby

b. Contact Coordinators & Incident Leads

- **District Collector** – Overall Incident Commander
- **District Medical Officer (DMO)** – Health Lead
- **Block Medical Officer (BMO)** – Field Operations
- **Block Epidemiologist** – Surveillance & outbreak control
- **Police (CI/SI level)** – Crowd management & evacuation clearance
- **Fire & Rescue Officer** – Emergency response support
- **Food Safety Officer** – Monitoring of Annadanam

All contact numbers to be:

- Shared in **control room**
- Circulated via **WhatsApp groups**
- Displayed at **medical aid post**

**Evacuation Route & Base Hospital Plan**

**Evacuation Route**

- Primary:
  - Temple → Mannarasala Road → Haripad → NH66

- Alternate:
  - Temple → Interior Panchayath roads → NH66

#### **Base Referral Hospital**

- **Taluk Hospital Haripad (Primary referral centre)**

#### **Referral Flow**

- Medical Aid Post → Taluk Hospital Haripad
- If required → General Hospital Alappuzha
- Critical cases → Medical College Vandanam

#### **d. Alert Mechanism to Secondary Referrals**

- All hospitals to be:
  - Alerted **3–5 days prior**
  - Placed on **standby during Ayilyam day**
- Communication system:
  - Mobile / WhatsApp group (real-time updates)
  - Direct call from medical officer to hospital
- Trigger situations for alert:
  - Cluster of diarrhea/vomiting cases
  - Multiple syncope cases
  - Any suspected outbreak
  - Mass casualty / stampede
- Action:
  - Immediate intimation to:
    - DMO
    - District Surveillance Unit
  - Activation of **Rapid Response Team (RRT)**

## 11. CAPACITY BUILDING PLANS AND MEETING DETAILS FOR DISASTER PREPAREDNESS

### Meeting Details (Name, Date, Stakeholders)

Sl No	Name of Meeting	Tentative Date	Stakeholders Attending
1	District Level Planning Meeting	2–3 weeks before event	District Collector, DMO, Police, Fire & Rescue, LSGD
2	Block Level Coordination Meeting	1–2 weeks before	BMO, Health Supervisor, Health Inspectors, block epidemiologists, and Panchayath representatives
3	Interdepartmental Review Meeting	1 week before	Health, Police, Fire, Food Safety, KSEB, Water Authority
4	Field Level Microplanning Meeting	3–5 days before	JHI, JPHN, ASHA, field staff
5	Final Review Meeting	1 day before	All departments, incident leads

### d. Training and MOCK DRILL

#### Training Activities

- Basic Life Support (BLS) training for:
    - Health staff
    - Field workers
  - First aid training for:
    - Volunteers
    - Police personnel
  - Orientation on:
    - Crowd-related emergency management
    - Dehydration and syncope management
    - Food poisoning identification
-

## Mock Drill Plan

- Conduct **1 mock drill before event (3–5 days prior)**
- Scenario-based drill:
  - Syncope in crowd
  - Stampede-like situation
  - Emergency evacuation

## Mock Drill Components

- Ambulance movement test
- Evacuation route clearance
- Coordination between:
  - Health team
  - Police
  - Fire & Rescue

## Expected Outcomes

- Identify bottlenecks in:
  - Evacuation routes
  - Communication system
- Improve response time
- Strengthen interdepartmental coordination

## 12. SOP OF INTERVENTIONS IN COMMON POSSIBLE HEALTH HAZARDS

### Standard Operating Procedures (SOP)

Sl No	Health Hazard	Identification	Immediate Action at Site	Referral Criteria	Remarks
1	Syncope (Fainting)	Giddiness, loss of consciousness	Shift to resting area, lay flat, elevate legs, check vitals	If not recovering / recurrent	Very common due to crowd & fasting
2	Dehydration / Heat exhaustion	Weakness, dizziness, dry mouth	ORS, oral fluids, IV fluids if needed	Severe dehydration	Ensure hydration points

3	Acute Diarrheal Disease	Loose stools, vomiting	ORS, fluids, isolate if cluster suspected	Severe dehydration multiple cases	Watch for /outbreak
4	Food poisoning	Vomiting, diarrhea in groups	Symptomatic treatment, inform RRT	Cluster cases	Immediate reporting essential
5	Minor injuries	Cuts, abrasions, falls	First aid, dressing	Deep wounds	Common in crowded areas
6	Stampede-related injuries	Trauma, fractures	Stabilize, immobilize, control bleeding	All moderate/severe cases	Rapid referral required
7	Burns (oil lamps)	Redness, blisters	Cool with water, apply dressing	Severe burns	Fire safety monitoring
8	Snake bite	Bite mark, swelling	Immobilize limb, no incision/suction	Immediate referral	Do not delay
9	Cardiac emergency	Chest pain, collapse	Basic life support, oxygen	Immediate referral	Time-critical
10	Fever / ARI	Fever, cough	Symptomatic care, mask if needed	Severe cases	Monitor clusters

### GENERAL SOP PRINCIPLES

- Ensure **early identification of symptoms**
- Provide **immediate basic management at medical aid post**
- Prioritize **stabilization before referral**
- Maintain **proper documentation of all cases**
- Report any **unusual clustering immediately**

### OUTBREAK RESPONSE (VERY IMPORTANT)

- If  $\geq 2$  similar cases (diarrhoea/vomiting):
  - Inform **DSO immediately**
  - Activate **Rapid Response Team (RRT)**
  - Collect details (time, place, food history)

### REFERRAL PRINCIPLES

- Do not delay referral in:
  - Altered consciousness
  - Severe dehydration
  - Trauma
  - Cardiac symptoms
- Ensure:
  - Ambulance availability
  - Prior intimation to hospital

### 13. CONSOLIDATION SHEET – TEMPORAL EVENTS QUICK SUMMARY

#### A. TEMPORAL EVENT SUMMARY (QUICK REFERENCE)

Day / Time	Event	Risk Level	Key Risks	Immediate Action	Contact Point
Day 1 Punartham (Evening)	Deepakazhcha, cultural rituals	Moderate	Fire hazard, crowd build-up	Fire safety monitoring, basic medical readiness	Fire Officer / MO
Day 2 Morning	Pooyam Thozhal	High	Overcrowding, dehydration	ORS distribution, queue control	MO / Health Inspector

Day 2 – Afternoon	Annadanam	High	Food safety risk	Food inspection, hygiene monitoring	Food Safety Officer
Day 3 – Early morning (3–6 AM)	Nirmalyam, temple opening	<b>Very High</b>	Sudden crowd surge, syncope	Full deployment, crowd control	Police / MO
Day 3 – Morning (6–11 AM)	Peak darshan	<b>Very High</b>	Extreme overcrowding	Queue regulation, surveillance	Police / Health Team
Day 3 – Noon	Ezhunnallathu procession	<b>Very High</b>	Stampede, falls	Barricading, emergency alert	Police / Control Room
Day 3 – Afternoon	Annadanam peak	High	Food poisoning	Continuous inspection	Food Safety Officer
Day 3 – Evening	Dispersal	Moderate	Fatigue, delayed care	Maintain medical support	MO / Ambulance
Post-event (Day 1–7)	Surveillance period	High	ADD/ARI outbreak	Active surveillance, reporting	Epidemiologist / DSO

## B. KEY CONTACT POINTS (QUICK ACCESS)

### Health

- District Medical Officer (DMO)
- Block Medical Officer (BMO)
- Medical Officer – Medical Aid Post

### **Emergency Services**

- Ambulance (Health Dept)
- 108 Ambulance
- Private Ambulance (Seva Bharathi)

### **Administration & Coordination**

- District Collector
- Police Control Room / CI
- Fire & Rescue Officer
- Panchayath Secretary

### **Technical & Support**

- Food Safety Officer
- Water Authority
- KSEB (Electricity)

### **C. REFERRAL & EVACUATION QUICK LINK**

- Medical Aid Post → Taluk Hospital Haripad (**Primary**)
- → General Hospital Alappuzha (**Secondary**)
- → Medical College Vandanam (**Tertiary**)
- Evacuation Route:
  - Temple → Main road → Haripad → NH66
  - Alternate: Interior Panchayath roads

### **D. ALERT TRIGGERS (IMPORTANT)**

Immediate reporting required if:

- ≥2 cases of diarrhea/vomiting
- Multiple syncope cases
- Any stampede/major injury
- Any unusual clustering

Inform:

- DSO
- Control Room

## CONCLUSION

Mannarasala Ayilyam is a high-density religious mass gathering characterized by ritual-based crowd surges, particularly on the Ayilyam day, with an estimated inflow of nearly one lakh devotees over three days. The unique setting of the temple, with narrow access roads and continuous movement of pilgrims, necessitates a well-coordinated and practical public health preparedness approach.

This plan has been developed based on risk assessment, temporal crowd dynamics, and available local resources. Emphasis has been placed on **early identification of health risks, on-site stabilization, and rapid referral**, considering the limitation of a single medical aid post. Strengthening of ambulance services through both government and private support, along with a clearly defined evacuation route, ensures timely emergency response.

Interdepartmental coordination involving Health, Police, Fire & Rescue, Local Self Government, and Food Safety plays a crucial role in effective implementation. Capacity building through meetings, training, and mock drills further enhances preparedness. Continuous surveillance during and after the event will help in early detection of any outbreaks or unusual health events.

With systematic planning, coordinated execution, and real-time monitoring, the health system aims to ensure the **safe conduct of the festival, prevention of outbreaks, and minimization of morbidity and mortality**.

# Christmas



## Preamble:

Christmas in Alappuzha is celebrated with midnight masses, cultural programs, and large community gatherings that bring joy and unity across the district. Yet, these festivities also present significant public health challenges that require careful planning and vigilant surveillance. Seasonal risks such as alcohol-related accidents, adulterated liquor sales, unsafe food and beverages, and infectious disease outbreaks—particularly bird flu—are known to intensify during this period. In addition, the sheer scale of gatherings increases the likelihood of crowd-related injuries and emergencies. Christmas attracts large gatherings at

churches, beaches, and tourist hubs. Preparedness ensures safety, smooth coordination, and rapid response to health or security incidents.

To protect communities, a comprehensive health action plan must integrate crowd management, food and beverage safety, communicable disease monitoring, and road safety enforcement. Strengthened surveillance systems—ranging from excise checks on liquor outlets to inspections of ice factories and food vendors, as well as veterinary monitoring of poultry farms—are essential to prevent outbreaks and ensure safe consumption practices. Effective coordination between the Health Department, Excise and Police authorities, Food Safety officials, and Animal Husbandry units will provide a multi-layered defence against these risks.

By combining preventive inspections, rapid response mechanisms, and public awareness campaigns, Alappuzha can ensure that Christmas celebrations remain joyful while minimizing health hazards. This integrated approach not only addresses immediate festive risks but also builds long-term resilience for managing mass gatherings and seasonal health threats in the district.

### **Risk Mitigation of Gathering**

- Crowd control barriers at major churches and beach venues.
- Police deployment with traffic diversions.
- Fire safety checks at venues.
- Public health advisories on hygiene and safe food practices.

### **Key Public Health Risks anticipated :**

<b>Risk Type</b>	<b>Main Causes</b>	<b>Preventive Measures</b>
<b>Respiratory infections</b>	<b>Crowds, poor ventilation</b>	<b>Masks, vaccination</b>
<b>Food/waterborne</b>	<b>Street food, contaminated water</b>	<b>Hygiene checks, safe water</b>
<b>Vector-borne</b>	<b>Mosquito breeding in backwaters</b>	<b>Fogging, nets, awareness</b>
<b>Alcohol-related</b>	<b>Excessive consumption, unsafe driving</b>	<b>Police checks, awareness</b>
<b>Accidents/injuries</b>	<b>Fireworks, traffic congestion</b>	<b>Fire safety, traffic control</b>

### **1. Alcohol-Related Accidents**

- Increased risk of drunk driving and road traffic accidents during late-night celebrations.
- Preventive measures: Night patrols, breathalyzer checks, awareness campaigns.

### **2. Adulterated Wine & Liquor**

- Risk of methanol poisoning from spurious liquor sales.

- Preventive measures: Excise raids, liquor sample testing, public advisories.

### **3. Unsafe Food and Drinks**

- Contamination from ice made with unpurified water and unhygienic street food.
- Preventive measures: Food Safety inspections, certification of ice suppliers, random sampling.

### **4. Communicable Diseases**

- Bird flu outbreaks in poultry farms during December.
- Preventive measures: Veterinary surveillance, culling infected birds, restrictions on live bird sales, safe cooking advisories.

### **5. Crowd-Related Injuries**

- Risk of clashes, stampedes, and injuries during midnight masses and carol events.
- Preventive measures: Police deployment, trained volunteers, clear entry/exit routes.

### **6. Fire Crackers injuries**

- Community Coordination: Local clubs should coordinate carol rounds to avoid rivalry clashes.
- Police Monitoring: Increased patrolling during festive nights can prevent escalation.
- Firecracker Awareness: Even though not relevant here, families should supervise children during fireworks to avoid typical seasonal injuries.

## 7. Temporary Christmas Stalls

### 1. Clothing & Accessories

- ❖ Discounted dresses, T-shirts, cotton bedsheets, and winter wear are common.
- ❖ Seasonal fashion items like red & green outfits, Santa hats, and scarves.
- ❖ Affordable pricing attracts families and youth.

### 2. Decorations & Festive Items

- ❖ Star-shaped lanterns, fairy lights, cribs, and Christmas trees.
- ❖ Locally crafted ornaments and handmade decorative items.
- ❖ Paper and bamboo stars are especially popular in Kerala homes.

### 3. Food & Seasonal Treats

- ❖ Plum cakes, cookies, and homemade sweets.
- ❖ Local delicacies such as appam, kallappam, and seafood specials.
- ❖ Stalls near churches often sell snacks and hot drinks for carol-goers.

### 4. Household & Utility Items

- ❖ Umbrellas, bedsheets, and kitchen essentials at discounted rates.
- ❖ These stalls often double as New Year markets, extending beyond Christmas

## Temporal Events of Gathering (Timeline)

- **21, 22, 23, 24 Dec Evening:** Carol singing, church vigils.
- **24 Dec Midnight:** Midnight Mass at major churches.
- **25 Dec Morning:** Community feasts, houseboat cruises.
- **25 Dec Evening:** Cultural programs, beach gatherings.
- **31 Dec Night:** New Year countdown events.

## Temporal Timeline of Christmas Mass Gathering – Public Health Perspective

Phase / Time Period	Key Christmas Specific Activities	Crowd Dynamics	Major Public Health Risks	Preparedness & Control Measures	Responsible Agencies
<b>Pre-Christmas Preparation (1–2 Weeks Before – Dec 10–23)</b>	Decoration of churches, malls, public spaces; rehearsal for carols and nativity plays; procurement of food items (meat, cakes, dairy); increase in travel bookings	Gradual crowd build-up in markets and churches	Food adulteration, unsafe meat storage, respiratory infections, dengue breeding from decorative water storage	Market inspections, meat & bakery licensing checks, vector source reduction, awareness on food hygiene, enhanced disease surveillance	LSG, Health Dept, Food Safety Dept, Municipal Authorities

<p><b>Christmas Eve Morning (Dec 24 – Morning to Afternoon)</b></p>	<p>Church cleaning and final decoration; food preparation at homes and community kitchens; shopping rush</p>	<p>Moderate but steady crowding in markets and churches</p>	<p>Food contamination, injuries during decoration, heat stress in workers</p>	<p>Inspection of community kitchens, first-aid readiness, potable water supply assurance</p>	<p>Health Inspectors, Volunteers, Local Administration</p>
<p><b>Christmas Eve Evening &amp; Night (Dec 24 – 6 PM to 12 AM)</b></p>	<p>Carol services, midnight mass, street gatherings, candlelight services</p>	<p>Peak crowd density in churches and public spaces</p>	<p>Stampede risk, respiratory infections, fire hazards, alcohol-related incidents</p>	<p>Crowd flow management, emergency exits kept open, fire safety readiness, ambulance &amp; medical posts near churches</p>	<p>Police, Fire &amp; Rescue, Health Dept, Church Committees</p>
<p><b>Midnight Mass Period (Dec 25 – 12 AM to 2 AM)</b></p>	<p>Midnight mass and community prayers</p>	<p>Very high congregation density</p>	<p>Syncope, cardiac events, asthma</p>	<p>On-site medical teams, emergency response</p>	<p>Health Dept, Emergency Medical Services</p>

			exacerbation, crowd panic	protocol activation, referral linkage with hospitals	
<b>Christmas Day Morning (Dec 25 – 6 AM to 12 PM)</b>	Family gatherings, feasts, charity events	Localized household-level gatherings	Food poisoning, elderly health issues, alcohol-related complications	Health education, early case reporting, emergency services on alert	Health Dept, ASHA, Local Volunteers
<b>Christmas Day Afternoon &amp; Evening (Dec 25 – 12 PM to 9 PM)</b>	Public celebrations, community feasts, visits to relatives	Dispersed but continuous crowd movement	Road traffic injuries, alcohol-related violence, dehydration	Traffic regulation, enforcement of alcohol laws, trauma care readiness	Police, Motor Vehicles Dept, Health Services
<b>Post-Christmas Period (Dec 26 – Jan 1)</b>	Continued social visits, picnics, tourism surge	Secondary crowding at tourist spots	Delayed foodborne illness, respiratory illness clusters	Active surveillance, syndromic reporting, follow-up inspections	Surveillance Units, IDSP, Health Dept

<b>Post-Event Surveillance (7–14 Days After)</b>	Return to routine activities	No crowding	Detection of outbreaks (ARI, AGE, measles, COVID-like illness)	Line listing, trend analysis, outbreak investigation if required	Surveillance Officer, District RRT
--	------------------------------	-------------	--	--	------------------------------------

### ***Key Public Health Considerations Specific to Christmas***

- **Food safety** (meat, cakes, dairy) is the **highest-risk component**
- **Midnight mass** represents the **critical peak-risk window**
- **Alcohol-related injuries and emergencies** are common
- **Respiratory infections** often rise 5–10 days post-event
- **Post-event surveillance is as important as on-event preparedness**

## **Command System & Collaboration**

- Incident Commander: District Collector.
- Medical Commander: District Medical Officer (DMO).
- Police Commander: Superintendent of Police.
- Collaboration: Fire & Rescue, Tourism Dept., NGOs, Red Cross.

## **Strengthening Surveillance Measures by Intersectoral coordination**

### **1. Excise & Police**

- Joint raids on liquor shops.
- Night patrols to monitor drunk driving.

## 2. Food Safety Department

- Inspections of ice factories and roadside vendors.
- Certification and monitoring of food stalls near churches.

## 3. Water Authority Department

- Continuous Water Supply: Extra arrangements are made to ensure 24x7 water availability at major churches (Champakulam Basilica, Arthunkal Church), beach venues, and houseboat jetties.
- Water Quality Monitoring: KWA conducts water quality testing services to prevent contamination risks during mass gatherings.
- Emergency Tankers: Standby water tankers are deployed to meet sudden demand at large feasts and public events.
- Coordination with Local Bodies: Works closely with Alappuzha Municipality and Tourism Department during beach festivals, canal fests, and kayal carnivals.

## 4. Animal Husbandry Department

- Monitoring poultry farms for bird flu.
- Enforcing biosecurity and culling infected birds.

## 5. Health Department

- First aid booths at churches.
- Ambulance standby during midnight masses.
- Disease monitoring and rapid response teams.

## 6. Community Role

- Churches and NGOs to spread awareness on safe practices.
- Encourage designated drivers and safe food consumption.

## 7. Fire Safety Department

- **Crowd Safety:** Fire officers are deployed at major churches (Champakulam Basilica, Arthunkal Church) and beach venues to manage fire hazards during midnight masses and cultural programs.
- **Event Inspections:** Temporary stages, lighting setups, and food stalls undergo fire safety checks before approval.
- **Emergency Response:** Fire tenders and rescue vehicles are stationed near Alappuzha Beach and houseboat jetties.

## **Key People & Contacts – Alappuzha District (Kerala)**

For effective coordination and emergency response during large gatherings such as Eid-ul-Fitr in Alappuzha, the following district-level authorities play critical roles:

### **1. District Administration**

- **District Collector, Alappuzha**  
Overall in charge of district administration, disaster management, and coordination of all departments.
- **Contacts :0477-2251720, 0477-2243721**

### **2. Law & Order**

- **Superintendent of Police (SP), Alappuzha**  
Responsible for law enforcement, crowd control, traffic regulation, and public safety during gatherings.  
*(Contact: 0477-2239326 (Landline),*

### **3. Health Services**

- **District Medical Officer (DMO), Alappuzha**  
Oversees public health preparedness, deployment of medical teams, disease surveillance, and emergency care services.  
*(Contact: 0477-2251650 or 0477-2252329)*

### **4. Fire & Emergency Services**

- **District Fire & Rescue Officer, Alappuzha**  
Handles fire safety audits, emergency rescue operations, and disaster response readiness.  
*(Contact:0477-2230303 )*

### **5. Tourism Department**

- **District Tourism Promotion Officer (DTPO), Alappuzha**  
Coordinates tourism-related activities, especially important due to Alappuzha's

backwater tourism and visitor inflow during festivals.  
(Contact: +91 477 225 1796)

## Operational Strategy & Timeline

### Objectives:



1. Build awareness and ensure preventive measures are in place before the festive rush.
2. Strengthen enforcement and prepare emergency response systems.
3. Ensure smooth crowd management and rapid response to emergencies.

### Level I: Advent Season Preparedness (Early December)

#### 1. Public Awareness & Risk Communication



During the Advent season, proactive **risk communication and community awareness** form the foundation of safe Christmas celebrations. Awareness campaigns are systematically conducted across **schools, churches, and major public gathering areas**, ensuring that key safety messages reach diverse population groups.

Educational sessions and interactive talks are organized in schools and religious institutions to promote **responsible behavior during festivities**.

These sessions emphasize:

- The importance of **crowd discipline** in preventing stampedes
- Dangers associated with **alcohol misuse and drunk driving**
- Maintenance of **food hygiene during large feasts**

- Awareness of **emergency contact numbers and services**

To reinforce these messages, **IEC (Information, Education, Communication) activities** are widely implemented. This includes:

- Distribution of **pamphlets and posters** in high-footfall areas
- Display of **emergency helpline numbers** at strategic public locations
- Dissemination of information through **local media, radio, and social media platforms**

This multi-channel communication strategy ensures **maximum outreach, behavior change, and preparedness among the public.**

### ***Alcohol-Related Issues During Christmas Celebrations – Public Awareness***

During **Christmas celebrations**, the consumption of alcohol often increases as part of social gatherings and festivities. While moderate and responsible drinking may be part of celebrations, excessive alcohol use can lead to serious health, safety, and social problems.

One of the major concerns is **drunk driving**, which significantly increases the risk of road traffic accidents, injuries, and fatalities. Alcohol impairs judgment, coordination, and reaction time, making driving extremely dangerous.

Alcohol consumption can also contribute to **violence and conflicts**, including fights, domestic disturbances, and public nuisance, especially in crowded celebration areas.

In addition, **health-related issues** such as alcohol poisoning, vomiting, dehydration, and loss of consciousness may occur, requiring immediate medical attention. Vulnerable groups, including youth and individuals with existing health conditions, are at higher risk.

Another concern is **unsafe behavior**, including falls, drowning (in areas near water bodies like in Alappuzha), and risky activities that can lead to injuries.

# ALCOHOL-RELATED ISSUES DURING CHRISTMAS CELEBRATIONS

## ★ PUBLIC AWARENESS ★

**Celebrate Responsibly, Stay Safe, Save Lives**

Christmas is a time of joy, togetherness and celebration. Let's not let alcohol misuse turn happiness into tragedy. Drink responsibly and protect yourself and others.

### ALCOHOL CAN LEAD TO SERIOUS PROBLEMS

<p><b>DRUNK DRIVING</b> Risk of Road Accidents, Injuries &amp; Death</p> 	<p><b>VIOLENCE &amp; CONFLICTS</b> Fights, Public Disturbances, Domestic Problems</p> 	<p><b>HEALTH RISKS</b> Alcohol Poisoning, Vomiting, Dehydration, Loss of Consciousness</p> 	<p><b>UNSAFE BEHAVIOR</b> Falls, Drowning, Risky Activities, Accidents</p> 	<p><b>IMPACTS ON YOUTH &amp; SOCIETY</b> Addiction, Poor Choices, Legal Consequences</p> 
---	--	---	--	---

### PUBLIC AWARENESS MESSAGES

 <p><b>DON'T DRINK AND DRIVE</b></p>	 <p><b>KNOW YOUR LIMITS – DRINK RESPONSIBLY</b></p>	 <p><b>STAY HYDRATED AND EAT PROPERLY</b></p>	 <p><b>TAKE CARE OF FRIENDS AND FAMILY</b></p>	 <p><b>AVOID ALCOHOL IN CROWDED PUBLIC PLACES</b></p> <p><b>SEEK MEDICAL HELP IN EMERGENCIES IMMEDIATELY</b></p>
---	--	--	--	---

### SLOGANS

 <p><b>CELEBRATE CHRISTMAS, NOT CARELESSNESS</b></p>	 <p><b>DRINK RESPONSIBLY, ARRIVE SAFELY</b></p>	 <p><b>YOUR SAFETY IS THE BEST CELEBRATION</b></p>
---	--	--

### CONCLUSION

Responsible behavior and awareness can prevent alcohol-related incidents and ensure a safe, peaceful and joyful Christmas for everyone.

### EMERGENCY HELPLINES

 <b>108</b> Medical Emergency	 <b>100</b> Police	 <b>1073</b> Traffic Police
---	--	---

### A JOINT INITIATIVE FOR A SAFE CHRISTMAS

Police Department | Health Department | Local Self Governments



Let's work together for a safe & happy celebration!

*Public Awareness Message*

- Drink responsibly and know your limits
- Never drink and drive – use a designated driver or public transport
- Stay hydrated and eat properly
- Avoid alcohol in crowded public places
- Look out for friends and family members
- Seek immediate medical help in case of emergencies

## 2. Regulatory Inspections & Enforcement

To prevent public health hazards and maintain law and order, **strict regulatory inspections and enforcement activities** are initiated well in advance of Christmas.

### 1. Liquor Shop Monitoring and Control





During the Christmas season in Alappuzha, there is a significant increase in the consumption of alcohol due to social gatherings, celebrations, and tourism inflow. This necessitates **intensified monitoring by the Excise Department and Police.**

Joint inspection drives are conducted across:

- Licensed liquor outlets
- Bars and toddy shops
- Temporary sale points near festive hotspots

Key enforcement activities include:

- Detection of **illegal sale and unauthorized stocking**, especially in rural and backwater regions
- Strict checking of **sale timings** as per regulations
- Surveillance to prevent **sale to minors and intoxicated individuals**

Night patrols and highway checks are strengthened to curb **drunk driving**, particularly on routes leading to major churches and tourist destinations.

Joint inspection drives are conducted by the **Excise Department** to ensure compliance with legal and safety standards. These inspections focus on:

- Detecting and preventing **illegal sale and unauthorized stocking**
- Identifying and eliminating **adulterated or spurious liquor**
- Enforcing **licensed sale timings and regulations**

These measures are critical in reducing **alcohol-related incidents, poisoning cases, and public disturbances** during the festive period.

### ***b. Food Safety Inspections***

Health Inspectors carry out targeted inspections in:

- **Ice factories** – assessing water quality, ice production, and storage hygiene
- **Poultry farms** – evaluating slaughtering practices, handling, and sanitation

The primary objective is to ensure **safe food supply chains**, especially during large-scale community feasts. By enforcing hygiene standards, authorities aim to **prevent outbreaks of foodborne illnesses such as gastroenteritis and food poisoning**.

## **2. Prevention of Adulterated Wine & Liquor**



One of the major public health concerns during festive seasons is the circulation of **adulterated or spurious liquor**, which may contain toxic substances such as methanol.

**In Alappuzha:**

- **Special excise squads conduct surprise raids and sample collection**
- **Suspected liquor is sent for chemical analysis**
- **Intelligence-based operations are carried out to detect illicit brewing units**

Adulterated liquor consumption can lead to:

- Acute poisoning
- Blindness
- Sudden deaths

Hence, strict enforcement under the Kerala Abkari Act, 1902 is critical to prevent such incidents during Christmas festivities.

### **3. Fire Shop Inspections**



Fire shop inspections before Christmas play a crucial role in preventing accidents and ensuring that festive celebrations remain safe, controlled, and enjoyable for the public.

Before the Christmas season, fire shops (firecracker and fireworks outlets) in Alappuzha are subject to strict inspections by authorities such as the Fire & Rescue Department, Police, and Local Self Government bodies to ensure public safety during celebrations.

The inspection process begins with license verification, where officials check whether the shop has valid permits for storing and selling fireworks. Unauthorized or expired licenses can lead to immediate closure of the shop.

Next, inspectors assess the storage conditions of fireworks, ensuring that materials are kept in dry, well-ventilated spaces away from heat sources, electrical connections, and flammable substances. Proper stacking and limited quantity storage are also verified to prevent accidental explosions.

A major focus is on fire safety measures. Shops must have essential equipment such as fire extinguishers, sand buckets, and water sources readily available. Emergency exits should be clear and accessible, and “No Smoking” signs must be prominently displayed.

Authorities also evaluate crowd management arrangements, especially since Christmas attracts large numbers of customers. Shops are required to maintain safe distances, avoid overcrowding, and ensure orderly movement of people.

Additionally, inspectors check for electrical safety, ensuring that wiring systems are safe and do not pose a fire hazard. Temporary or faulty connections are strictly prohibited.

Finally, shop owners and staff are briefed on emergency response protocols, including how to handle fire accidents, evacuate people safely, and alert emergency services quick

<b>Inspection Area</b>	<b>Check Points</b>	<b>Purpose</b>
<b>License Verification</b>	Valid license/permit for storage and sale of fireworks	Prevent illegal sale and ensure regulation
<b>Storage Conditions</b>	Dry, ventilated storage; away from heat, electricity, and flammable materials	Reduce risk of fire and explosions
<b>Quantity Control</b>	Limited and safe quantity of fireworks stored	Avoid overcrowding of hazardous materials
<b>Fire Safety Measures</b>	Availability of fire extinguishers, sand buckets, water sources	Immediate response to fire incidents
<b>Safety Signages</b>	Display of “No Smoking” and warning signs	Increase public awareness and prevent risks

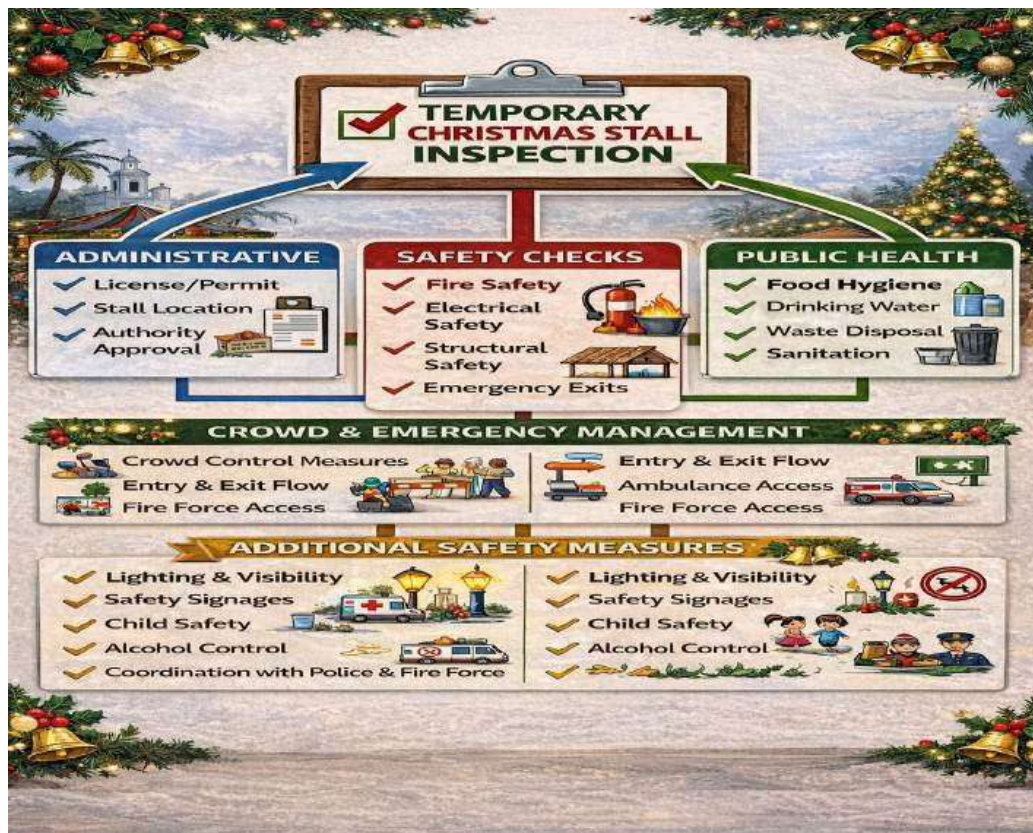
<b>Emergency Exits</b>	Clear, accessible exits for quick evacuation	Ensure safe escape during emergencies
<b>Crowd Management</b>	Control of customer flow, avoidance of overcrowding	Prevent stampede and accidents
<b>Electrical Safety</b>	Proper wiring, no loose or temporary connections	Prevent electrical fires
<b>Staff Preparedness</b>	Awareness of emergency protocols and fire handling	Quick and effective emergency response
<b>Coordination</b>	Contact with Fire Force, Police, and emergency services	Ensure rapid assistance if needed

#### 4. Temporary Christmas Stall Inspection:

<b>Inspection Area</b>	<b>What Should Be Analysed</b>	<b>Purpose</b>
<b>Permission &amp; Licensing</b>	Valid temporary permit from Municipality/LSGD	Ensure legal operation
<b>Location Safety</b>	Stall placed away from roads, emergency routes, and high-risk zones	Prevent obstruction and accidents
<b>Structural Stability</b>	Strength of temporary structure (bamboo, tent, sheets, supports)	Avoid collapse or injury

<b>Electrical Safety</b>	Proper wiring, no loose connections, safe use of lights/decoration	Prevent fire and electrical hazards
<b>Fire Safety Measures</b>	Availability of fire extinguisher, sand buckets, no open flames near materials	Reduce fire risk
<b>Food Safety (if applicable)</b>	Hygiene of food preparation, clean utensils, safe water, valid food license	Prevent food-borne diseases
<b>Waste Management</b>	Availability of dustbins, proper waste disposal system	Maintain cleanliness and hygiene
<b>Crowd Management</b>	Adequate space for movement, no overcrowding, queue system	Prevent crowd crush and panic situations
<b>Emergency Access</b>	Clear access for ambulance and fire services	Enable quick emergency response
<b>Public Safety Signage</b>	Display of warning signs, exit directions, "No Smoking" boards	Improve awareness and safety
<b>Lighting &amp; Visibility</b>	Adequate lighting at night	Prevent accidents and improve security

<b>Water &amp; Sanitation</b>	Availability of safe drinking water and nearby toilet facilities	Ensure public health
<b>Alcohol Control</b>	No illegal sale/consumption of alcohol	Prevent disturbances and accidents
<b>Child Safety</b>	Safe environment for children, no hazardous items within reach	Protect vulnerable groups
<b>Coordination with Authorities</b>	Contact details of Police, Fire Force, Health Department	Ensure quick coordination in emergencies



## 6. Anticipated Communicable Diseases:

December in Alappuzha is marked by cooler weather, festive gatherings, increased travel, and crowded public spaces due to Christmas and tourist activities. These conditions create a favorable environment for the spread of communicable diseases, especially when combined with high humidity, waterlogged areas, and increased food handling in temporary stalls.

Respiratory infections are among the most common during this period. Seasonal changes and close contact in churches, markets, and celebrations lead to the spread of illnesses such as influenza and other viral fevers. People experiencing symptoms like fever, cough, and sore throat can easily transmit infections in crowded settings.

Food-borne diseases also tend to increase in December due to the rise in outdoor eating and temporary food stalls. Improper food handling, inadequate cooking, and poor hygiene can result in conditions like diarrhea and food poisoning. Consumption of contaminated water further contributes to water-borne diseases such as typhoid and gastroenteritis, especially in areas with sanitation challenges.

Another important concern is **Avian Influenza (bird flu)**, particularly due to increased poultry consumption during the festive season. Handling raw or infected poultry and consuming undercooked chicken or eggs can pose health risks. Though transmission to humans is relatively rare, vigilance is necessary.

Vector-borne diseases such as dengue may persist due to stagnant water in canals and low-lying areas, even though peak transmission is usually earlier in the year. Additionally, skin infections and minor communicable conditions can spread in overcrowded environments with poor hygiene.

Overall, the combination of **crowd gatherings, food exposure, environmental factors, and seasonal changes** increases the risk of communicable diseases in Alappuzha during December. Preventive measures such as maintaining personal hygiene, consuming safe food and water, avoiding overcrowding when ill, and ensuring proper sanitation are essential to protect public health during the festive season.

- **Respiratory Infections:** Cold, influenza (flu), COVID-like illnesses spread through coughing, sneezing, and close contact
- **Food-borne Diseases:** Diarrhea, food poisoning due to improper food handling in stalls and gatherings
- **Water-borne Diseases:** Contaminated drinking water leading to cholera, typhoid
- **Skin Infections:** Due to poor hygiene in crowded environments
- **Bird Flu (Avian Influenza):** A viral infection that can spread from infected poultry to humans through direct contact .

## **Prevention of Communicable Diseases During Festive Season**

### ***1. Personal Precautions***

Personal hygiene is the first and most effective line of defense against communicable diseases. Individuals should wash their hands frequently with soap, especially before eating and after visiting crowded places. Using alcohol-based sanitizers can help when handwashing facilities are not available. Respiratory hygiene must be strictly followed by covering the mouth and nose while coughing or sneezing, preferably using a tissue or elbow. People experiencing symptoms like fever, cough, or cold should wear masks and avoid attending public gatherings to prevent spreading infections. Early medical consultation should be encouraged if symptoms worsen.

### ***2. Food Safety Measures***

During the festive season, the consumption of outside food increases significantly, making food safety a critical concern. Only freshly prepared, thoroughly cooked food should be consumed, as improperly cooked food can harbor harmful microorganisms. Special care must be taken while consuming poultry products to reduce the risk of infections such as Avian Influenza. Drinking water should always be safe, preferably boiled or purified. Food handlers must maintain proper hygiene, including clean utensils, covered food storage, and the use of gloves when necessary. Avoiding food from unhygienic or overcrowded stalls is essential to prevent food-borne illnesses.

### ***3. Crowd & Gathering Control***

Large gatherings are common during Christmas celebrations, increasing the risk of disease transmission. It is important to avoid overcrowded areas whenever possible and maintain safe physical distance in public places. Organizers should ensure proper crowd management strategies such as controlled entry and exit points and regulated flow of people. Indoor events should have adequate ventilation to reduce the concentration of airborne pathogens. Public awareness messages should encourage people to stay away from gatherings if they feel unwell.

#### ***4. Environmental & Sanitation Measures***

A clean environment plays a vital role in preventing the spread of diseases. Proper waste management systems must be in place to avoid accumulation of garbage, which can attract flies and rodents. Stagnant water should be eliminated to prevent mosquito breeding, thereby reducing the risk of vector-borne diseases. Public places, including markets and stalls, should be cleaned and disinfected regularly. Availability of clean toilets and handwashing facilities should be ensured, especially in crowded areas.

#### ***5. Poultry & Animal Safety (Bird Flu Prevention)***



Handling of poultry requires special precautions, particularly during festive seasons when demand is high. Direct contact with sick or dead birds should be strictly avoided, as they may carry infections like Avian Influenza. Raw poultry should be handled with care, and hands must be washed thoroughly after contact. Cooking poultry products at the correct temperature is essential to kill harmful viruses and bacteria. Any unusual deaths of birds in the area should be promptly reported to veterinary or health authorities.

## **6. Public Health & Administrative Measures**

Local authorities and health departments play a crucial role in disease prevention. Regular inspections of food stalls, meat shops, and water sources should be conducted to ensure compliance with safety standards. Water quality monitoring helps prevent water-borne diseases. Public awareness campaigns through posters, announcements, and community programs can educate people about preventive practices. Additionally, deploying medical teams, setting up first aid stations, and ensuring quick response mechanisms for outbreaks are essential during large gatherings.

## **7. Community Responsibility**

Preventing communicable diseases is a shared responsibility. Community members should remain vigilant and take care of vulnerable groups such as children, the elderly, and those with weakened immunity. Encouraging good hygiene practices within families and social groups can significantly reduce disease spread. People should also cooperate with authorities and report unsafe or unhygienic conditions in public places to ensure timely intervention.

A coordinated approach involving individuals, communities, and authorities is essential to prevent communicable diseases during festive seasons in Alappuzha. By following proper hygiene, ensuring food safety, managing crowds effectively, and maintaining environmental cleanliness, a safe and healthy celebration can be achieved.

## **Level II: Pre-Event Intensification (22nd December)**

### **Christmas Eve preparedness:**

#### **I. Risk Assessment & Preparedness**

Effective planning for Christmas celebrations begins with proper risk assessment and preparedness, especially in high-density areas of Alappuzha. Authorities must identify vulnerable locations such as churches hosting midnight mass, **busy town centers, beach areas, tourist hubs, markets, and temporary christmas and food stalls** where large crowds gather. Special attention should also be

given to areas where firecrackers are sold or used, as these locations carry a higher risk of fire accidents and injuries.

In addition, identifying vulnerable population groups is equally important. Elderly individuals attending late-night services may be at risk of fatigue or medical emergencies. Children are particularly vulnerable to injuries related to firecrackers, while people with existing health conditions (comorbidities) may face complications due to crowd exposure, infections, or stress. Proper preparedness ensures that these risks are minimized through targeted interventions.

## **II. Night Patrol & Law Enforcement**



Strengthening night patrol and law enforcement is essential to maintain safety and order during festive celebrations. Police and Excise teams should be deployed across public spaces and highways to monitor activities and prevent any unlawful behavior. Their presence helps in controlling crowds, avoiding public nuisance, and ensuring that celebrations remain peaceful.

Strict enforcement of drunk driving laws is critical, as alcohol-related incidents tend to increase during this period. Authorities should focus on high-risk areas such as major pilgrimage routes and high-traffic junctions, where the likelihood of accidents is higher. Continuous monitoring and timely intervention by enforcement teams can significantly reduce accidents and maintain public safety.

### **III. Emergency Medical Preparedness**

Ensuring emergency medical preparedness is vital during Christmas celebrations due to the increased risk of accidents and health emergencies. Ambulances should be strategically deployed at high-footfall locations to provide rapid response when needed. Key locations for standby arrangements include Arthunkal Basilica, Edathua Church, and Mount Carmel Cathedral, where large gatherings are expected.

These emergency units must be equipped with Basic Life Support (BLS) equipment and staffed with trained paramedical personnel capable of providing immediate care. Additionally, a strong referral linkage system with nearby hospitals should be established to ensure that patients requiring advanced treatment can be quickly transferred without delay. This coordinated approach helps in saving lives and managing emergencies effectively during the festive season.

### **IV. Health System Preparedness**

A well-prepared health system is essential to handle emergencies during Christmas celebrations in Alappuzha. All major health facilities should ensure the availability of 24×7 emergency services to manage any sudden medical situations. Hospitals must keep their

casualty departments, intensive care units (ICUs), and oxygen-supported beds fully functional and ready to accommodate increased patient load.

Adequate stocking of essential medical supplies is equally important. This includes emergency drugs, burn management kits for firecracker-related injuries, and trauma care supplies to handle accident cases. Proper preparedness of healthcare facilities ensures timely treatment and reduces complications during emergencies.

#### **V. Ambulance Deployment**

Efficient ambulance deployment plays a crucial role in emergency response during the festive season. Ambulances should be strategically positioned at major churches and high crowd density areas to ensure rapid access to patients. These vehicles must be equipped with essential life-saving equipment and staffed by trained personnel.

To enhance coordination and response time, all ambulances should have GPS tracking systems and reliable communication linkages with control rooms and hospitals. This enables quick navigation through traffic and ensures that patients receive timely medical attention, especially during the critical “golden hour.”

#### **VI. Intersectoral Coordination**

Effective management of Christmas celebrations requires strong intersectoral coordination among various departments. The Police Department plays a key role in maintaining law and order, managing crowds, and regulating traffic flow in busy areas. The Fire & Rescue Services are responsible for conducting fire safety inspections and responding to fire-related emergencies.

The Local Self Government (LSG) ensures proper sanitation, waste management, and cleanliness in public spaces and event areas. The Excise Department monitors alcohol-related activities to prevent misuse and associated incidents. Meanwhile, the Food Safety Department conducts inspections of food stalls and eateries to ensure hygiene and prevent food-borne diseases. This coordinated approach among departments helps create a safe, organized, and well-managed festive environment for the public.



## VII. Fire & Electrical Safety

*During Christmas celebrations, strict safety measures must be implemented to prevent accidents and hazards. Authorities should carefully inspect all temporary electrical connections to ensure there are no loose wires, overloading, or unsafe installations that could lead to short circuits or fires. Decorative lighting, which is widely used during the festive season, must also be checked for quality and safe usage.*

*The use of unsafe practices such as high-decibel firecrackers and indoor fireworks should be strictly prohibited, as they can cause fire accidents, injuries, and panic in crowded environments. Event organizers must ensure that adequate fire safety arrangements, including fire extinguishers, are available at all venues. Additionally, all emergency exits should be clearly marked, unobstructed, and easily accessible to allow quick evacuation in case of emergencies.*

## VIII. Inspection Focus (Food Safety & Hygiene)

*Special attention should be given to the licensing and regulation of temporary food stalls, as food consumption significantly increases during Christmas celebrations. Authorities must verify that all stalls operate with valid permissions and follow safety guidelines.*

***Food safety inspections should include checking the use of clean and safe water for cooking and cleaning purposes. All food items must be properly covered and stored to prevent contamination from dust, flies, and other environmental factors. The personal hygiene of food handlers is equally important, and they should maintain cleanliness by wearing gloves, using clean utensils, and following proper food handling practices.***

***These measures are essential to prevent outbreaks of food poisoning and other food-borne diseases, ensuring that the public can enjoy the festivities safely without health risks.***



## IX. Traffic & Injury Prevention

Effective traffic and injury prevention measures are essential during Christmas celebrations in Alappuzha, where large gatherings and increased vehicle movement are common. Traffic police should be strategically deployed at church entry and exit points to manage both pedestrian and vehicular flow, reducing congestion and the risk of accidents. Strict enforcement of drunk driving laws is crucial to prevent alcohol-related road accidents. Authorities must also ensure compliance with helmet and seatbelt regulations, which significantly reduce the severity of injuries in case of

mishaps. In addition, proper diversion routes should be planned and communicated in advance to avoid traffic bottlenecks. Organized parking control systems should be implemented to prevent roadside congestion and ensure smooth movement of emergency vehicles.

#### ***X. Noise & Firecracker Monitoring***

Noise and firecracker usage must be carefully regulated to protect public health and maintain a peaceful environment. Authorities should enforce the provisions of the Noise Pollution (Regulation and Control) Rules, 2000, which define permissible noise levels in different zones. The use of firecrackers should be restricted by implementing time limits, particularly prohibiting their use after 10 PM to reduce nighttime disturbance. Monitoring of decibel levels is especially important in silent zones such as areas near hospitals, schools, and other sensitive institutions. These measures help prevent noise-related health issues and ensure community well-being.

#### ***XI. Public Health Measures***

Public health measures play a key role in preventing disease transmission during festive gatherings. Authorities and organizers should promote practices such as mask usage, especially if there is a rise in respiratory illnesses, and encourage regular hand hygiene through washing or use of sanitizers.

Adequate infrastructure must be ensured in crowded areas, including the installation of temporary toilets and proper waste disposal systems. These facilities help maintain sanitation, reduce environmental contamination, and prevent the spread of communicable diseases.

#### ***XII. Public Awareness & IEC (Information, Education, Communication)***

Raising public awareness is essential for ensuring safe and responsible celebrations. Key messages should focus on safe celebration practices, avoiding overcrowding, responsible alcohol use, and the importance of knowing emergency contact numbers. These messages should be effectively disseminated through multiple channels such as church announcements, local WhatsApp groups, and local cable television networks. Clear and consistent communication helps educate the public, encourages responsible behavior, and enhances overall safety during the Christmas season.

### **Level III: Event Day Response (25th December)**

#### ***A. Crowd Monitoring & Control***

##### **i. CCTV Surveillance**

- **Meaning:** Closed-Circuit Television cameras installed at strategic points.
- **Festival Context:** Helps monitor crowd density, detect suspicious activity, and identify bottlenecks in real time.
- **Benefit:** Provides continuous visual coverage, allowing authorities to respond quickly to emergencies or overcrowding.

##### **ii. Drone Monitoring (where permitted)**

- **Meaning:** Use of aerial drones equipped with cameras and sensors.
- **Festival Context:** Offers a bird's-eye view of large gatherings, processions, or queues, especially in open grounds or waterfront areas in Alappuzha.
- **Benefit:** Detects overcrowding, guides crowd dispersal, and supports rescue operations if needed. Must comply with aviation and local regulations.

##### **iii. Police Personnel for Law & Order**

- **Meaning:** Deployment of trained police officers.

- **Festival Context:** Ensures safety, prevents conflicts, manages traffic, and enforces rules around restricted zones.
- **Benefit:** Provides authority and immediate response capability in case of law-and-order issues.

#### iv. Trained Volunteers

- **Queue Management:** Volunteers guide pilgrims into orderly lines, preventing chaos at entry points, food distribution areas, or temple sanctums.
- **Pilgrim Guidance:** They assist visitors with directions, information, and support for elderly or differently-abled pilgrims.
- **Prevention of Overcrowding & Stampede:** Volunteers act as the first line of crowd control, redirecting flow and calming anxious groups.

##### *Putting It All Together for Alappuzha Festivals*

- **CCTV + Drones:** Technology ensures real-time monitoring of crowd behavior.
- **Police Personnel:** Provide enforcement and authority.
- **Volunteers:** Offer human touch, guidance, and immediate crowd management.
- **Outcome:** A safer, more organized festival environment where pilgrims can focus on devotion without fear of accidents or disorder.

### V. General Evacuation Protocol for Churches in Alappuzha

#### *1. Preparedness Before Christmas Day*

- **Control Room:** Alappuzha District Disaster Management Control Room operates 24x7 (**1077 / 0477-2238630**) for emergency coordination.
- **Risk Assessment:** Churches identify hazards such as electrical overloads (lights, sound systems), fire risks from candles, and overcrowding.
- **Volunteer Training:** Ushers and parish volunteers are briefed on evacuation routes, assembly points, and crowd guidance.
- **Mock Drills:** Some parishes conduct practice runs before major feasts to familiarize staff and congregation.

## **2. Immediate Response During a Disaster**

- **Alarm Activation:** Bell, siren, or public announcement system alerts the congregation.
- **Clear Instructions:** Priests or designated leaders announce evacuation steps calmly to avoid panic.
- **Exit Routes:** Use **multiple exits** (front, side, rear doors) to disperse crowds quickly.
- **Priority Evacuation:** Elderly, children, and differently-abled persons are assisted first.
- **Crowd Flow Management:** Volunteers form human chains or guide lines to prevent stampede.

## **3. Post-Evacuation Protocol**

- **Assembly Points:** Congregation gathers at pre-designated safe zones (church grounds, nearby open areas).
- **Headcount:** Volunteers check attendance lists to ensure no one is left inside.
- **Medical Aid:** First-aid teams and nearby hospitals are alerted for injuries.
- **Police & Fire Coordination:** Local police and fire units take charge of rescue and investigation.

## **4. Key Safety Measures for Christmas Mass**

<b>Risk</b>	<b>Preventive Action</b>	<b>Evacuation Role</b>
Fire from candles/decorations	Fire extinguishers at entry points	Volunteers guide to nearest exit
Electrical overload	Regular inspection of wiring	Cut power supply immediately

Overcrowding	Queue management, seating limits	Redirect flow to alternate exits
Floods/heavy rain (common in Alappuzha)	Elevated platforms, sandbags	Move congregation to higher ground

## 5. Risks & Challenges

- **Overcrowding:** Christmas Eve Mass often exceeds church capacity.
- **Coastal Hazards:** Alappuzha’s coastal belt is prone to cyclones and flooding.
- **Limited Resources:** Smaller parishes may lack trained volunteers or equipment.

### ***B. Rapid Response Mechanism***

#### **i. Fire & Rescue Services**

- **Meaning:** Specialized teams trained to respond to fire outbreaks, building collapses, or rescue operations.
- **Festival Context:** With temporary stalls, electrical decorations, and candles, fire risk is high. Fire units ensure quick suppression and safe evacuation.
- **Role:** Deploy fire engines, extinguishers, and rescue equipment to prevent escalation of incidents.

#### **On site Fire work safety with emergency response & Structural Safety Audits**



Firecracker injuries are common during Christmas and other festivals in Kerala, including Alappuzha, and the first five minutes of response are critical: immediately cool burns under running water, remove tight items, cover with clean cloth, and seek urgent medical care for deep or large wounds. During mass gatherings, emergency preparedness must include first aid stations, crowd control, and coordination with hospitals.

#### **I . Firecracker Sound Inspections & Fireworks Shop Monitoring during Christmas season**



## Objectives

- Ensure compliance with permissible noise levels during firecracker use
- Prevent illegal sale/storage of fireworks
- Reduce risks of fire accidents, injuries, and environmental hazards
- Enforce provisions under:
  - Explosives Rules, 2008
  - Petroleum and Explosives Safety Organisation guidelines
  - Environment (Protection) Act, 1986
  - Kerala Public Health Act, 2023

## II. Firecracker Sound (Noise) Monitoring

# Noise Monitoring Inspection

### 1. Field Measurement

Measuring noise levels on-site.

### 2. Site Details

Source: Traffic, Loudspeakers, Industry, Fireworks

### 3. Noise Level Recording

Recording & comparing levels.

### 4. Permissible Limits

	dB(A) Limits	
Silent Zone	50 /	40
Residential	55 /	45
Commercial	65 /	55
Industrial	75 /	70

Checking legal noise limits.

### 5. Violation Action

Issuing warning or notice.

### 6. Photographic Evidence

Documenting noise sources.

**Reduce Noise Pollution • Protect Public Health**

## 2.1 Permissible Limits

Authorities set strict **permissible noise limits** — 125 dB(A) or 145 dB(C) peak measured at 4 meters. These limits are only allowed during a narrow window (10:00 PM to 12:30 AM on Christmas Eve). Beyond that, late-night or early-morning fireworks are prohibited.

To enforce this, **inspection teams** are formed, usually including health inspectors, police representatives, local government officials, and sometimes pollution control board staff. Their job is to patrol high-risk areas like churches, residential clusters, and public gathering zones. Using sound level meters, they measure and record peak noise levels, check for banned high-decibel crackers, and ensure celebrations don't spill beyond permitted hours.

If violations are found, inspectors can issue warnings, seize illegal crackers, and even file cases under the Noise Pollution Rules or the Explosives Act. Every action is documented with location, time, and readings, then reported daily to the district control room.

- Maximum noise level: 125 dB(AI) or 145 dB(C) peak at 4 meters distance
- Time restrictions:
  - Allowed: 10:00 PM – 12:30 AM (Christmas Eve only)
  - Prohibited: Late night / early morning beyond permitted hours

### ***2.2 Inspection Teams***

- Health Inspector / Junior Health Inspector
- Police Department representative
- Local Self Government (LSG) officials
- Pollution Control Board (if available)

### ***2.3 Inspection Procedure***

#### **Field Activities:**

- Identify high-risk areas:
  - Churches & celebration zones
  - Residential clusters
  - Public gathering areas
- Use sound level meter:
  - Measure at 4 meters distance
  - Record peak levels
- Monitor:
  - Use of banned crackers (high-decibel series)
  - Use beyond permitted time limits

### ***2.4 Enforcement Actions***

- Immediate warning for minor violations
  - Seizure of illegal crackers
  - Filing cases under:
-

- Noise Pollution Rules
- Explosives Act provisions

### **2.5 Documentation**

- Maintain:
  - Location-wise sound readings
  - Time of violation
  - Action taken
- Submit daily report to District Control Room

## **III. Fireworks Shop Inspection**

Shops selling fireworks are subject to equally strict checks. Inspectors verify that each shop has the proper licenses — a PESO license, local trade license, and fire safety clearance. Storage must be in approved premises, never in residential buildings or basements, and always at a safe distance from sensitive places like hospitals, schools, or religious institutions.

Fire safety is non-negotiable: shops must have working extinguishers, sand buckets, and water sources, with strict bans on smoking or open flames. Inspectors also check stock quantities, ensuring they don't exceed permitted limits, and confirm that no banned crackers are being sold. Labels must clearly show manufacturer details and safety instructions.

Crowd control is another focus — shops must avoid overcrowding, maintain queues, and prevent roadside or open sales. Selling to minors is strictly prohibited. If violations are found, inspectors can seize illegal stock, shut down unlicensed shops, or close shops that ignore safety norm

### **3.1 Licensing Verification**

Ensure shop has:

- Valid PESO license
- Local body trade license
- Fire safety clearance

### ***3.2 Storage & Safety Checks***

#### **Key Points:**

- Storage in **approved premises only**
- No storage in:
  - Residential buildings
  - Basements
- Maintain safe distance from:
  - Hospitals
  - Schools
  - Religious institutions

### ***3.3 Fire Safety Requirements***

- Availability of:
  - Fire extinguishers (functional)
  - Sand buckets
  - Water source
- No:
  - Smoking
  - Open flames

### ***3.4 Stock Verification***

- Check for:
  - Quantity within permitted limits
  - No banned/illegal crackers
  - Proper labeling (manufacturer, safety instructions)

### ***3.5 Crowd & Sales Regulation***

- Avoid overcrowding
  - Ensure:
    - Queue system
    - No roadside/open sales
-

- No sale to minors

### **3.6 Enforcement Measures**

- Seizure of:
  - Illegal stock
  - Excess quantity
- Closure of:
  - Unlicensed shops
  - Shops violating safety norms

## **Common Firecracker Injuries**

- **Burns:** First-degree (redness), second-degree (blisters), third-degree (charred skin).
- **Eye injuries:** Sparks or debris can cause corneal burns or vision loss.
- **Hand/finger trauma:** Explosions may cause lacerations or even amputations.
- **Hearing damage:** Loud blasts can cause temporary or permanent hearing loss.
- **Smoke inhalation:** Breathing in fumes can trigger respiratory distress.

## **Safety Notes for Festival Firecracker Shops**

- **Avoid overcrowding inside shops** — keep aisles clear.
- **No smoking near stalls** — sparks can ignite fireworks.
- **Keep water/sand buckets ready** — for small fires.
- **Limit storage indoors** — large stockpiles increase fire risk.
- **District authorities** often regulate licensing and safety checks during festive seasons.



## First Aid & Emergency Response

Immediate steps for firecracker burns and wounds:

1. **Ensure safety:** Move victims away from active fireworks and crowds.
2. **Cool the burn:** Place under cool running water for 15–20 minutes (never ice or butter).
3. **Remove tight items:** Rings, bangles, or shoes before swelling sets in.
4. **Cover wound:** Use sterile gauze or clean cloth; avoid cotton wool or greasy dressings.
5. **Control bleeding:** Apply firm pressure with clean gauze; elevate injured limb.
6. **Eye injuries:** Rinse gently with clean water; do not rub; seek ophthalmic care immediately.
7. **Severe cases:** Burns larger than palm size, deep wounds, or injuries to face/genitals require urgent hospital care.
8. **Tetanus protection:** Victims should receive tetanus shots if wounds are open.



Given the large gatherings during Christmas services and celebrations, fire and structural safety assessments are conducted in all major venues, including churches and community halls.

These audits ensure:

- Availability and proper functioning of fire extinguishers
- Clearly marked and unobstructed emergency exits
- Compliance with electrical safety standards, including safe wiring and load management

Regular inspections and corrective actions significantly reduce the risk of fire accidents, electrical hazards, and panic situations during crowded events.

## II. UNSAFE FOOD AND DRINKS

During festive seasons like Christmas in Alappuzha, local authorities typically step up inspections to ensure food and drink safety, as large crowds and temporary vendors increase the risk of contamination and unsafe practices.

- Purpose: Ensure only healthy livestock enters the food supply chain.

### Relevance of inspections are important during Christmas

- High demand for street food, bakery items, and beverages
- Temporary stalls may lack proper hygiene facilities
- Risk of food adulteration and expired products
- Increased chances of foodborne illnesses
- Meat consumption increases significantly
- Risk of unsafe or rushed supply becomes higher
- Temporary vendors and overcrowded markets appear

### Key authorities involved

- Food Safety Department (Kerala)
- Health Inspectors from local municipalities
- Food Safety and Standards Authority of India



### Inspection of Chicken and Meat Stalls

During inspection visits, officials carefully assess the freshness of meat by closely observing its color, smell, and overall storage conditions to ensure it is safe for consumption. Fresh meat should have a natural appearance and odor, and must be stored under appropriate conditions to prevent spoilage and contamination. To further ensure safety, inspectors use devices such as thermometers to monitor and confirm that proper temperature control is maintained throughout storage and handling, which is critical in preventing bacterial growth.

In addition to quality checks, officials place strong emphasis on hygiene practices within the shop. They ensure that cutting surfaces, tools, and preparation areas are clean and sanitized, reducing the risk of cross-contamination. Food handlers are also expected to follow strict personal hygiene standards, including wearing gloves and masks while handling meat. Furthermore, inspectors verify whether the establishment holds valid licenses and approvals, ensuring that the shop operates legally and complies with all prescribed food safety regulations.



During inspection drives in Alappuzha, inspectors carefully examine multiple aspects of food safety and hygiene. They begin by assessing overall food hygiene, ensuring that cooking areas and utensils are clean and properly maintained. The personal hygiene of food handlers is also

checked, including the use of gloves, hairnets, and clean clothing while preparing and serving food.

Inspectors then evaluate food quality, paying close attention to the freshness of items and verifying the expiry dates of packaged foods. They also check for the use of artificial colors or adulterants, which can pose serious health risks. In addition, water and beverages are inspected to ensure that safe drinking water sources are used and that juices, soft drinks, and ice are prepared under hygienic conditions.

Another important aspect is licensing, where officials confirm whether vendors possess valid FSSAI registration. They also examine storage conditions, ensuring proper refrigeration for meat and dairy products and checking that food is adequately protected from flies, dust, and contamination.

During these inspections, several common violations are often identified, such as the sale of stale or expired bakery items, the use of contaminated water in juices, and the display of uncovered food exposed to dust and insects. In some cases, illegal additives are found in sweets and drinks, along with poor hygiene practices like the absence of gloves, hairnets, or clean uniforms.

Based on the findings, authorities take strict actions, including the immediate disposal of unsafe food, imposing fines or penalties on vendors, and even ordering the temporary closure of unhygienic stalls. Samples of food may also be collected for detailed laboratory testing.

The public also plays an important role in maintaining food safety. Residents and visitors are encouraged to report unsafe food practices to local health authorities, avoid overcrowded or visibly unhygienic stalls, and check for valid FSSAI license numbers before purchasing food.

To stay safe, consumers should follow basic safety tips, such as choosing freshly prepared hot food, avoiding cut fruits or uncovered items, drinking bottled or boiled water, and being cautious when consuming street-side juices and ice.

### **III. Crowd Related Injuries**



Crowd-related injuries are a significant concern during festivals, public gatherings, and busy market periods, especially in places like Alappuzha where large numbers of people live in limited spaces. These injuries often occur due to overcrowding, poor crowd management, or sudden panic situations. Common incidents include slips, trips, and falls caused by congested pathways, as well as minor cuts, bruises, and sprains. In more serious situations, uncontrolled crowd movement can lead to stampedes, resulting in crush injuries, breathing difficulties, and even life-threatening conditions.

To reduce such risks, authorities and organizers must ensure proper crowd control measures, including regulated entry and exit points, clear pathways, and the presence of trained personnel to manage movement. Adequate lighting, public announcements, and visible signage also help guide people safely. From the public's side, individuals should avoid overcrowded areas, remain calm in dense gatherings, and follow instructions given by officials. Being aware of surroundings and moving cautiously can greatly reduce the chances of injury during crowded events.

**Anticipated physical risks:**

- **Stampedes and Crush Injuries:** Caused by large crowds moving in different directions, sudden surges, or panic in restricted spaces.
- **Falls and Fractures:** Often occurring on slippery riverbanks during boat races or in overcrowded pathways.
- **Abrasions:** Specific rituals like the "Urulyarcha" (crawling/rolling penance) at Arthunkal and Kanichukulangara can lead to physical exhaustion and abrasive skin injuries from sandy surfaces.
- **Fainting and Syncope:** Common among elderly devotees due to prolonged standing, heat exposure, and dehydration.

### ***Medical Preparedness and Response***

To manage these injuries, the plans mandate the following on-site resources:

- Medical Aid Posts (MAPs): Strategically located at high-density points (e.g., beach entry gates, main stages, and food courts).
- Triage System: Use of the START (Simple Triage and Rapid Treatment) method to categorize injuries:
  - **RED (Immediate):** Critical injuries like airway obstruction or uncontrolled bleeding.
  - **YELLOW (Delayed):** Serious but stable injuries like fractures.
  - **GREEN (Minor):** "Walking wounded" with minor injuries.
  - **BLACK (Deceased):** No signs of life.
- Equipment: MAPs are equipped with stretchers, wheelchairs, emergency drugs, oxygen cylinders, and basic resuscitation tools like AEDs and Ambu bags.

### ***Evacuation and Stabilization Protocols***

- Ambulance Deployment: Both Basic Life Support (BLS) and Advanced Life Support (ALS) units are positioned at key exit points.
- Green Channels: Dedicated "Ambulance-Only" lanes maintained by police to ensure the "Golden Hour" is not lost in traffic congestion.
- Referral Network: Primary stabilization occurs on-site, with rapid evacuation to secondary hubs like General Hospital Alappuzha or tertiary care at Government T.D. Medical College (MCH) Vandanam for major trauma.

### ***Preventive Mitigation Strategies***

- Crowd Flow Planning: Implementation of one-way pedestrian traffic (e.g., "North-In, West-Out") to prevent bi-directional friction.
- Barricading: Use of "U-shaped" or "Snake" barricades to break large masses into manageable sections and protect people in the center from lateral pressure.
- Pressure Release Gates: High-density zones must have gates that can be opened instantly if crowd density becomes dangerous.



#### IV. Medical Emergency Teams

- **Meaning:** Paramedics, doctors, and first-aid volunteers stationed near festival sites.
- **Festival Context:** Large crowds often lead to health emergencies like fainting, dehydration, or cardiac events.
- **Role:** Provide immediate medical care, stabilize patients, and coordinate hospital transfers.

#### Ambulance Services

- **Role:** Ambulances are stationed near festival sites to provide immediate transport for injured or ill individuals.
- **Preparedness:** Equipped with stretchers, oxygen cylinders, defibrillators, and trained paramedics.
- **Benefit:** Rapid evacuation from crowded areas to hospitals, minimizing delays in treatment.

#### Fire Force Units

- **Role:** Fire engines and rescue teams are deployed to handle fire outbreaks, electrical hazards, or structural collapses.
- **Preparedness:** Units carry extinguishers, water hoses, ladders, and protective gear.
- **Benefit:** Quick suppression of fire incidents, preventing escalation and protecting both people and property.

### **First-Aid Teams**

- **Role:** Volunteers or medical staff positioned at church grounds, roadside stalls, and public gathering points.
- **Preparedness:** Stocked with bandages, antiseptics, IV fluids, and basic emergency medicines.
- **Benefit:** Provides immediate care for minor injuries, dehydration, or fainting before hospital transfer

## **V. Disaster Management Units**

- **Meaning:** District-level disaster response teams under Kerala State Disaster Management Authority (KSDMA).
- **Festival Context:** Handle large-scale emergencies such as floods, stampedes, or structural collapses.
- **Role:** Coordinate between police, fire, medical, and volunteers to ensure unified response.

## **VI. Preparedness for Specific Emergencies**

- **Road Traffic Accidents:** With heavy inflow of pilgrims and visitors, traffic accidents are common. Ambulances and police patrols are kept ready.
- **Fire Incidents:** Electrical overloads, fireworks, or cooking stalls can trigger fires. Fire units are pre-positioned.
- **Medical Emergencies:** Cardiac events, dehydration, and food poisoning are anticipated risks in crowded, festive environments. Medical teams prepare with defibrillators, IV fluids, and antidotes.

## C. Establish a Central Control Room

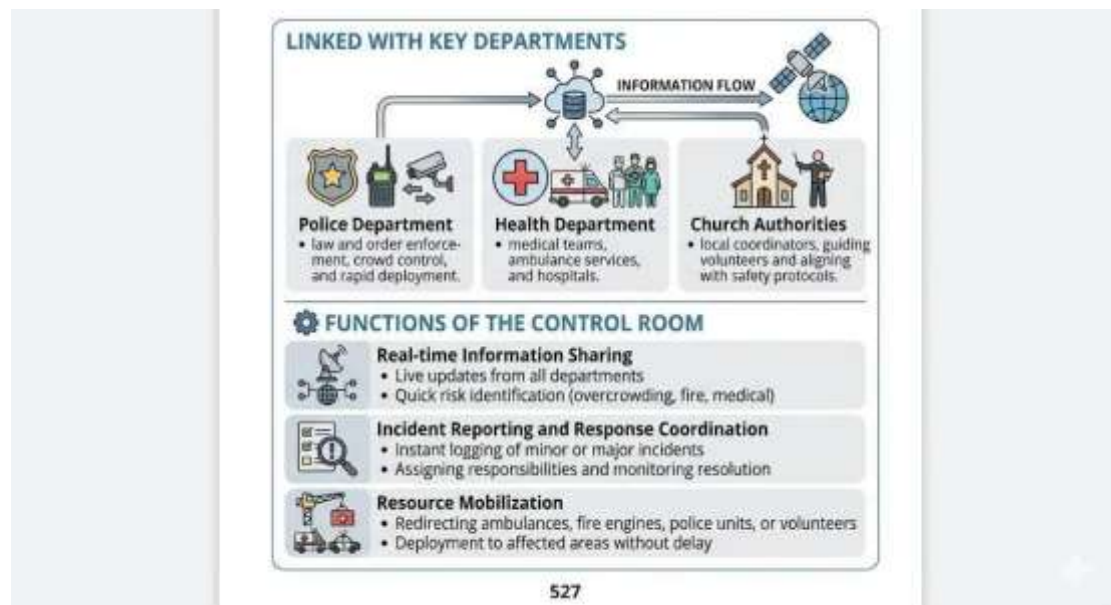
A **Central Control Room** is set up as the nerve center of operations during the festival. It functions as the single point of contact for all emergency services, ensuring that information flows seamlessly and decisions are made quickly.

### *Linked with Key Departments*

**Communication Redundancy:** Mention backup communication methods (e.g., satellite phones or dedicated radio frequencies) in case local cellular networks become congested due to the crowd.

**Data Logging:** Specify that the CCR should maintain a digital log of all incidents to help with post-event analysis and future planning.

**Public Address Integration:** Connecting the CCR directly to the event's PA system allows for instant, coordinated announcements or evacuation instructions if needed.



- **Police Department:** Provides law and order enforcement, crowd control, and rapid deployment of personnel. The control room receives real-time updates from patrol units and CCTV surveillance.

- **Health Department:** Coordinates medical teams, ambulance services, and hospitals. Any medical emergency reported is instantly relayed for immediate response.
- **Church Authorities:** Act as local coordinators, guiding volunteers and ensuring that religious activities align with safety protocols. They provide ground-level information about crowd size, entry/exit points, and ongoing rituals.

#### ⚙️ *Functions of the Control Room*

- **Real-time Information Sharing:** All departments feed live updates into the system, allowing quick identification of risks such as overcrowding, fire hazards, or medical emergencies.
- **Incident Reporting and Response Coordination:** Any incident—whether minor or major—is logged instantly. The control room assigns responsibilities, dispatches teams, and monitors resolution.
- **Resource Mobilization:** Based on the situation, the control room can redirect ambulances, fire engines, police units, or volunteers to the affected area without delay.

## ***D. Public Helpline Services***

### *i. Emergency Reporting*

- **Meaning:** *A dedicated phone line where citizens can immediately report accidents, fires, or suspicious activities.*
- **Festival Context:** *During Christmas gatherings, this ensures that any incident inside or outside church premises is quickly communicated to the control room.*
- **Benefit:** *Speeds up response time by connecting the public directly to police, fire, or medical teams.*

### *ii. Lost and Found Assistance*

- **Meaning:** *A helpline service to report missing persons, belongings, or children separated from families.*
- **Festival Context:** *Large crowds at Alappuzha churches and beachside celebrations often lead to confusion and misplaced items.*

- **Benefit:** Provides reassurance to families and helps authorities reunite people or recover lost valuables.

**iii. Medical Support Requests**

- **Meaning:** Citizens can call the helpline to request ambulances, first-aid, or medical advice.
- **Festival Context:** Useful for sudden health issues like fainting, dehydration, or cardiac emergencies during crowded services.
- **Benefit:** Ensures immediate medical attention and smooth coordination with hospitals.

Level	Phase	Focus	Outcome
I	Plan during Advent	Early risk mitigation with calendars, checklists, and hazard assessments	Hazards identified and minimized before the event
II	Prepare before the Event	Strengthened surveillance using binoculars, CCTV, and volunteer coordination	Crowds monitored and risks reduced

III	<b>Operate on Event Day</b>	Efficient emergency response with ambulances, medical teams, and communication headsets	Quick response to incidents and medical emergencies
IV	<b>Unify Outcomes</b>	All efforts converge to safe, organized, and health-conscious celebrations	Community safety and smooth festival experience

### On site preparedness structure :

Alappuzha district has 250 - 300 churches across different denominations, reflecting its deep Christian heritage. The largest groups are Roman Catholics (both Latin and Syro-Malabar), Orthodox Syrian, Mar Thoma, and CSI (Church of South India).

#### Estimated Number of Churches in Alappuzha districts:

- ★ **Roman Catholic (Latin + Syro-Malabar + Syro-Malankara):** ~150+ churches in Alappuzha district.
- ★ **Malankara Orthodox Syrian Church:** ~50–60 parishes.
- ★ **Mar Thoma Syrian Church:** ~40–50 parishes.
- ★ **CSI (Church of South India):** ~30–40 congregations.
- ★ **Pentecostal/Independent:** ~20–30 active congregations.

Out of these churches only 16 churches are been selected and mapped with structured preparedness plans based on:

- Large-scale midnight masses with thousands attending.
- Community-driven events like carol competitions, crib exhibitions, and charity programs.

- Historic and cultural significance — many of these churches date back centuries and are architectural landmarks.
- Tourist attraction — visitors from across Kerala and beyond come to witness the festive atmosphere.

**1. Mount Carmel Roman Catholic Cathedral**



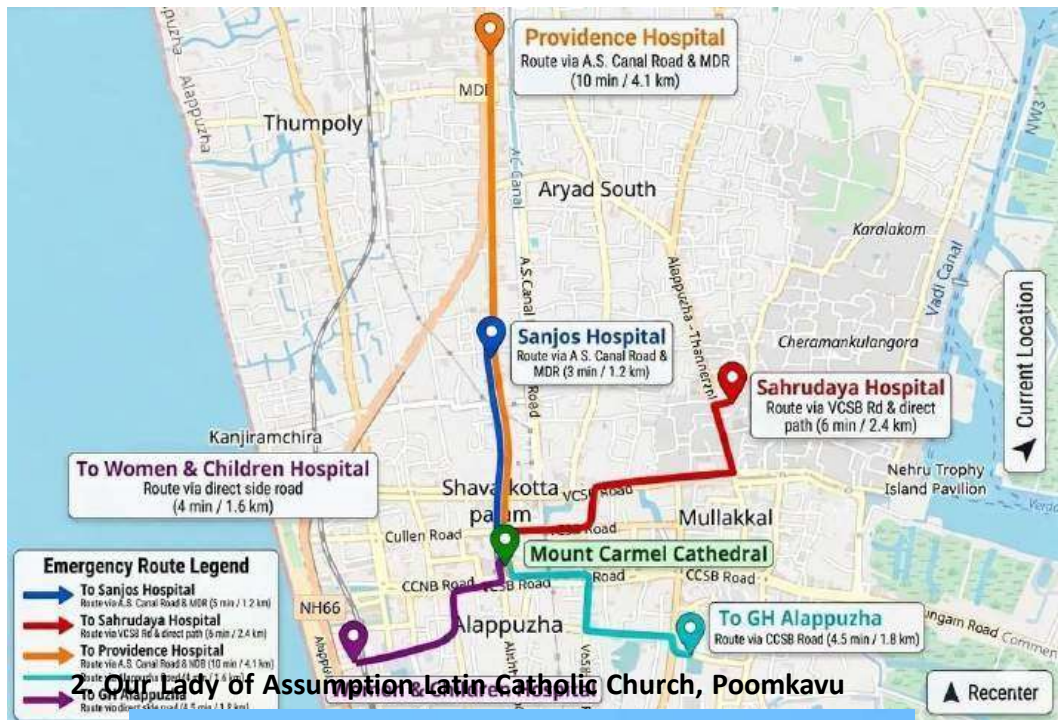
- **Location:** Convent Square, Sea View Ward, Alappuzha
- **Highlights:** One of the oldest and most prominent churches in Alappuzha. Known for its grand midnight mass, elaborate crib displays, and festive lighting.

Mount Carmel Cathedral in Alappuzha is surrounded by several government and private hospitals within a 2–5 km radius, ensuring quick access to emergency and routine care during Christmas celebrations.

**The nearest major facilities include:**

Facility	Type	Distance (approx.)	Travel Time	Emergency Access
General Hospital Alappuzha	Govt	~2 km	5–7 min	24 hrs

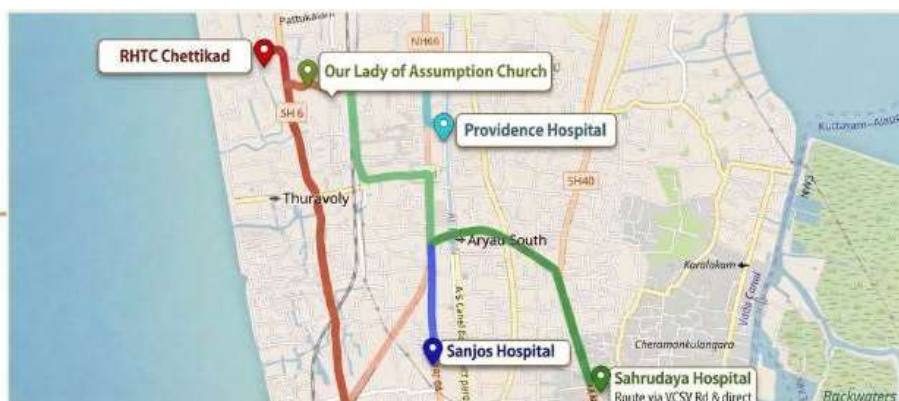
Women & Children Hospital	Govt	~2 km	6–10 min	24 hrs
Sanjos Hospital	Private	~2 km	5–10 min	24 hrs
Providence Hospital	Private	~4 km	10–15 min	24 hrs
Sahrudaya Hospital	Private	~3 km	6–10 min	24 hrs



- **Location:** Pathirappally, Poomkavu, Alappuzha
- **Highlights:** Famous for community carol singing and large gatherings during Christmas Eve.

The nearest major facilities include:

Hospital	Type	Distance	Travel Time	Emergency Access
General Hospital Alappuzha	Govt	~5 km	10–15 min	24 hrs
Women & Children Hospital	Govt	~5.5 km	12–15 min	24 hrs
RHTC Chettikad	Govt	~1 km	3–5 min	24 hrs
Providence Hospital	Private	~2 km	5–7 min	24 hrs
Sanjos Hospital	Private	~6 km	12–15 min	24 hrs
Sahrudaya Hospital	Private	~6 km	12–15 min	24 hrs



### ***3. Mar Gregorios Syro-Malabar Church, Punnapra***



- **Location:** Punnapra, Alappuzha
- **Highlights:** Hosts Christmas conventions and cultural programs alongside religious services.

**The nearest major facilities include:**

<b>Hospital</b>	<b>Type</b>	<b>Distance</b>	<b>Travel Time</b>	<b>Emergency Access</b>
-----------------	-------------	-----------------	--------------------	-------------------------

PHC Punnapra	Govt	~2 km	3–5 min	Daytime
General Hospital Alappuzha	Govt	~7 km	15–20 min	24 hrs
Women & Children Hospital	Govt	~8.5 km	15–20 min	24 hrs
Providence Hospital	Private	~13 km	20–22 min	24 hrs
Sanjos Hospital	Private	~11.5 km	15–20 min	24 hrs
Sahrudaya Hospital	Private	~9.5 km	15–20 min	24 hrs



**4. St. Mary's Forane Roman Catholic Church, Thankey**



- **Location:** Cherthala, near Alappuzha
- **Highlights:** A historic church with huge festive crowds, decorated courtyards, and traditional Christmas feasts.

**The nearest major facilities include:**

Hospital	Type	Distance	Travel Time	Emergency Access
Taluk HQ Hospital Cherthala	Govt	~2 km	5–7 min	24 hrs
CHC Thankey	Govt	~1 km	3–5 min	Daytime
Govt Ayurveda Hospital	Govt	~2.5 km	7–10 min	Daytime
SN Medical Mission Hospital	Private	~2 km	5–7 min	24 hrs



### 5. St. Thomas Roman Catholic Church (Thumpoly Church)



- **Location:** Thumpoly, Alappuzha
- **Highlights:** A pilgrimage shrine that becomes a hub of Christmas festivities, drawing large crowds for its decorated altar and festive music.

**The nearest major facilities include:**

Hospital	Type	Distance	Travel Time	Emergency Access
RHTC Chettikad	Govt	~1.5 km	5–8 min	24 hrs
General Hospital Alappuzha	Govt	~6 km	12–15 min	24 hrs
Women & Children Hospital	Govt	~6.5 km	12–15 min	24 hrs
Providence Hospital	Private	~0.5 km	2–3 min	24 hrs
Sanjos Hospital	Private	~7 km	15–20 min	24 hrs
Sahrudaya Hospital	Private	~7 km	15–20 min	24 hrs



## 6. St. Sebastian church , Arthukal



- **Location:** Arthunkal, Cherthala South, Alappuzha
- **Highlights:** Famous pilgrimage site with a grand carved teak altar depicting the Last Supper. Known for the Arthunkal Perunnal (annual feast) in January, attracting thousands of devotees.

**The nearest major facilities include:**

Hospital	Type	Distance	Travel Time	Emergency Access
FHC Cherthala South	Govt	~1 km	3–5 min	Daytime
Taluk Hospital Cherthala HQ	Govt	~8 km	15–20 min	24 hrs
Govt Ayurveda Hospital Cherthala	Govt	~9 km	15–20 min	Daytime
SN Medical Mission Hospital	Private	~8 km	15–20 min	24 hrs



## 7. St. George Church , Edathua

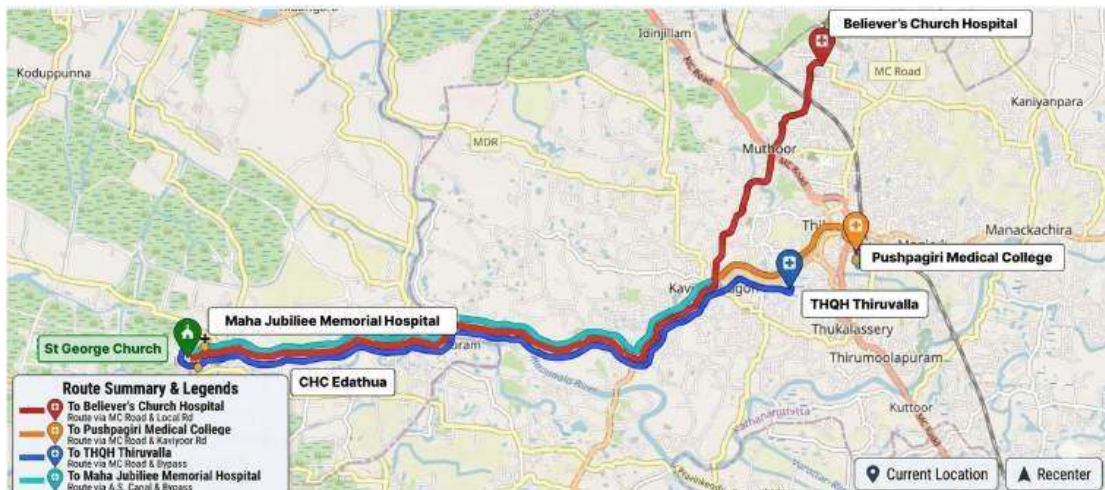


- **Location:** Edathua, Alappuzha

- **Highlights:** Established in 1810, this large church is a major pilgrim center. The Edathua Perunnal feast in May is one of the biggest Christian festivals in Kerala.

The nearest major facilities include:

Hospital	Type	Distance	Travel Time	Emergency Access
CHC Edathua	Govt	~1 km	3–5 min	Daytime
Taluk HQ Hospital Thiruvalla	Govt	~12 km	20–25 min	24 hrs
Mahajubilee Memorial Hospital	Private	~0.5 km	2–3 min	24 hrs
Pushpagiri Medical College	Private	~13 km	20–25 min	24 hrs
Believers Church Hospital	Private	~15 km	25–30 min	24 hrs



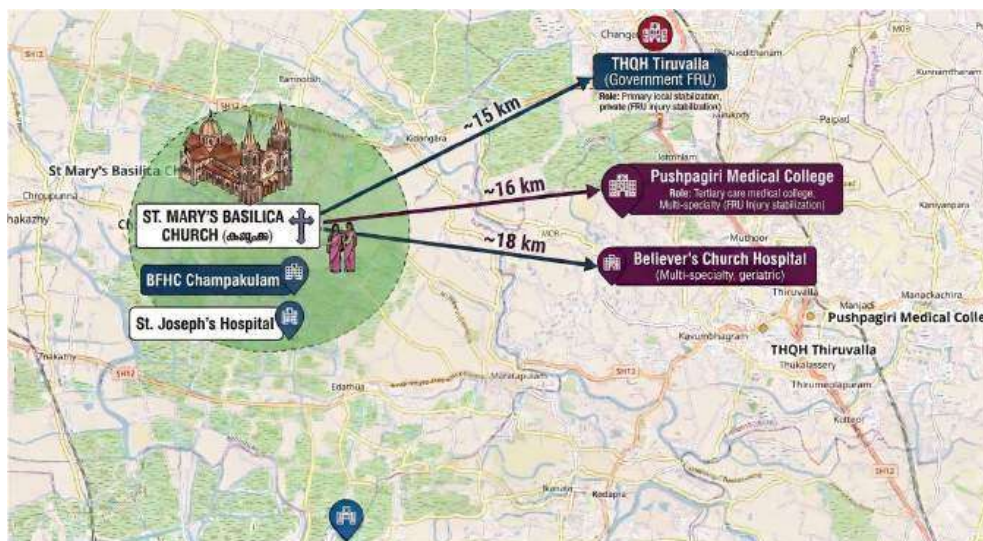
### 8. St. Mary's Basilica, Chempakulam, Kaloorkadu



- **Location:** Champakulam, Alappuzha
- **Highlights:** One of the oldest Christian churches in India, with Syrian Christian heritage dating back over 1,000 years. Elevated to Basilica status, it is historically linked to the arrival of Christianity in Kerala

**The nearest major facilities include:**

Hospital	Type	Distance	Travel Time	Emergency Access
BPFHC Champakulam	Govt	~1 km	3–5 min	Daytime
Taluk Hospital Thiruvalla	Govt	~15 km	25–30 min	24 hrs
St. Joseph's Hospital Champakulam	Private	~0.5 km	2–3 min	24 hrs
Pushpagiri Medical College	Private	~16 km	25–30 min	24 hrs
Believers Church Hospital	Private	~18 km	30–35 min	24 hrs



### 9. St. Joseph's Church, Kayalpuram, Pulincunnu

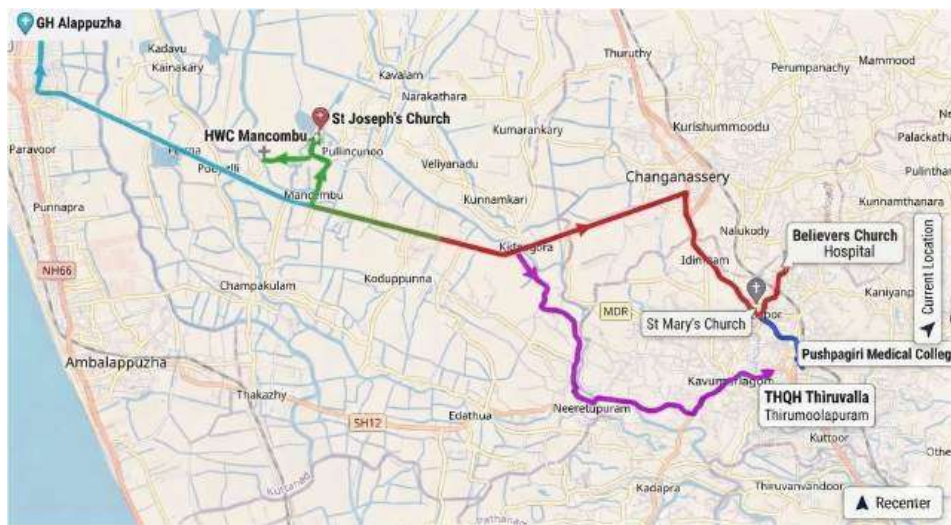


- **Location:** Kayalpuram Road, Pulincunnu, Alappuzha
- **Highlights:** A serene church located amidst the backwaters, known for its traditional boat processions during festivals.

**The nearest major facilities include:**

Hospital	Type	Distance	Travel Time	Emergency Access
HWC Mancombu	Govt	~3 km	5-8 min	Day Time
Taluk HQ Hospital Thiruvalla	Govt	~14 km	25–30 min	24 hrs

General Alappuzha	Hospital	Govt	~22 km	35–40 min	24 hrs
Pushpagiri College	Medical	Private	~15 km	25–30 min	24 hrs
Believers Hospital	Church	Private	~17 km	30–35 min	24 hrs



### 10. Mar Sleeva Forane Church, Pazhavangady



- **Location:** Pazhavangadi, Alappuzha town
- **Highlights:** A Syro-Malabar Catholic church with strong local community ties. Hosts vibrant liturgical celebrations and is a popular parish center.

**The nearest major facilities include:**

<b>Hospital</b>	<b>Type</b>	<b>Distance</b>	<b>Travel Time</b>	<b>Emergency Access</b>
General Hospital Alappuzha	Govt	~2 km	5–7 min	24 hrs
Urban Health and Wellness Centre	Govt	~1km	3-5 min	Daytime
Women & Children Hospital	Govt	~2.5 km	7–10 min	24 hrs
Sanjos Hospital	Private	~3 km	8–12 min	24 hrs
Sahrudaya Hospital	Private	~2.5 km	7–10 min	24 hrs
Providence Hospital	Private	~4 km	10–15 min	24 hrs



### 11. Kreupasanam Marian Shrine, Kalavoor



- **Location:** Kalavoor, Alappuzha
- **Highlights:** Famous Marian shrine and retreat center, attracting pilgrims seeking blessings and healing. Known for special novenas and Marian devotions.

The nearest major facilities include:

Hospital	Type	Distance	Travel Time	Emergency Access
FHC Kalavoor	Govt	~1 km	3–5 min	Daytime
General Hospital Alappuzha	Govt	~10 km	20–25 min	24 hrs
Women & Children Hospital	Govt	~11 km	20–25 min	24 hrs
Providence Hospital	Private	~4 km	8–10 min	24 hrs
Sanjos Hospital	Private	~12 km	20–25 min	24 hrs
Sahrudaya Hospital	Private	~12 km	20–25 min	24 hrs



## 12. St. Mary's Forane Church (Valiyapally) Pulinkunnu



**Location :** Pulinkunnu, Kuttanad (backwater region) on the banks of the Pampa River

**Distance:** ~17 km from Alappuzha town and ~16.5 km from railway station.

**Area type:** low-lying island/backwater zone → travel can be slower during rains/floods

**Highlights :** One of the oldest churches (~1450 AD) in Kerala, Portuguese-style architecture + Gothic facade, Scenic backwater setting (kayal in front), Major Syro-Malabar pilgrimage centre, Accessible by road + boat routes.

**The nearest major facilities include:**

Level	Hospital	Distance	Travel Time	Emergency Access

Immediate	THQH Pulinkunnu	~1 km	3–5 min	24 hrs
Basic	Pulinkunnu AYUSH PHC	~2km	10–15 min	24 hrs
Secondary	Alappuzha General Hospital	~17 km	12–15 min	24 hrs
Secondary(PVT)	Providence Hospital Thumpoly	~18 - 20 km	5–7 min	24 hrs
Advanced	Aster Medcity	~ 75- 80 km	12–15 min	24 hrs
Advanced	Ernakulam General Hospital	~ 70 km	12–15 min	24 hrs



**Emergency Contacts:**

Service	Number	Notes
Ambulance	108	Fastest, Free govt Service
Medical Transport	102	Non-critical transport
National Emergency	112	Police+ Ambulance

**13. St. Joseph's Roman Catholic Forane Church, Punnapra**



**Location:** Punnapra (near Paravoor), Alappuzha district, Kerala

**Highlights :** Roman Latin Catholic Forane Church under Alleppey Diocese

Established parish (early 20th century; recorded ~1915)

Dedicated to St. Joseph (Feast: May 1)

Important regional parish center (Forane) overseeing nearby churches

**The nearest major facilities include:**

<b>Level</b>	<b>Hospital</b>	<b>Distance</b>	<b>Travel Time</b>	<b>Emergency Access</b>
Immediate	THQH ALP	~5 - 6km	10 to 15 minutes	24 hrs
Immediate	Beach Hospital Alappuzha	~4 -5 km	10–15 min	24 hrs
Secondary	Alappuzha General Hospital	~6 - 7 km	15–20 min	24 hrs
Secondary	Providence Hospital Thumpoly	~8- 10 km	20-25 min	24 hrs
Advanced	Vandanam Medical College	~ 7- 9 km	20–25 min	24 hrs

#### **14. St. Peter's Roman Catholic Church, Vattayal**



**Location:** Vattayal, urban Alappuzha town area, Kerala

**Highlights:** Dedicated to St. Peter (Feast: Feb 22), Roman Latin Catholic parish church under Alleppey Diocese, Close to parish institutions (school, parish hall nearby).

**The nearest major facilities include:**

Level	Hospital	Distance	Travel Time	Emergency Access
Immediate	W & C , ALP	~ 1.5 km	5 to 10 minutes	24 hrs
Immediate	THQH Alappuzha	~2-3km	5 to 10 min	24 hrs
Secondary	Alappuzha General Hospital	~3- 4 km	10–15 min	24 hrs

Secondary	Providence Hospital Thumpoly	~5- 6 km	15 to 20 min	24 hrs
Advanced	Vandanam Medical College	~ 8 to 10 km	20–25 min	24 hrs

### 15. St. George Syro Malabar Catholic Church, Chakkara Kadavu Pally

**Location:** Chakkara Kadavu Pally, Sea View Ward, Alappuzha town

**Highlights:** Dedicated to St. George (popular saint in Kerala Christianity), Active parish serving town-based Catholic community.

**The nearest major facilities include:**

Type	Hospital	Distance	Travel Time	Emergency Access
Govt	Alappuzha General Hospital	~ 1.5 km	5 to 10 minutes	24 hrs
Pvt	Believers Medical Centre, ALP	~2-3km	5 to 10 min	24 hrs
Pvt	Sahrudaya Hospital	~3- 4 km	10–15 min	24 hrs

Pvt	Sanjose Hospital	~4- 5 km	10 to 5 min	24 hrs
Govt	Vandanam Medical College	~ 8 to 10 km	20–25 min	24 hrs

## E. Reporting & Review

### 1. Daily Reporting

- **To the District Medical Officer (DMO):** All medical incidents, hospital admissions, and health-related emergencies are documented and shared daily. This ensures that the DMO has a clear picture of public health risks during the festival.
- **To the District Collector:** Law and order updates, fire incidents, crowd management issues, and inspection reports are submitted. The Collector oversees overall coordination and resource allocation.
- **Purpose:** Continuous monitoring allows authorities to detect patterns early, respond to emerging risks, and maintain accountability across departments.

### 2. Post-Event Review

- **Inspection Records:** A detailed account of how many stalls, fireworks vendors, and temporary structures were inspected.
- **Violations Detected:** Documentation of illegal activities such as unauthorized fireworks sales, unsafe food stalls, or structural hazards.
- **Actions Taken:** Includes fines, closures, warnings, or arrests carried out during the festival period.
- **Medical & Rescue Statistics:** Number of ambulance calls, fire incidents handled, and first-aid cases treated.
- **Recommendations for Next Year:** Suggestions for improving preparedness, such as stricter licensing, better volunteer training, or enhanced surveillance systems.

### 3. Benefits of Reporting & Review

- **Transparency:** Ensures that the public and higher authorities know what measures were taken.
- **Learning & Improvement:** Each year’s review becomes a guide for better preparedness in the next festival cycle.
- **Accountability:** Departments are held responsible for their roles, ensuring no gaps in safety management.
- **Community Trust:** Regular reporting reassures citizens that their safety is prioritized during large gatherings.

## Post-Event Management

### *1. Health & Medical*

- Monitor hospitals and clinics for cases of alcohol poisoning, food poisoning, injuries, and
- respiratory infections
- Ensure 24–48 hour alert status in emergency departments after celebrations
- Track symptoms of communicable diseases (fever, diarrhea, flu-like illness) through surveillance systems
- Deploy rapid response teams if unusual case clusters are detected
- Issue public health advisories via media on hydration, hygiene, and when to seek medical help

### *2. Alcohol Control*

- Conduct inspections of bars, shops, and informal vendors for adulterated or illegal liquor
- Collect and test suspected samples of wine/liquor
- Take legal action against unauthorized sales and seize unsafe products
- Maintain records of alcohol-related accidents and hospital admissions
- Launch awareness drives on safe alcohol consumption and risks of illicit liquor

### *3. Crowd Injury Follow-up*

- Ensure treatment and follow-up care for injured persons
- Maintain a centralized injury reporting system
- Analyze incidents (falls, overcrowding, stampede risks) to identify cause and location
- Conduct post-event review meetings with police and event organizers
- Mark high-risk zones for improved planning in future events

#### ***4. Firecracker Safety***

- Provide immediate care for burns, eye injuries, and smoke inhalation cases
- Deploy teams to collect and safely dispose firecracker debris
- Inspect public areas for unexploded or hazardous materials
- Conduct fire risk assessments in crowded and residential zones
- Promote awareness on safe disposal and environmental impact

#### ***5. Temporary Stall Management***

- Identify and remove unauthorized or unsafe temporary stalls
- Ensure safe dismantling of legal stalls (electrical connections, gas cylinders, structures)
- Clear leftover materials such as wood, plastic sheets, and decorations
- Inspect sites for sanitation and hygiene compliance after removal
- Prevent re-encroachment in cleared public spaces

#### ***6. Waste Management & Sanitation***

- Deploy municipal workers for immediate large-scale cleaning operations
- Collect and dispose food waste to prevent foul smell and pest breeding
- Ensure segregation of biodegradable and non-biodegradable waste
- Transport waste to designated disposal or recycling facilities
- Disinfect public areas to prevent health hazards and disease spread
- Monitor water bodies (important in Alappuzha) for pollution from waste dumping

#### ***7. Traffic & Infrastructure Restoration***

- Remove temporary barricades, stalls, and obstructions from roads
- Clear congestion points and ensure smooth traffic flow restoration
- Inspect roads, streetlights, and public utilities for damage

- Repair footpaths, drainage systems, and public facilities
- Reopen normal routes for emergency services access
- Evaluate traffic management effectiveness for future improvements

## **Post-event Review**

### ***1. Number of Inspections Conducted***

- Every inspection carried out during the festival period is documented, including checks on temporary stalls, fireworks vendors, food outlets, and crowd management arrangements.
- This record helps measure the scale of monitoring and shows whether coverage was comprehensive across all high-risk areas.
- Comparing inspection numbers with previous years highlights whether vigilance has improved or declined.

### ***2. Violations Detected***

- Violations may include illegal stalls operating without permits, unsafe fireworks being sold, unhygienic food practices, or structural hazards in temporary setups.
- Each violation is categorized by severity (minor, moderate, major) to prioritize corrective action.
- Detailed notes are kept on the location, type of violation, and the responsible party, ensuring accountability.

### ***3. Actions Taken***

- Authorities record the specific measures taken against violations, such as issuing fines, closing unsafe stalls, confiscating illegal fireworks, or giving formal warnings.
- In serious cases, police intervention may be noted, including arrests or legal proceedings.
- This section demonstrates that enforcement was not just symbolic but actively carried out to protect public safety.

### ***4. Recommendations for Next Year***

- Based on lessons learned, officials propose improvements such as stricter licensing requirements, better volunteer training, enhanced surveillance technology, or more medical teams on standby.
- Recommendations also include community awareness campaigns—for example, promoting green crackers or encouraging collective fireworks displays instead of individual use.
- These suggestions form the foundation for a stronger preparedness plan in the following year, ensuring continuous improvement.

### **In conclusion:**

The Christmas festival in Alappuzha is not only a time of joy and devotion but also a period that demands heightened vigilance and organized management. By adopting a three-tier preparedness strategy—planning during Advent, strengthening surveillance before the event, and ensuring efficient emergency response on the day itself—the district creates a robust safety framework.

The integration of central command systems, rapid response mechanisms, and public helpline services ensures that emergencies are addressed swiftly and resources are mobilized without delay. Special focus on firecracker safety, crowd management, and temporary stall inspections reflects the district’s commitment to minimizing risks. Public awareness campaigns further empower citizens to celebrate responsibly, while continuous reporting and post-event reviews guarantee transparency, accountability, and improvement year after year.

Ultimately, this preparedness and management plan transforms Christmas celebrations in Alappuzha into safe, organized, and health-conscious community events, where faith and festivity flourish alongside resilience and responsibility.

Effective post-event management in Alappuzha ensures that the impact of large-scale Christmas celebrations is minimized. A coordinated, multi-departmental approach helps prevent secondary incidents, protects public health, and restores the district to normal functioning quickly and safely.

## Sop for Common Hazards

### 1. SOP: Food Poisoning Management in Mass Gatherings

#### 1. Purpose

To ensure rapid detection, response, and treatment of food poisoning cases during Christmas celebrations, minimizing morbidity and preventing escalation.

#### 2. Scope

Applicable to all event venues (churches, beaches, houseboats, resorts) where food is served or consumed during the festive period.

#### 3. Risk Identification

- Contaminated food from temporary stalls or caterers.
- Improper storage of perishable items.
- Consumption of unregulated street food.
- Large-scale community feasts without adequate hygiene checks.

#### 4. Preparedness Measures

- Food Safety Inspections: Conducted by Food Safety Officers before events.
- Vendor Licensing: Only registered caterers and bakeries permitted.
- Awareness Campaigns: Public advisories on safe food practices.
- Rapid Response Medical Teams (RRMT): Deployed at high-risk venues.

#### 5. Response Protocol Detection

- On-site medical posts monitor for symptoms: nausea, vomiting, diarrhea, abdominal pain.
- Immediate reporting to the Incident Commander and District Medical Officer.

#### ***Triage***

- Mild cases: Treated at First Aid Posts with oral rehydration.
- Moderate cases: Shifted to nearest hospital via BLS ambulance.

- Severe cases: Evacuated using ALS ambulance to Medical College Hospital.

### ***Containment***

- Food samples collected and tested by the Food Safety Department.
- Source vendor immediately suspended pending investigation.

## 6. Command & Communication

- Incident Commander: District Collector.
- Medical Lead: District Medical Officer.
- Food Safety Lead: Chief Food Safety Officer.
- Communication: Real-time updates via WhatsApp groups and control room hotline.

## 7. Resource Deployment

- Ambulances: 2 ALS + 4 BLS dedicated for food poisoning emergencies.
- Medical Staff: 1 doctor + 2 nurses per aid post.
- Support: Red Cross volunteers for crowd management.

## 8. Evacuation & Referral

- Evacuation routes mapped to Alappuzha Medical College Hospital.
- Secondary referrals: Bishop Benziger Hospital, SD Mission Hospital.
- Mock drills conducted on 20 Dec for evacuation readiness.

## 9. Hospital Preparedness

- Red Alert: Hospitals on standby during 24–25 Dec and 31 Dec.
- Crisis Teams: Emergency physicians, gastroenterologists, and lab staff mobilized.
- Protocols: Rapid IV hydration, electrolyte balance, and toxicology testing.

## 10. Documentation & Reporting

- Incident reports filed within 24 hours.
- Consolidated summary shared with District Disaster Management Authority.

- Lessons learned incorporated into future preparedness plans

## **2. SOP: Alcohol-Related Accidents in Mass Gatherings**

### **1. Purpose**

To prevent and manage alcohol-related accidents and injuries during festive gatherings, ensuring public safety and timely medical response.

### **2. Scope**

Applicable to all celebration areas including beaches, roads, resorts, houseboats, and event venues.

### **3. Risk Identification**

- Drunk driving and road traffic accidents
- Drowning incidents near water bodies
- Physical altercations and violence
- Falls and injuries due to intoxication

### **4. Preparedness Measures**

- Police enforcement for drunk driving checks
- Awareness campaigns on responsible alcohol consumption
- Deployment of RRMT at high-risk zones
- Coordination with Excise Department

### **5. Response Protocol**

Detection: Identification of intoxicated individuals and accident victims

#### **Triage:**

- Mild: First aid and observation
- Moderate: BLS transport to nearby hospital
- Severe: ALS transfer to higher center

#### **Containment:**

- Immediate law enforcement intervention
- Crowd control to prevent escalation

#### **6. Command & Communication**

- Incident Commander: District Collector
- Medical Lead: District Medical Officer
- Law Enforcement Lead: District Police Chief
- Communication: Control room and emergency helpline

#### **7. Resource Deployment**

- Ambulances: ALS & BLS units
- Police patrol teams
- Medical staff at aid posts

#### **8. Evacuation & Referral**

- Referral to nearest hospitals and trauma care centers
- Pre-identified emergency routes

#### **9. Hospital Preparedness**

- Emergency units on standby
- Trauma and ICU readiness

#### **10. Documentation & Reporting**

- Incident reporting within 24 hours
- Review for preventive strategies

### **3. SOP: Adulterated Wine & Liquor**

#### **1. Purpose**

To detect, prevent, and manage health risks from consumption of adulterated alcohol.

## **2. Scope**

Applicable to licensed outlets, temporary stalls, and informal distribution points.

## **3. Risk Identification**

- Sale of illicit or spurious liquor
- Methanol poisoning cases
- Unregulated supply chains

## **4. Preparedness Measures**

- Strict inspection by Excise Department
- Monitoring of liquor outlets
- Public awareness on risks of illicit alcohol

## **5. Response Protocol**

Detection: Symptoms like blurred vision, vomiting, unconsciousness

### **Triage:**

- Mild: Observation and supportive care
- Moderate: Hospital referral
- Severe: ICU care and antidote therapy

### **Containment:**

- Seizure of suspected liquor
- Closure of source outlet

## **6. Command & Communication**

- Incident Commander: District Collector
- Excise Lead: Excise Officer
- Medical Lead: District Medical Officer

## **7. Resource Deployment**

- Ambulances and toxicology support

- Excise inspection squads

### **8. Evacuation & Referral**

- Immediate transfer to tertiary care hospitals

### **9. Hospital Preparedness**

- Availability of antidotes (e.g., fomepizole/ethanol)
- ICU and dialysis support

### **10. Documentation & Reporting**

- Case reporting and lab confirmation
- Legal action reports

## **4. SOP: Unsafe Food and Drinks**

### **1. Purpose**

To prevent illness due to unsafe food and beverages during gatherings.

### **2. Scope**

All food distribution points including stalls and community feasts.

### **3. Risk Identification**

- Contaminated water or beverages
- Poor hygiene practices
- Unlicensed vendors

### **4. Preparedness Measures**

- Inspection of food and water quality
- Vendor regulation
- Public advisories

### **5. Response Protocol**

Detection: GI symptoms among attendees

**Triage:** Similar to food poisoning SOP

**Containment:**

- Stop distribution of unsafe items
- Sample testing

## 6. Command & Communication

- Incident Commander: District Collector.
- Medical Lead: District Medical Officer.
- Food Safety Lead: Chief Food Safety Officer.
- Communication: Real-time updates via WhatsApp groups and control room hotline.

## 7. Resource Deployment

- Ambulances: 2 ALS + 4 BLS dedicated for food poisoning emergencies.
- Medical Staff: 1 doctor + 2 nurses per aid post.
- Support: Red Cross volunteers for crowd management.

## 8. Evacuation & Referral

- Evacuation routes mapped to Alappuzha Medical College Hospital.
- Secondary referrals: Bishop Benziger Hospital, SD Mission Hospital.
- Mock drills conducted on 20 Dec for evacuation readiness.

## 9. Hospital Preparedness

- Red Alert: Hospitals on standby during 24–25 Dec and 31 Dec.
- Crisis Teams: Emergency physicians, gastroenterologists, and lab staff mobilized.
- Protocols: Rapid IV hydration, electrolyte balance, and toxicology testing.

## 10. Documentation & Reporting

- Incident reports filed within 24 hours.

- Consolidated summary shared with District Disaster Management Authority.
- Lessons learned incorporated into future preparedness plans

## 5. SOP: Communicable Diseases in Mass Gatherings

### 1. Purpose

To prevent outbreak and transmission of infectious diseases.

### 2. Scope

All crowded gatherings during festive events.

### 3. Risk Identification

- Respiratory infections
- Waterborne diseases
- Close-contact transmission

### 4. Preparedness Measures

- Surveillance systems
- Vaccination campaigns (if applicable)
- Hygiene promotion (handwashing, masks if needed)

### 5. Response Protocol

Detection: Fever, cough, diarrhea clusters

**Triage:** Isolation and treatment

#### Containment:

- Isolation of suspected cases
- Contact tracing

## 6. Command & Communication

- Incident Commander: District Collector.
- Medical Lead: District Medical Officer.

- Food Safety Lead: Chief Food Safety Officer.
- Communication: Real-time updates via WhatsApp groups and control room hotline.

## 7. Resource Deployment

- Ambulances: 2 ALS + 4 BLS dedicated for food poisoning emergencies.
- Medical Staff: 1 doctor + 2 nurses per aid post.
- Support: Red Cross volunteers for crowd management.

## 8. Evacuation & Referral

- Evacuation routes mapped to Alappuzha Medical College Hospital.
- Secondary referrals: Bishop Benziger Hospital, SD Mission Hospital.
- Mock drills conducted on 20 Dec for evacuation readiness.

## 9. Hospital Preparedness

- Red Alert: Hospitals on standby during 24–25 Dec and 31 Dec.
- Crisis Teams: Emergency physicians, gastroenterologists, and lab staff mobilized.
- Protocols: Rapid IV hydration, electrolyte balance, and toxicology testing.

## 10. Documentation & Reporting

- Incident reports filed within 24 hours.
- Consolidated summary shared with District Disaster Management Authority.
- Lessons learned incorporated into future preparedness plans

## 6. SOP: Crowd-Related Injuries

### *1. Purpose*

To prevent and manage injuries due to overcrowding and stampede situations.

### *2. Scope*

All high-density gathering locations.

### **3. Risk Identification**

- Stampede risk
- Falls and trampling
- Structural collapse

### **4. Preparedness Measures**

- Crowd control planning
- Barricading and regulated entry
- Police deployment

### **5. Response Protocol**

Detection:                      Sudden                      crowd                      surge                      incidents

#### **Triage:**

- Minor injuries: First aid
- Major trauma: Hospital referral

#### **Containment:**

- Immediate crowd dispersal
- Route clearance

### **6. Command & Communication**

- Incident Commander: District Collector.
- Medical Lead: District Medical Officer.
- Food Safety Lead: Chief Food Safety Officer.
- Communication: Real-time updates via WhatsApp groups and control room hotline.

### **7. Resource Deployment**

- Ambulances: 2 ALS + 4 BLS dedicated for food poisoning emergencies.
- Medical Staff: 1 doctor + 2 nurses per aid post.
- Support: Red Cross volunteers for crowd management.

## 8. Evacuation & Referral

- Evacuation routes mapped to Alappuzha Medical College Hospital.
- Secondary referrals: Bishop Benziger Hospital, SD Mission Hospital.
- Mock drills conducted on 20 Dec for evacuation readiness.

## 9. Hospital Preparedness

- Red Alert: Hospitals on standby during 24–25 Dec and 31 Dec.
- Crisis Teams: Emergency physicians, gastroenterologists, and lab staff mobilized.
- Protocols: Rapid IV hydration, electrolyte balance, and toxicology testing.

## 10. Documentation & Reporting

- Incident reports filed within 24 hours.
- Consolidated summary shared with District Disaster Management Authority.
- Lessons learned incorporated into future preparedness plans

## 7. SOP: Firecracker Injuries

### **1. Purpose**

To prevent and manage injuries caused by firecrackers.

### **2. Scope**

All areas where fireworks are used.

### **3. Risk Identification**

- Burns and blast injuries
- Eye injuries
- Fire hazards

### **4. Preparedness Measures**

- Regulation of firecracker use
- Public awareness

- Fire force readiness

### **5. Response Protocol**

Detection: Burn or blast injury cases

#### **Triage:**

- Minor burns: First aid
- Severe burns: Immediate referral

#### **Containment:**

- Fire control measures
- Restriction enforcement

### **6. Command & Communication**

- Incident Commander: District Collector.
- Medical Lead: District Medical Officer.
- Food Safety Lead: Chief Food Safety Officer.
- Communication: Real-time updates via WhatsApp groups and control room hotline.

### **7. Resource Deployment**

- Ambulances: 2 ALS + 4 BLS dedicated for food poisoning emergencies.
- Medical Staff: 1 doctor + 2 nurses per aid post.
- Support: Red Cross volunteers for crowd management.

### **8. Evacuation & Referral**

- Evacuation routes mapped to Alappuzha Medical College Hospital.
- Secondary referrals: Bishop Benziger Hospital, SD Mission Hospital.
- Mock drills conducted on 20 Dec for evacuation readiness.

### **9. Hospital Preparedness**

- Red Alert: Hospitals on standby during 24–25 Dec and 31 Dec.

- Crisis Teams: Emergency physicians, gastroenterologists, and lab staff mobilized.
- Protocols: Rapid IV hydration, electrolyte balance, and toxicology testing.

## 10. Documentation & Reporting

- Incident reports filed within 24 hours.
- Consolidated summary shared with District Disaster Management Authority.
- Lessons learned incorporated into future preparedness plans

## 7. SOP: Waste Management in Mass Gatherings

### 1. Purpose

To ensure hygienic waste disposal and prevent environmental and health hazards.

### 2. Scope

All event venues and surrounding areas.

### 3. Risk Identification

- Accumulation of solid waste
- Food waste leading to contamination
- Vector breeding

### 4. Preparedness Measures

- Adequate waste bins and segregation
- Deployment of sanitation workers
- Coordination with local body

### 5. Response Protocol

Detection: Waste overflow or unhygienic conditions

#### Action:

- Immediate waste clearance
- Disinfection measures

**Containment:**

- Prevent accumulation
- Regular monitoring

**6. Command & Communication**

- Local Self Government (LSGD) Lead
- Health Inspector

**7. Resource Deployment**

- Sanitation staff
- Waste collection vehicles
- Not applicable

**9. Hospital Preparedness**

- Prepared for vector-borne/related illnesses

**10. Documentation & Reporting**

- Daily sanitation reports
- Post-event review

**Contact Points**

<b>DMO Office</b>	<b>Collectorate Control Room</b>	<b>DISHA</b>
<b>0472 251650, 0472 252329</b>	<b>0477 2238630, 0477 2236837</b>	<b>1056</b>

## CONCLUSION

This preparedness plan ensures **proactive risk reduction, efficient emergency response, and coordinated inter-agency action** during all major festivals in Alappuzha district. Continuous review, training, and stakeholder engagement are critical to maintaining readiness and safeguarding public health.