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Department of Health Services

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Government of Kerala  
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# **PANDEMIC MANAGEMENT PLAN**

District Medical Office (Health), Kottayam

## Message



Kerala Health has consistently recognised that pandemic preparedness is no longer a standalone activity limited to the health sector, but an essential component of public safety, governance resilience, and sustainable development. The experiences of NIPAH outbreaks, COVID-19 pandemic, emerging zoonotic threats, climate-sensitive diseases, and increasing global interconnectedness have clearly demonstrated that future public health emergencies require continuous preparedness, rapid response systems, and strong institutional coordination. In this context, the preparation of comprehensive

Pandemic Preparedness Plans by the Department of Health and Family Welfare marks an important landmark towards strengthening Kerala's health security framework.

Today, pandemic management plans must be viewed through the broader lens of the One Health approach, which recognises the interconnectedness of human health, animal health, environmental systems, and ecological balance. Emerging infections are increasingly influenced by environmental degradation, climate variability, urbanisation, migration, and changing human-animal interactions. Therefore, effective preparedness requires coordinated action not only from the Health and Family Welfare Department, but also from departments including Animal Husbandry, Forests, Local Self Government, Disaster Management, Revenue, Education, Transport, Police, Water Resources, and Civil Supplies. Such interdepartmental convergence is critical for surveillance, risk communication, outbreak containment, logistics management, and continuity of essential services during emergencies.

Kerala has always demonstrated exemplary leadership in responding to public health challenges through timely action, scientific decision-making, community participation, and decentralised governance. The integration of pandemic management with disaster management systems further strengthens our capacity to respond to multiple emergencies simultaneously, including outbreaks occurring during floods, heat waves, or other natural disasters. The development of structured protocols, surveillance mechanisms, escalation frameworks, surge planning systems, infection prevention strategies, and institutional coordination models reflects the state's commitment to building a resilient and future-ready health system.

I am informed that Keralam is the only state where the pandemic preparedness plans have been prepared to such a depth right from the Panchayath level to District and at institutional level up to Medical Colleges. I place on record my sincere appreciation to all those who worked on this endeavour. The dedication, technical expertise, and coordinated efforts demonstrated by the state and district teams are truly commendable. I am confident that these plans will further strengthen Kerala's capacity to effectively prevent, detect, and respond to future public health emergencies while ensuring the safety and wellbeing of our people.

**Shri. K Muraleedharan**

**Minister for Health and Family Welfare and Devasom,  
Government of Kerala**

## Foreword



Kerala Health has been taking efforts to strengthen the ‘Health System’. The outbreak of diseases is common across the world. But the important thing that stands out is public awareness, their advisory-abiding behaviour, accessing hospital and getting diagnosed. That is the reason that outbreaks of Nipah or MPox are detected early and scientifically managed without any hassle.

Public health emergencies and pandemics remind us that health systems must remain prepared, responsive, and closely connected with the community. The recent experiences of the COVID-19 pandemic and various other communicable disease outbreaks especially involving newer pathogens have shown that timely preparedness, a coordinated response, and strong community participation are essential to the reduction of health risks and protection of lives. Kerala Health has managed COVID in exemplary ways with the involvement of people and all the line departments. Following the COVID pandemic, all international and national organizations have worked on preparedness and published guidelines, books and papers. But the most important question one should ask “Have we learned our lessons?” and “In what way these learning we have put to practice managing future health emergencies?”

It is with this thought process of “WHAT IS NEXT?”, a series of meetings were taken with Senior Medical Officers at the State level and district level of Directorate of Health Services. All officers of Medical Colleges and other stakeholders were also oriented to prepare the Pandemic Management Plans. Series of workshops were conducted in the districts to further follow up works done by the district teams.

The concept of ‘Learning by Doing’ was put to practice. NHM has deployed Epidemiologists in all Block FHCs. It was important to build their capacity to ensure day to day involvement in analysis and giving inputs for taking control and mitigation activities. Alappuzha district took the challenge and prepared a template. Dr Dileep and team took wholehearted efforts to work on this task. The prepared template was validated and sent to all concerned.

Later the district officers conducted series of capacity building meetings with all health as well as line departments functionaries. They submitted the first draft and conducted a workshop in which few plans of Panchayath, Block and major institutions in the Districts such as General Hospital, District Hospital and Medical Colleges were presented. Post discussions and getting feedback the district team fine-tuned the Plans. As Alappuzha district completed all Panchayaths and District Plans in depth, they were made into a ‘Learning Site’. Another concept of capacity building was put to practice. All the key officers of the respective districts were sent to Alappuzha in two batches to understand the method with which the Pandemic Preparedness Plans should be prepared. This exposure and interactions were very useful as most of the officers realised the importance of doing such planning.

The state level resource team comprising of Dr Mahesh N, Dr Ajan M J, Dr Harikumar S, Dr Bijoy E, Dr Dileepkumar S R and others supported the district teams and all the districts

prepared the Pandemic Management Plans. Dr Vinay Goyal then SMD NHM and Mr Rahul Sharma present SMD NHM provided their leadership to facilitate plans preparations.

Simultaneously this initiative was discussed with Digital University of Kerala, and they were engaged to develop Kerala Pandemic Management System. This system envisages an end-to-end solution for pandemic management. This will make things easy for the field workers and all functionaries at the health institutions to update the information. As we go forward, it is envisaged that HOEC shall work as Hub and information flow will be from Kerala Pandemic Management System, IDSP, IHIP, SDMA and other information sources to HOEC at the time of any disaster/ health emergency.

It is noteworthy to mention here that after Alappuzha, Thrissur also prepared a comprehensive Pandemic management Plan and Festival management Plan. Unfortunately, during this year's Thrissur Pooram preparations, there was a massive fire accident, but the Thrissur MCH team put the Management Protocol in practice and in a short span of time within eight minutes, they took care of the fire disaster victims and provided exemplary services. While they were handling the incident, thanks to timely preparation and awareness, they were handling hundreds of emergencies not relating to the disaster during that period. This has clearly demonstrated to all that well-prepared planning and capacity building is the key to mitigating problems.

I would like to highlight here that these plans are not only at the state and district level but up to the Panchayath level. We first oriented and coordinated work on the Panchayath Pandemic Preparedness Plans. These plans were collated to make Block Plans. At the same time District teams worked on the District Pandemic Plans by taking the details from Panchayath Plans as well as the assets available at the district. This has made our Grama Panchayat/Municipality/Corporation equipped to effectively prevent, detect, and respond to public health emergencies.

The plan serves as a framework for coordinated action involving the Health Department and other line departments, organisations, volunteers and other stakeholders at the local self-government level. The plans follow a One Health approach, recognizing the close relationship between human health, animal health, and the environment in the emergence and spread of diseases. Strengthening disease surveillance, infection prevention and control measures, environmental sanitation, risk communication, and community awareness are all important components of local preparedness.

We incorporated surge preparedness plans which can be adopted quickly during a public health emergency. Particular attention was also given to vulnerable populations including the elderly, children, persons with disabilities, individuals with chronic illnesses, and socially disadvantaged groups who may face greater risks during emergencies. Early reporting, community engagement, and coordinated interdepartmental action are critical for minimizing the impact of outbreaks and ensuring continuity of essential health services.

Kerala Health has taken this initiative for the last six months; there are hundreds of officers involved in preparing and completing such a huge task. Therefore, the design of the book is also done in a different way. It was decided that the officers who hands on worked on this

project should be mentioned prominently. As this is a unique milestone achieved by Kerala Health, the sincerely working officers' names are put on the cover itself.

These tasks would not have been possible without the support of the state resource officers' team of Dr Vinay Goyal, Mr Rahul Sharma, Dr Mahesh, Dr Ajan, Dr Dileepkumar, Dr Harikumar, Dr Ravindran, and many others. I appreciate their untiring efforts and patience for agreeing to do additional things which I pushed to them in the last minutes.

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 challenge and excel in their endeavours.

**Dr Rajan N Khobragade IAS**  
**Addl Chief Secretary**  
**Health and Family Welfare Dept.**

## Message



When we look at public health through an operational lens, it becomes clear that managing a crisis is as much about robust architecture as it is about public health interventions. A successful response relies on the strength of our systems: seamless data flows, efficient resource deployment and reliable communication networks.

The COVID-19 pandemic was an inflection point for public health systems worldwide. It exposed vulnerabilities, tested our capacity to respond under pressure, and reinforced the irreplaceable value of preparedness. As we move forward, it is imperative that the lessons we learnt from that experience are institutionalised and embedded into the very fabric of how our districts plan, coordinate, and respond to health emergencies.

This District Pandemic Preparedness Plan represents a significant milestone in our collective journey toward building resilient and responsive public health systems across the State. It is the outcome of sustained collaboration, ground-level insight, and an unwavering commitment shared by every member of our health team. From an administrative perspective, this plan is the blueprint that translates vital epidemiological data into actionable workflows on the ground. It ensures that our infrastructure, logistics, and human resources are perfectly synchronized, enabling our medical teams to deliver care without delay.

This Plan has been designed to serve as a practical, actionable guide for our health teams. It outlines clear roles and responsibilities, establishes robust surveillance and early warning mechanisms, streamlines supply chain and logistics frameworks, and ensures that our health workforce is trained, equipped, and supported to respond to emergencies. A preparedness plan is only as strong as the systems that sustain it, and this document reflects our shared commitment to building those systems with care and rigour.

I place on record my sincere appreciation for the district health team and all other stakeholders whose knowledge and commitment have shaped this framework. Their dedication to public health service is a source of great strength for us. I also call upon them to internalise this plan, champion its implementation, and treat preparedness not as a mandate from above, but as a professional and moral obligation to the communities we serve. Together, we have the capacity and the responsibility to ensure that no community in our State is caught unprepared.

**Rahul Krishna Sharma IAS**

**State Mission Director**

**National Health Mission**

## Message



At the heart of an effective public health response is a simple truth:- a strong healthcare system doesn't just react to a crisis—it anticipates and prepares for it. Our true readiness is measured by how quickly and empathetically we can turn complex medical strategies into organized care on the ground.

Our District Pandemic Preparedness plans serve as a clinical and tactical guide. They bridge the gap between public health data and reality, turning data into clear action plans for our frontline workers. This ensures that everyone from Family Health Centres to major hospitals operates with complete clarity and a shared purpose.

A pandemic requires a balance of science and human compassion. While we look at data, trends, and logistics to plan our resources, our ultimate focus remains on the people and families behind those numbers. Ensuring clinical readiness, securing medical supply chains, and maintaining unbroken communication networks are the pillars that allow our medical teams to respond to emergencies and save lives.

I want to express my deepest gratitude to our public health workforce; your dedication is the foundation of our resilience. In particular, I thank the DMO, DPM, district program officers, medical officers, public health staff, and every member of the health team who worked tirelessly to bring this plan to life. By embedding these strategies into our daily work, we are doing more than just preparing for a future crisis—we are actively safeguarding the health, dignity, and future of our communities.

Let us continue to lead with science, serve with empathy, and strengthen our collective resilience.

**Dr Reena K J**  
**Director of Health Services**

## Message



Pandemics pose significant challenges to public health systems and require a proactive, well-coordinated response. Strengthening preparedness at the district level is essential to ensure early detection, effective containment, and timely management of outbreaks. This Pandemic Preparedness Plan reflects our commitment to safeguarding the health and well-being of the community through a structured and resilient approach.

At the district level, the Collector serves as the nodal authority responsible for coordinating all preparedness and response activities, ensuring convergence across departments such as health, local self-government, police, and disaster management (). This plan emphasizes strengthening surveillance systems, healthcare infrastructure, logistics, and human resource capacity, along with regular review and capacity-building initiatives to address emerging challenges.

Community participation and awareness remain key pillars of effective pandemic management. The success of this plan depends on the collective efforts of all stakeholders, including government departments, healthcare workers, and the public. With coordinated action, vigilance, and resilience, we can effectively respond to any public health emergency and build a safer, healthier district.

**Chethan Kumar Meena IAS**

District Collector

Kottayam

## Message



The global public health landscape has undergone a profound transformation, underscoring the evolving and unpredictable nature of infectious disease threats. In a district like Kottayam—characterised by its unique combination of midlands, low-lying areas, river systems, and close human-environment interactions, public health risks are not merely theoretical but a recurring reality. The district's diverse geography, ranging from highlands to water-rich plains connected to the Vembanad ecosystem, creates conditions that can facilitate the emergence and transmission of infectious diseases.

While Kottayam has a strong and resilient primary healthcare system, recent public health emergencies have highlighted the urgent need to strengthen real-time surveillance systems, enhance surge capacity, and establish seamless digital communication between peripheral health institutions and tertiary care centres. These evolving challenges necessitate a strategic shift from a reactive, crisis-driven approach to a proactive, preparedness-oriented public health framework.

This Pandemic Preparedness Plan represents that transition. It is grounded in the One Health approach, recognising that human health is intrinsically linked with animal health and environmental conditions. In a district where agricultural practices, water ecosystems, and human settlements are closely interconnected, early warning signals of potential pandemics may arise from changes in livestock health or environmental disruptions. Therefore, this plan integrates human health, animal husbandry, and environmental sectors into a unified preparedness strategy.

At its core, this document emphasizes intersectoral collaboration. Pandemic response is not the sole responsibility of the Health Department; rather, it requires coordinated action across all administrative sectors. This plan reflects a collective commitment to ensure logistical efficiency, social preparedness, and medical readiness through strong institutional coordination involving Local Self Governments, the District Disaster Management Authority, and all line departments.

The development of this comprehensive plan is the result of the dedicated efforts and collective expertise of the district's health system. I express my sincere gratitude to Dr. Rajan N. Khobragade, IAS, Additional Chief Secretary, and Sri. Chethan Kumar Meena IAS, District Collector, for their continuous guidance and leadership in shaping this initiative. I also acknowledge the invaluable contributions of the District Surveillance Officer, Deputy District Medical Officers, and District Programme Officers for their technical inputs and strategic direction.

My heartfelt appreciation extends to the Superintendents of major hospitals, Block Medical Officers, and Medical Officers of peripheral institutions, who play a critical role in translating policy into effective action at the grassroots level. I commend the tireless efforts of Health Supervisors, Epidemiologists, Health Inspectors, and Junior Health Inspectors for their precision in surveillance and field-level interventions. I also recognise the indispensable contributions of Public Health Nurses (PHNs), Junior Public Health Nurses (JPHNs), and Mid-

Level Service Providers (MLSPs), whose close engagement with communities forms the backbone of our public health system.

I further acknowledge the essential role of Data Managers and the administrative health team in ensuring evidence-based decision-making through accurate and timely data. My sincere thanks are due to the District Disaster Management Authority (DDMA), the Local Self-Government Department (LSGD), and all other supporting departments for their unwavering cooperation and leadership during public health emergencies.

This Pandemic Preparedness Plan is envisioned as a dynamic and evolving document, not a static framework. It will be continuously updated in alignment with emerging scientific evidence, technological advancements, and changing epidemiological patterns. Our commitment is to remain vigilant, adaptive, and forward-looking in our approach.

Through this plan, we reaffirm our collective resolve to build a resilient health system that not only responds effectively to public health emergencies but is also prepared to anticipate and mitigate them. Together, we strive to safeguard the health and well-being of the people of Kottayam and ensure that the district remains resilient in the face of future pandemics.

**Dr. Priya N**

District Medical Officer of Health  
Kottayam

## EXECUTIVE SUMMARY

Kottayam district, located in the central part of Kerala, is a unique geographical and socio-economic region characterized by a mix of highlands, midlands, and low-lying areas adjoining the Vembanad lake system. The district was formed in 1949 and currently comprises 5 taluks and a well-developed Local Self Government (LSG) structure, with dense rural and semi-urban settlements. ([Kerala State Planning Board][1])

The district's terrain ranges from the elevated eastern highlands to the low-lying plains of Kuttanad, a region known for below-sea-level farming and recurrent flooding. Major rivers such as the Meenachal and Manimala rivers drain into the backwater system, contributing to both ecological richness and increased vulnerability to water-related disasters. These geographical features, combined with high population density and mobility, create favourable conditions for the transmission of infectious diseases, particularly during monsoon and post-flood periods.

Kottayam's economy is driven by agriculture (notably rubber cultivation), fisheries, inland water systems, and service sectors. The district also has significant inter-district connectivity, facilitating movement of people and goods. While this enhances economic activity, it also increases the risk of rapid spread of infectious diseases across regions.

Historically, the district has reported outbreaks of vector-borne and water-borne diseases such as dengue, leptospirosis, and acute diarrhoeal diseases, especially during periods of heavy rainfall and flooding. Disaster situations, including floods, further exacerbate public health risks by causing displacement, overcrowding, and disruption of essential services.

In response to these vulnerabilities, the District Pandemic Preparedness Plan for Kottayam provides a comprehensive framework to strengthen prevention, preparedness, and response mechanisms for pandemics and large-scale disease outbreaks. The plan emphasizes:

- Strengthening integrated disease surveillance and early warning systems
- Enhancing laboratory capacity and rapid response teams
- Ensuring continuity of essential health services during emergencies
- Expanding healthcare surge capacity and infection prevention and control (IPC)
- Securing supply chains for medicines, diagnostics, and personal protective equipment

The plan adopts a multi-sectoral and decentralized approach, involving Local Self Governments, the Health Department, District Disaster Management Authority (DDMA), and other key stakeholders. It also prioritizes risk communication and community engagement, ensuring timely dissemination of accurate information and active public participation.

Special focus is given to vulnerable populations, including the elderly, individuals with comorbidities, residents of flood-prone areas, and economically vulnerable groups.

By integrating public health preparedness with disaster risk reduction and climate resilience, this plan aims to enhance district-level readiness, reduce morbidity and mortality, and minimize socio-economic disruption. Its effective implementation will strengthen the resilience of Kottayam district against future pandemics and public health emergencies.

## LIST OF ABBREVIATIONS

<b>LSGD/LSGI</b>	LOCAL SELF-GOVERNMENT DEPARTMENT / LOCAL SELF-GOVERNMENT INSTITUTION
<b>BMO</b>	BLOCK MEDICAL OFFICER
<b>IDSP</b>	INTEGRATED DISEASE SURVEILLANCE PROGRAMME
<b>NDMA</b>	NATIONAL DISASTER MANAGEMENT AUTHORITY
<b>PPE</b>	PERSONAL PROTECTIVE EQUIPMENT
<b>ICMR</b>	INDIAN COUNCIL OF MEDICAL RESEARCH
<b>CD</b>	COMMUNICABLE DISEASES
<b>NCD</b>	NON-COMMUNICABLE DISEASES
<b>SDMA</b>	STATE DISASTER MANAGEMENT AUTHORITY
<b>DDMA</b>	DISTRICT DISASTER MANAGEMENT AUTHORITY
<b>MO</b>	MEDICAL OFFICER
<b>HS</b>	HEALTH SUPERVISOR
<b>HI</b>	HEALTH INSPECTOR
<b>JHI</b>	JUNIOR HEALTH INSPECTOR
<b>ASHA</b>	ACCREDITED SOCIAL HEALTH ACTIVIST

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## **BACKGROUND**

Kottayam district, located in the central part of Kerala, has a unique geographic and epidemiological profile that necessitates a comprehensive pandemic preparedness plan. The district experiences a tropical monsoon climate with high humidity and heavy rainfall, creating favourable conditions for the spread of vector-borne and waterborne diseases. Seasonal variations, particularly during the monsoon, contribute to recurrent outbreaks of diseases such as dengue, leptospirosis, and other infectious conditions, highlighting the need for continuous vigilance and preparedness.

The district has also witnessed multiple public health threats in recent years, including outbreaks of avian influenza and rising trends in infectious diseases. Surveillance data indicates that several local bodies in Kottayam are hotspots for diseases like dengue and leptospirosis, while recent reports confirm avian influenza outbreaks requiring rapid containment and interdepartmental coordination. Additionally, Kerala, including Kottayam, has experienced periodic surges in COVID-19 cases and other emerging infections, emphasizing the importance of a robust and responsive health system.

Kottayam also benefits from a relatively strong healthcare infrastructure and high health awareness; however, increasing disease burden, ageing population, and high morbidity levels pose significant challenges. The Government of Kerala's One Health approach, implemented in Kottayam and other Pampa basin districts, integrates human, animal, and environmental health to strengthen outbreak preparedness and response systems. In this context, a district-specific pandemic preparedness plan is essential to enhance coordination, strengthen surveillance, ensure resource readiness, and build resilience against future public health emergencies

### **General Objective**

To strengthen district-level preparedness, surveillance, and response mechanisms to effectively prevent, detect, and manage pandemic threats in Kottayam district.

### **Specific Objectives**

1. To strengthen disease surveillance and early warning systems across all health facilities and communities.
2. To ensure adequate health infrastructure, human resources, and logistics for pandemic response.
3. To enhance laboratory diagnostic capacity and reporting mechanisms.
4. To establish effective coordination among health departments, local self-government institutions, and disaster management authorities.
5. To ensure rapid response, case management, and containment measures during outbreaks.
6. To protect vulnerable populations and minimise morbidity, mortality, and socio-economic disruption.

This Pandemic Preparedness Plan covers all five taluks of Kottayam district and includes public and private healthcare facilities, local self-government institutions, and relevant government departments involved in emergency response. The plan outlines preparedness strategies related to surveillance, healthcare infrastructure, logistics, human resources, communication, and inter-sectoral coordination required for effective pandemic management.

## **DISTRICT AT A GLANCE**

- Situated in south-central part of the state of Kerala with an area about 2,208 km<sup>2</sup>
- Shares boundary with North: Ernakulam district
- East: Idukki district
- South: Pathanamthitta district
- West: Kottayam district and the backwaters (via Vembanad Lake)
- Lowlands Mid Lands
- Population 20,40,412
- Literacy rate 97.21% hence called Akshara Nagari.
- Major crops are rubber, coconut, cashew, tapioca, paddy and spice.

**DISTRICT PROFILE**

<b>Particulars</b>	<b>Details</b>	<b>Source of Information</b>
<b>Administrative Overview</b>		
District Formation	01 July 1949	NIC
Geographical Area	2,208 km <sup>2</sup>	NIC
Revenue Divisions	2	NIC
Taluks	5 (Changanasserry, Kottayam, Vaikom, Meenachil, Kanjirappally)	NIC
Villages	100	NIC
Municipalities	6	NIC
Block Panchayats	11	NIC
Grama Panchayats	71	NIC
Assembly Constituencies	9	NIC
Major Rivers	Meenachil, Muvattupuzha, Manimala/289 in Km	NIC
<b>Health Infrastructure</b>		
Medical Colleges	1	Health Department
General Hospitals	4	Health Department
Taluk Hospitals	3	Health Department
Speciality Hospital	1	Health Department
Block Family Health Centres (FHC)	11	Health Department
Family Health Centres	60	Health Department
Community Health Centres	4	Health Department

District Ayurveda Hospital	1	Ayurveda DMO
Govt. Ayurveda Dispensary	62	Ayurveda DMO
Ayush PHCs	17	Ayurveda DMO
District Homeopathy Hospital	1	Homeo DMO
Govt. Homeopathy Hospitals	2	Homeo DMO
Govt. Homeopathy Dispensaries	54	Homeo DMO
<b>Education Infrastructure</b>		
High Schools	260	Education Department
Higher Secondary Schools (HSS)	135	Education Department
Vocational Higher Secondary Schools (VHSS)	23	Education Department
Upper Primary Schools (UP)	201	Education Department
Lower Primary Schools (LP)	449	Education Department
Anganwadis	2049	ICDS
<b>Infrastructure &amp; Economy</b>		
Registered Industrial Units	9962	Directorate Of Industries And Commerce
Large Scale	11	Directorate Of Industries And Commerce
Medium Scale	12	Directorate Of Industries And Commerce
Small Scale	623	Directorate Of Industries And Commerce
Micro Scale Industries	9316	Directorate Of Industries And Commerce
PWD Road Length	2106Km	kerala.me
Registered Vehicles	11,10,883	Official vahan website <a href="https://vahan.parivahan.gov.in/">https://vahan.parivahan.gov.in/</a>

**BASELINE DATA**  
**Community Development Block/Municipality**

<b>CD Block/Municipality</b>	<b>LSGs</b>	<b>Ward</b>	<b>Houses</b>	<b>Populati on</b>	<b>Migrants</b>	<b>Wells</b>
Ayarkunam	5	106	46818	195640	1802	40931
Edamaruku	8	115	27712	102888	1085	12959
Edayarikkapuzha	6	103	41969	154289	1330	35856
Edayazham	6	95	32844	125133	493	16994
Erumeli	7	136	59775	230746	1690	31635
Kumarakom	6	112	47094	184621	2877	31079
Madappally	5	104	47905	168899	5053	40468
Pampady	8	136	52479	183798	2419	40296
Ramapuram	8	127	44960	171167	2912	31979
Thalayolaparambu	6	101	37272	141698	6607	28571
Ullanad	6	88	29680	112458	2208	16122
<b>Total Rural</b>	<b>71</b>	<b>1223</b>	<b>468508</b>	<b>1771337</b>	<b>28476</b>	<b>326890</b>
<b>MUNICIPALITY</b>						
Changanasserry	1	37	12031	47685	785	8850
Eratupetta	1	28	8709	35612	428	1554
Ettumanoor	1	35	12893	48351	847	11534
Kottayam	1	53	33304	114367	2399	18667
Pala	1	26	5027	21461	341	2142
Vaikom	1	26	4770	24494	125	3592
<b>Total Urban</b>	<b>6</b>	<b>205</b>	<b>76734</b>	<b>291970</b>	<b>4925</b>	<b>46339</b>
<b>Grand Total</b>	<b>77</b>	<b>1428</b>	<b>545242</b>	<b>2063307</b>	<b>33401</b>	<b>373229</b>

\*Source of Information - Health Department

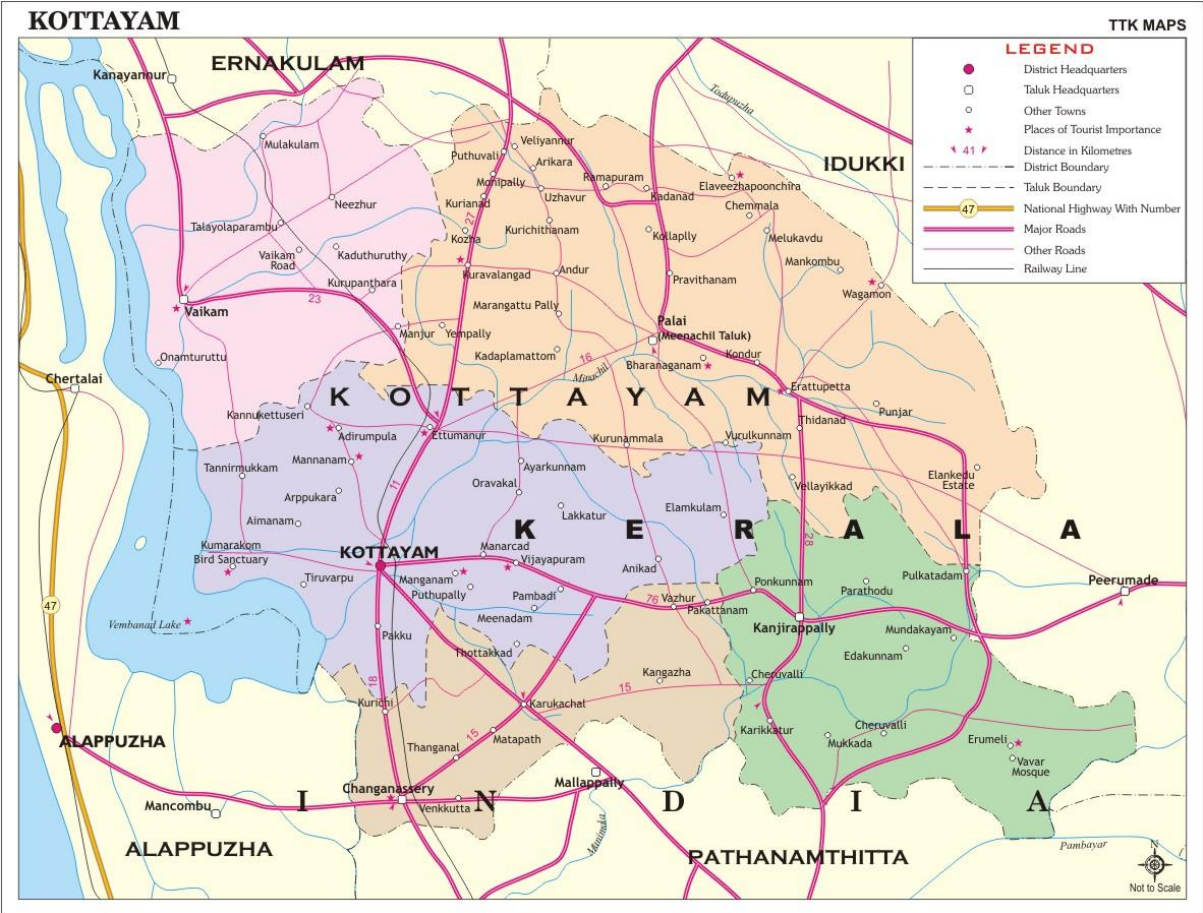




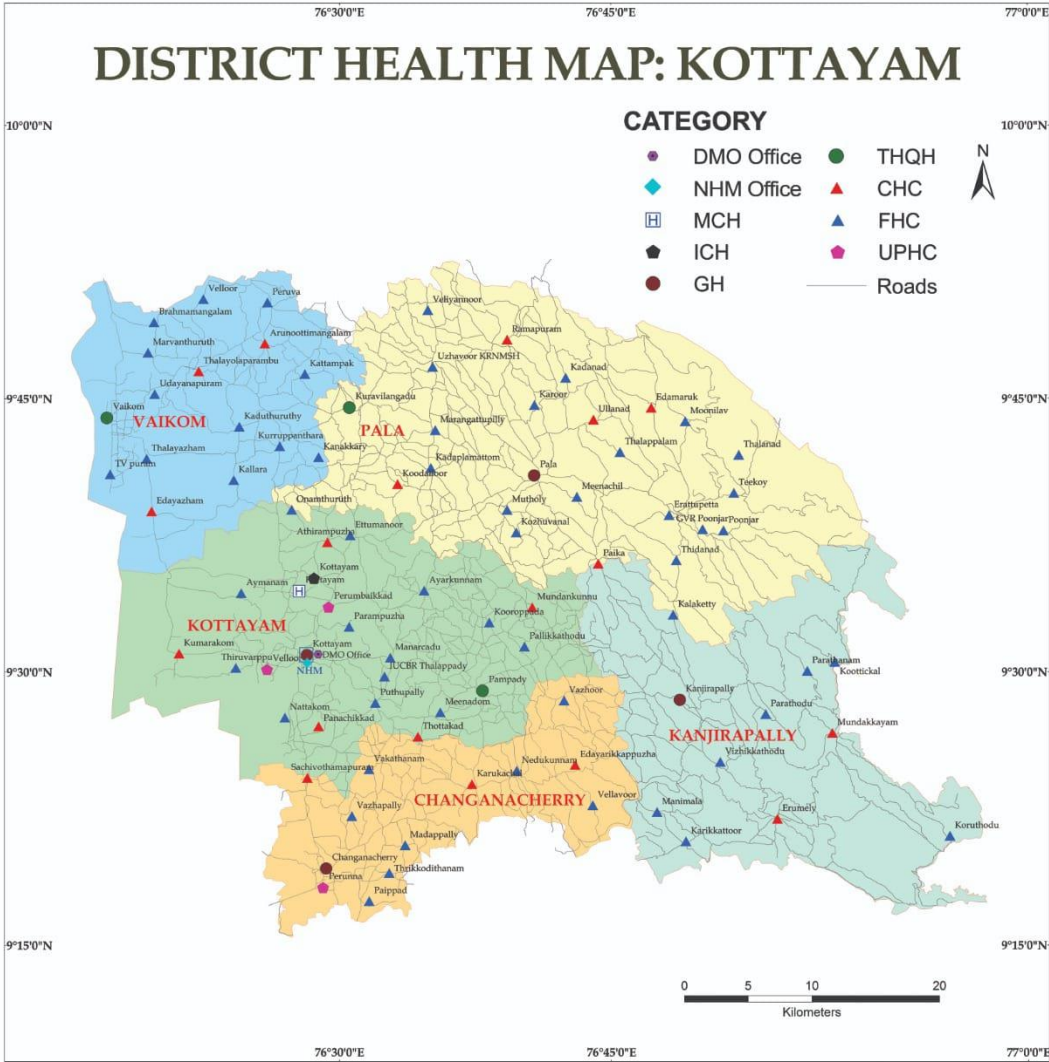
2)Major Govt Hospital Map



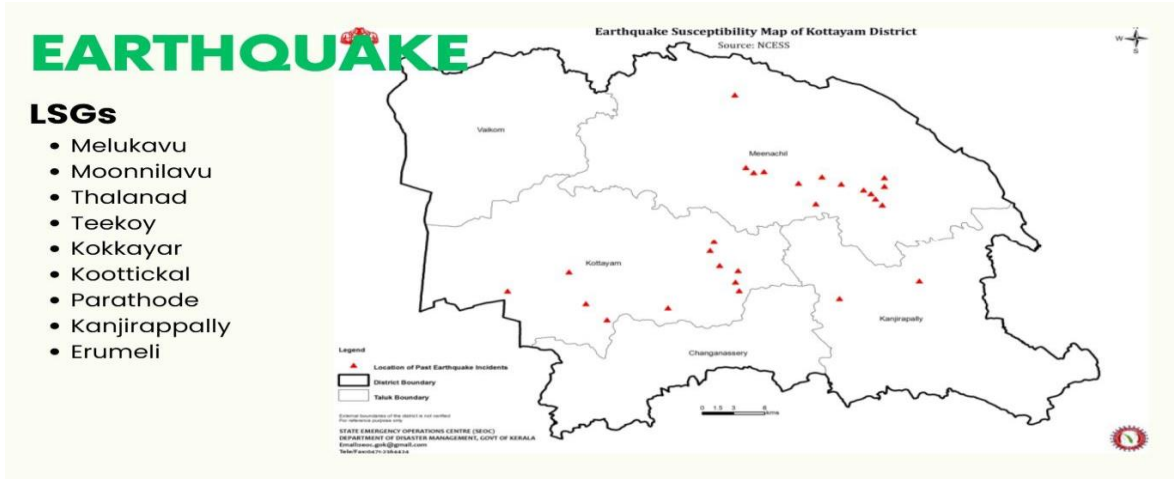
3)River Map



4)major establishments map



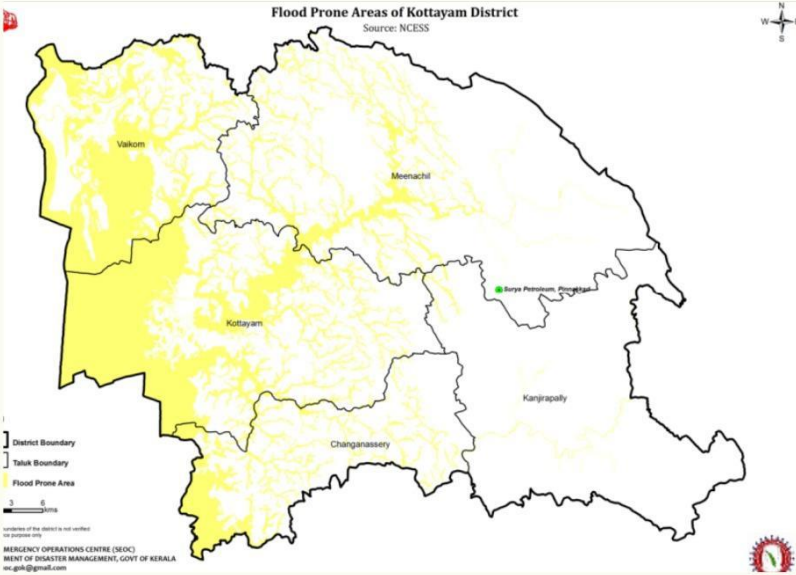
5. disaster-prone areas map-graphical



# FLOOD

## LSGs

- Vechoor
- Kumarakom
- Thalayazham
- Udayanapuram
- Aymanam
- Nattakom
- Manimala
- Kangazha
- Kottayam Municipality



<b>TABLE 1: BACKGROUND OF DISTRICT</b>		
<b>Description</b>	<b>Details</b>	<b>Source of Information</b>
Name of District	Kottayam	
Number of Local Self-Governments (LSGs)	01 District Panchayath 11 Block Panchayaths 06 Municipalities 71 Grama Panchayaths 1428 wards	NIC
Total Area	2208 sq. km	NIC
Population	19,74,551	2011 Census
Population	20,63,307	Health Department
Population Density	930 persons per sq. km	NIC
Terrain Characteristics	Highlands, Midlands and backwater regions	
Major Rivers	Three major rivers – Meenachil, Muvattupuzha, Manimala/289 in Km	NIC
Number of Water Bodies	3506	Water bodies census report 2023 by irrigation department
Educational Institutions	1068 (449+201+260 +135+23)	(LP, UP,HS,HSS,VHSS)
Large Scale Factories	11	DIC dashboard
Registered Industrial Units	9962	DIC dashboard
Registered MSMEs	9951	DIC dashboard
Flood-Prone LSGs	12	DM plan 2015
Landslide-Prone Areas	19 LSGs	DM plan 2015
Death Management and Disposal Facilities	Mortuaries – 16* Crematoriums – 29*	Health, LSG
Auditoriums / Marriage Halls / Community Centres	448**	Health Department

\*Annexure 14, \*\*Annexure 15

**Flood Prone LSGs (\*source health department)**

1. Changanassery
2. Aymanam
3. Kaduthuruthy
4. Kottayam Mplty
5. Panachikad
6. Thiruvappu
7. Kumarakom
8. Paippad

9. Thalayazham
10. Udayanapuram
11. Thalayolaparambu
12. Ayarkkunnam

**Landslide Areas**

**Landslide -2018**

Kanjirappilly Taluk-Koottikkal-village

Meenachil Taluk-Teekoy,(Inchappara, Vellikulam, Attikkalam, Mangalagiri, Vellani)

Thalanadu(Cholamala, perya mala,

**Landslide -2021**

Koottikkal -Kanjirappilly Taluk

Taluk	Village	Landslide
Meenachil	Erattupetta	High (Kizhakumala) Low (Kondurmala, Kalattukadavu)
Kanjirapally	Erumeli N	High (Forest) Low (Koratodu, Pulikunnu, Vandapatal)
Kanjirapally	Erumeli S	Low (Erumeli, Muttapalli, Kaikkalkavu) High (Forest)
Kanjirapally	Koottickal	High (Elankad, Melethadam, Around Chakiparamudi)
Meenachil	Melukavu	High (Kanjiramkavala, Knippadu) Low (N Of Melukavu, Chemmala)
Meenachil	Moonilavu	High (Mankombu, Pirakkadu, Chovur) Low (Cherippadu, Kuttankallu, Mechchal)
Kanjirapally	Mundakayam, Koottikkal	High (Anangum Padi) Low (Mundakayam)
Meenachil	Poonjar Nadubhagam	High (Kallelikulam, Perumkulam)
Meenachil	Poonjar Thekkekara	High (Kunnam, Adivaram) Low (Uppukulam, Chenad)
Meenachil	Poonjar Vadakkekara	High (Talanad, Meladukkam Marmala) Low (Mararikallu, Kizhadukkam, Karikode)
Meenachil	Teekoy	High (N Of Kankanikuzhi) Low (Orappurakkadu Vellikulam, Kallam, Vellattuchira, Kurisumala)
Meenachil	Thalappalam	High (N Of Puvathani,) Low (Anjuttimangalam, Kalekandam, Chitanapara)
Meenachil	Bharananganam	Low (Tevarmala, Bharananganam)
Kanjirapally	Chirakkadavu	Low (Valakayam)
Kanjirapally	Edakunnam	Low (Cherumala, Injiyani Chotti, Pazhamala, Palapara)
Kanjirapally	Elamgulam	Low (Vanji Mala)
Meenachil	Kadanad	Low (Perumkunnu, Nilur, Kurumannu)
Changanassery	Kangazha	Low (Uppanamala, Kanu Mala)
Kanjirapally	Kanjirapally	Low (Tambalakad)
Meenachil	Kondoor	Low (Vattapparamala, Pulikkamala)
Meenachil	Lalam	Low (Poyappara)
Kanjirapally	Manimala	Low (Pavatholimala, Vazhiyakunnu, Forest)

Meenachil	Ramapuram	Low (Matathipara, N of Kurinji & Niratanam)
Meenachil	Uzhavoor	Low (W Of Uzhavoor)
Meenachil	Vallichira	Low (E Of Kudakkachira)
Meenachil	Veliyannoor	Low (Tani Mala)
Changanassery	Vellavoor	Low (Kunnumbhagam, Kadayanikkad)
Meenachil	Vellilampally	Low (S Of Kudappalam, Kuriyanad Mala)

### a. Demographic And Vulnerable Population

Understanding the demographic composition and vulnerable population groups is essential for pandemic preparedness. Children, the elderly, economically deprived families, migrant workers, and socially vulnerable groups are at increased risk during public health emergencies due to higher exposure, limited access to services, and dependency on public systems.

Description	Details (in numbers)	Sources
<b>DEMOGRAPHIC PROFILE</b>		
Total population	2063307	Health Department
Transgender	88	Dhwani Kottayam
Children under 5	88748	Health Department
Adolescent	199698	Health Department
Elderly (>60)	377430	Health Department
<b>SOCIAL/LIVELIHOOD VULNERABILITY</b>		
Previous EPEP family	1064	LSG Department
BPL family	2,22,676 (7,51,963 persons)	AePDS - epos.kerala.gov.in
AAY	34305 (106378 persons)	AePDS - epos.kerala.gov.in
PHH	188371 (645585 persons)	AePDS - epos.kerala.gov.in

<b>Description</b>	<b>Details (in numbers)</b>	<b>Sources</b>
ST families	6320	ITD Office Kottayam
ST population	18180	ITD Office Kottayam
Migrant population	32588	Health Department
Socio-economically deprived	42258	Health Department
Fisherfolk	8539	www.fims.kerala.gov.in

## 1.2 Clinical Vulnerability

Certain population groups need priority healthcare & are at higher risk of severe illness, complications, and mortality during pandemics. Patients with chronic diseases, those requiring regular medical care, and individuals with mobility or functional limitations face challenges in accessing timely care during emergencies. Mapping these groups helps in prioritising continuity of treatment, medicine stock planning, oxygen support, referral transport, and targeted home-based care.

<b>Description</b>	<b>Details in numbers</b>	<b>Source of Data</b>
Pregnant women	8316	RCH portal
Lactating mothers	16286	RCH portal
Bedbound patients	5975	District Palliative Coordinator
Patients under palliative care, other than bedbound	6834	District Palliative Coordinator
Patients on Haemodialysis	954	District Palliative Coordinator
Patients on CAPD	173	Health Department
Cancer patients (currently on treatment)	4345	Health Department
Haemophilic patients	96	
Thalassemia	9	
Sickle Cell Anemia	3	
Diabetic patients	24698	NCD Nodal Officer
Hypertensive patients	36774	NCD Nodal Officer
TB patients	1451	District TB Office

The high prevalence of non-communicable diseases (NCDs), particularly Hypertension

(2.36 Lakhs) and Diabetes (2.14 Lakhs), presents a significant risk for increased morbidity and mortality during a pandemic surge. This clinical baseline necessitates the following localised strategies:

- **Continuity of Essential Care:** A decentralised protocol will be activated via the ASHA and JHI/JPHN network to ensure that patients—especially those on dialysis and palliative care—do not face treatment interruptions during lockdowns.
- **Vulnerability-Based Prioritisation:** The bedbound patients and differently abled individuals are categorised as "Priority 1" for mobile medical unit (MMU) visits and home-based vaccination or testing.
- **Referral Transport:** The pregnant women and dialysis patients require a dedicated "Green Channel" for transport to ensure emergency obstetric and renal care is not delayed by pandemic-related diversions.

### Calendar of Mass Gathering Events

Kottayam district hosts numerous religious, cultural, and traditional festivals throughout the year that attract large public gatherings. Such events involve significant population movement and crowding, which may increase the risk of disease transmission during public health emergencies. To ensure effective surveillance and crowd management, the district monitors religious and cultural festivals that involve significant public gatherings. The following calendar identifies peak risk periods across different Taluks in the district.

### Major Festivals and Public Gathering Events

Quarter	Peak Months	Key Large-Scale Events
Q1	Jan – March	Perunna Temple Festival, Mahadeva, Mahavishnu Temple, St. Teresa's Church, Pakkil, Nadel Church, Sree Subrahmaniya Temple- Thypooyam, Valiyapally Church Perunal, Parelpally Perunnal, Church Thuruthel bridge, Manganam Thirunal Aramana, Devalokam, Vazhappally Temple Festival, Subramanya Swami Temple Perunnal, Ankalamman Kovil, Ettumanoor Temple Festival, Siva Parvathi Temple- Sivarathri, Thirunakkara Ulsavam
Q2	April – June	Aruvithura thirunal Nadakkal Temple ulsavam Thalikota Temple (Ulsavam) Thirumala Sree Venkadachalapathi ( Ulsavam) St. Thomas Church Pakkil Ponkunnathukavu Devi Temple- Pathamudayam Kuttikkattu Temple -Pathamudaya maholsavam

Quarter	Peak Months	Key Large-Scale Events
Q3	July – Sept	Sree Dharma Sastha Temple-Samkrathi Nagambadam Sreemahadeva kshethra Festival
Q4	Oct – Dec	Kumaranalloor Devi temple Festival Udayanapuram Karthika Temple Vaikathashtami Sabarimala Mandala kala Edathavalam pala jubilee Chandana Kudam Kavil Bhagavathy Temple Chirrappe St. Marys Church, Karamood

### Master List of Localised Festivals

Refer annexure 3

These mass gathering events require coordinated planning between the health department, local self-government institutions, police, and disaster management authorities. Enhanced disease surveillance, sanitation measures, risk communication, and emergency medical preparedness are essential during these periods to prevent and control potential outbreaks.

#### NOTE:

A detailed list of festivals and events across different Local Self-Government Institutions with potential for large public gatherings is provided in the **Annexure**. This information will assist district authorities in planning crowd management, disease surveillance, and public health interventions during high-risk periods.

## **2. INFRASTRUCTURE & RESOURCE INVENTORY**

### **a. Health Facility Directory and Basic Capacity**

This section provides a comprehensive overview of the healthcare infrastructure within the district, highlighting the distribution, accessibility, and baseline capacity of facilities that form the backbone of routine healthcare delivery as well as emergency response.

At the primary level, Family Health Centres (FHCs) and Community Health Centres (CHCs), Block FHCs serve as the first point of contact for the community, providing essential outpatient services, preventive care, maternal and child health services, and management of common illnesses. During public health emergencies, these facilities play an important role in early case detection, screening, triaging, initial isolation, and referral coordination.

Secondary and tertiary care institutions, including General Hospitals (GHs), Taluk Hospitals (THQH), Speciality Hospitals and Medical College Hospitals (MCHs), function as referral centres with advanced diagnostic facilities, specialist services, intensive care units, and critical care support. In emergencies, these institutions manage severe cases and provide advanced treatment and specialist care.

Maintaining an updated inventory of these facilities enables health authorities to:

- Assess geographic distribution and service coverage
- Identify infrastructure and human resource gaps
- Estimate available bed strength, ICU capacity, and oxygen availability
- Plan for surge capacity, including expansion of isolation wards and critical care units
- Coordinate referral pathways effectively

Such systematic mapping of healthcare infrastructure strengthens preparedness, facilitates evidence-based planning, and enhances the district's capacity to respond efficiently during pandemics, outbreaks, and other public health emergencies.

### **Overview of Public Healthcare Infrastructure in Kottayam**

The district health system consists of a network of public and private healthcare facilities that collectively provide preventive, promotive, curative, and emergency healthcare services. These facilities operate at multiple levels, including primary, secondary, and tertiary care institutions.

Public health facilities form the backbone of the district health system and provide accessible and affordable healthcare services to the community. These institutions play a central role in disease surveillance, immunisation programs, maternal and child health services, and emergency response during outbreaks.

**Table 2.1 Overview of Public Healthcare Infrastructure in Kottayam**

Care Level	Type of Facility	Rural	Urban	Total
<b>Primary</b>	Health & Wellness Centre (HWC) / Janakeeya Arogyakendram(JAK)	313	20	<b>333</b>
	Family Health Centre (FHC)	57	3	<b>60</b>
	Urban Health & Wellness Centre (UHWC)	-	17	<b>17</b>
	Urban Primary Health Centre (UPHC)	-	3	<b>3</b>
<b>Secondary</b>	Community Health Centre (CHC)	4	-	<b>4</b>
	Block FHC	11	-	<b>11</b>
	Taluk Head Quarters Hospital (THQH)	2	1	<b>3</b>
<b>Tertiary</b>	General Hospital (GH)	1	3	<b>4</b>
	Women & Children Hospital (W&C)	-	-	<b>-</b>
<b>Specialized</b>	District TB Centre	-	1	<b>1</b>
	MCH (Maternal & Child Health)	-	1	<b>1</b>
	<b>TOTAL</b>	<b>388</b>	<b>49</b>	<b>437</b>

This table provides a consolidated overview of public healthcare institutions operating across different levels of care in the district. The distribution of healthcare institutions also reflects the district's focus on decentralised service delivery. With a strong base of primary care facilities supported by secondary and tertiary institutions, the public health system is capable of delivering preventive, promotive, curative, and emergency services. This network plays a crucial role in strengthening routine healthcare delivery as well as supporting preparedness and response during disease outbreaks and other public health emergencies.

## **b. Directory of Public Healthcare Institutions**

Maintaining a detailed directory of healthcare institutions is essential for operational planning, referral coordination, and emergency response. The following list provides the names and locations of major public healthcare facilities functioning within the district.

Sl.no.	Health Facility	Type of Facility (MCH/GH/CHC/FHC/SC etc.)	Rural/ Urban	Total beds	Functional Beds
1	CHC Ayarkunam	BFHC	R	24	24
2	CHC Edayarikkapuzha	BFHC	R	28	18
3	FHC Karukachal	BFHC	R	30	0
4	Bfhc Edayazham	BFHC	R	24	10
5	CHC Erumely	BFHC	R	30	30
6	CHC Paika	BFHC	R	36	20
7	FHC Ramapuram	BFHC	R	49	49
8	CHC Thalayolaparambu	BFHC	R	30	20
9	CHC Ullandu	BFHC	R	24	5
10	CHC Kumarakom	BFHC	R	50	35
11	CHC Edamaruku	BFHC	R	24	
12	CHC Thalapady	CHC	R	10	0
13	CHC Sachivothampuram	CHC	R	54	10
14	CHC Vakathanam	CHC	R	24	12
15	CHC Koodalloor	CHC	R	32	21
16	ESI Vadavathoor	ESI		60	
17	FHC Thottakkad	FHC	R	71	42
18	FHC Parampuzha	FHC	R	24	0
19	FHC Gvr Poonjar	FHC	R	32	6
20	FHC Brahmamangalam	FHC	R	18	0
21	FHC Mundakayam	FHC	R	60	20
22	FHC Koottickal	FHC	R	38	
23	Family Health Centre Madappally	FHC	R	4	4
24	FHC Kallara	FHC	R	1	
25	FHC Mundankunnu	FHC	R	3	3
26	FHC Kooroppada	FHC		2	
27	FHC Kadaplamattam	FHC	R	56	22
28	FHC Marangattupilly	FHC	R	26	
29	CHC Arunootimangalam	FHC	R	23	23
30	FHC Athirampuzha	FHC	R	42	31
31	FHC Erattupetta	FHC	U	24	24

32	FHC Kuruppanthara	FHC	R	1	
33	FHC Maravanthuruthu	FHC	R	3	
34	FHC Moonilavu	FHC	R	2	
35	GH Kanjirappaly	GH	R	142	162
36	GH Changanacherry	GH	U	225	175
37	GH Kottayam	GH	U	374	249
38	Govt Hospital Pala	GH	U	341	370
39	ICKKottayam	ICH		170	23
40	MCH Kottayam	MCH		2178	2178

### c. Private Healthcare Facilities

Private healthcare institutions contribute significantly to the healthcare delivery system in the district by providing additional treatment capacity, specialised services, and diagnostic facilities. During public health emergencies, coordination with private sector facilities becomes essential for expanding healthcare capacity and managing increased patient load.

Sl. No	Facility Name	Beds	Health Block
1	Parat Hospital	50	Ayarkunnam
2	Mandiram Hospital, Manganam	165	Ayarkunnam
3	Carithas Family Hospital, Kalathipady	15	Ayarkunnam
4	Jk Hospital, Vadavathoor	30	Ayarkunnam
5	Welfast Hospital, Vadavathoor	25	Ayarkunnam
6	Bliss Infertility Centre, Vadavathoor	16	Ayarkunnam
7	Bjm Hospital	10	Ayarkunnam
8	Chingavanam Medical Center	6	Ayarkunnam
10	Marsleeva Assumption Medicity	3	Edamaruku
11	Sunrise Hospital	99	Edamaruku
12	PMC Hospital	78	Edamaruku
14	Aravinda Hospital	45	Edayirikkapuzha
15	MGDM Kangazha	100	Edayirikkapuzha
16	Mercy Nursing Home	25	Edayirikkapuzha
	Royal Hospital	15	Edayirikkapuzha
	NSS Hospital	20	Edayirikkapuzha
	St.Xaviers Hospital, Kothavara	25	Edayazham

<b>Sl. No</b>	<b>Facility Name</b>	<b>Beds</b>	<b>Health Block</b>
	Indo American Hospital	205	Edayazham
	St.George Hospital	2	Edayazham
	Sony Hospital	25	Erumely
	Assisi Hospital	100	Erumely
	St.Thomas	0	Erumely
	Mithra	0	Erumely
	Kadamapuzha Hospital		Erumely
	Marymatha Hospital		Erumely
	St Joseph Eye Hospital		Erumely
	Rani Hospital		Erumely
	Mam Hospital		Erumely
	Mary Queen Mission Hospital	190	Erumely
	Holy Cross Koovappally	30	Erumely
	High Range Hospital	24	Erumely
	Peoples Hospital Mundaka Yam	0	Erumely
	Trinity Ayurved A Hospital	10	Kumarakom
	Kims Health	92	Kumarakom
	Caritas Hdp Hospital	40	Kumarakom
	Mitera Hospital Thellakom	100	Kumarakom
	Ayurveda	0	Kumarakom
	Homeo	0	Kumarakom
	Sanjeevini Hospital	10	Madappally
	Udayagiri Hospital	50	Madappally
	Suresh Nursing Home	10	Madappally
	Nss Medical Mission Hospital Perunna	120	Madappally
	Medical Mission Thengana	9	Madappally
	Kmc Family Clinic	0	Madappally
	St. Rita's Hospital	100	Madappally
	Arpitha Nursing Home	2	Madappally
	St.Thomas Hospital	300	Madappally
	CNK Hospital	40	Madappally
	St.Jude Hospital	7	Madappally
	Kannammali Hospital	0	Madappally
	Jayashankar Ayurveda Hospital	0	Madappally
	Koovapoika Task Trust	5**	Pampady

<b>Sl. No</b>	<b>Facility Name</b>	<b>Beds</b>	<b>Health Block</b>
	Cicilamma Memorial Good Samaritan Hospital Koprakalam	10	Pampady
	Govt Ayurvedic Hospital , Kothala	30	Pampady
	Govt. Ayurveda Hospital (Kothala)	10	Pampady
	St.Vincent Hospital Kuravilngad	20	Ramapuram
	Chaithanya Trust Hospital	30	Ramapuram
	Mum Hospital Monippally	99	Ramapuram
	Cardinal Hospital	70	Ramapuram
	Santhigiri Ayurveda Hospital	15	Ramapuram
	Mercy Hospital	300	Thalayolaparambu
	HGM Hospital Muttuchira Kaduthuruthy	115	Thalayolaparambu
	Kaduthuruthy Co- Operative Hospital	50	Thalayolaparambu
	Bindhu Nursing Home, Kallara	0	Thalayolaparambu
	Wellness Point Hospital	15	Thalayolaparambu
	Pulickal Ayurveda Hospital Peruva	5	Thalayolaparambu
	Immaculate Heart Of Mary	100	Ullanadu
	Sreeekrishna Ayurveda Hospital	10	Ullanadu
	Puthiyedom	14	Ullanadu
	Mar Sleeva Medicity Palai	648	Ullanadu
	Sanjeevini Hospital	10	Changanassery
	Udayagiri Hospital	50	Changanassery
	Suresh Nursing Home	10	Changanassery
	NSS Medical Mission Hospital Perunna	120	Changanassery
	Indo American Hospital Vaikom	49	Vaikom
	Catitas Hospital	655	Ettumanoor
	Caritas Matha Hospital	209	Ettumanoor
	Vimala Hospital	Nil	Ettumanoor
	BJM Hospital	15	Kottayam
	CMC Hospital	15	Kottayam
	Bharat Hospital Kottayam	199	Kottayam
	SH Medical Centre Kottayam	250	Kottayam
	Bhavana Hospital Kottayam	3	Kottayam
	Dr. Agarwals Eye Hospital Kottayam	0	Kottayam

Sl. No	Facility Name	Beds	Health Block
	Caritas Hospital Karappuzha	0	Kottayam
	Chingavanam Medical Center	20	Kottayam
	Susrusha Varisserry	10	Kottayam
	Karuna Ayurveda Hospital	0	Pala

#### d. Private Clinics

Private clinics form an important component of the district healthcare system and play a significant role in outpatient service delivery. In many communities, they are often the first point of contact for individuals seeking medical care when symptoms begin.

During public health emergencies and disease outbreaks, private clinics contribute to early case detection, prompt referral of suspected cases, and timely reporting to the public health authorities. Their active participation strengthens disease surveillance and facilitates rapid response measures. Maintaining an updated directory of private clinics, including their location and services offered, enables effective engagement of private practitioners in public health initiatives, risk communication activities, and coordinated emergency response.

#### e. Healthcare Education and Training Institutions in Kottayam

Healthcare education and training institutions play a vital role in strengthening the health system by producing skilled healthcare professionals and supporting capacity-building activities. These institutions contribute to the availability of trained medical personnel, including doctors, nurses, paramedical staff, and public health professionals.

In addition to academic training, many of these institutions serve as clinical training centres and provide internship opportunities, skill development programs, and continuing medical education for healthcare professionals.

During public health emergencies, such institutions can support the health system by mobilising trained personnel, facilitating capacity-building programs, and assisting in clinical and public health response activities. Kottayam's medical and paramedical educational institutions serve as a vital reserve for the **surge workforce**, including student volunteers, interns, and specialised training faculty.

## Inventory of Medical and Nursing Institutions in the District

Category of Institution	Govt	Private	AYUSH	Total
Medical Colleges	1	0	0	1
Nursing Colleges	5	16	0	21
Dental Colleges	1		0	1
Para-medical / Allied Health	0	8	0	8
Pharmacy Colleges	2	2	0	4
<b>Total</b>	<b>9</b>	<b>26</b>	<b>0</b>	<b>35</b>

The district hosts a substantial number of healthcare education institutions, particularly in the nursing and allied health sectors. These institutions significantly contribute to the development of a skilled healthcare workforce that supports both routine healthcare delivery and emergency response operations. The presence of these training centres also facilitates regular capacity building programs, clinical training, and continuing professional education for healthcare personnel within the district.

### 2.6.1 Role in Capacity Building and Emergency Preparedness

Healthcare training institutions also support the district health system through various training and capacity-building activities. These include programs on infection prevention and control, emergency clinical care, surveillance, and outbreak response. During pandemics and disaster situations, students, interns, and faculty members from these institutions can be mobilised to assist in surveillance activities, community awareness campaigns, vaccination programs, and clinical support services under appropriate supervision.

## Specialised Services and Emergency Resource Inventory

This section provides a detailed overview of specialised healthcare resources available within the district, with particular emphasis on emergency response and critical care capacity. These resources are essential for managing severe illnesses, trauma cases, and large-scale public health emergencies such as pandemics, natural disasters, and mass casualty incidents.

The inventory includes critical infrastructure such as hospital beds, oxygen-supported beds, ventilator-supported beds, intensive care units, blood centres, emergency transport systems, and dialysis facilities across the Government, Private, and AYUSH sectors. Maintaining an updated record of these resources helps the district health administration assess surge capacity, plan resource mobilisation, and strengthen emergency preparedness.

**Table 2.5 Specialised Services and Emergency Resource Inventory**

<b>Item</b>	<b>Govt</b>	<b>Private</b>	<b>AYUSH</b>	<b>Total</b>
Hospital beds	3921	6085	220	10226
Oxygen-generating systems(Y/N)	Y	Y	Y	Y
Oxygen-supported beds (Numbers)	1522	2457	0	3979
Ventilator-supported beds	328	192	0	520
ICU beds	297	712	0	1009
Burns units	4	9	0	13
Blood centres	5	14	0	19
Ambulances	17	253	1	271
Dialysis	5	11	0	15
Medical Stores	34	391	46	471

## **f. Industrial Establishments Supporting Emergency Response**

Certain industrial establishments within the district may serve as critical support systems during large-scale emergencies. Medium-scale and small-scale industries can assist in providing logistical support, manufacturing essential supplies, or facilitating emergency infrastructure when required.

A detailed list of such industrial establishments that may be mobilised during worst-case scenarios is provided in **Annexure**.

## **g. Oxygen and Diagnostic Capacity**

Monitoring oxygen supply systems and diagnostic capabilities is a critical component of public health preparedness. Adequate oxygen infrastructure and diagnostic services enable healthcare facilities to effectively manage respiratory illnesses, infectious disease outbreaks, and other medical emergencies requiring critical care support.

Oxygen-generating systems and backup oxygen sources ensure an uninterrupted oxygen supply during periods of high demand, while diagnostic facilities such as laboratories, imaging services, and molecular testing support timely detection and clinical management of diseases.

The following table provides an overview of the oxygen infrastructure and diagnostic facilities available across major government healthcare institutions in the district.

**Table 2.6 Oxygen and Diagnostic Capacity in Major Government Hospitals in Kottayam**

Name of Health Facility	Oxygen-generating System (Y/N)	Backup Oxygen Source (Y/N)	Diagnostic Facilities Available(Y/N)				
			Lab	USG	X-ray	CT/MRI	RT-PCR
MCH Kottayam	Y	Y	Y	Y	Y	Y	N
ICH Kottayam	N	Y	Y	Y	Y	N	N
GH Kottayam	Y	Y	Y	Y	Y	Y	N
GH Pala	Y	Y	Y	N	Y	N	N
GH Kanjirappally	N	Y	Y	N	Y	N	N
GH Changanasserry	Y	Y	Y	N	Y	N	N
THQH Vaikom	Y	Y	Y	Y	Y	N	N
THQH Kuravilangad	N	Y	Y	N	Y	N	N
THQH Pampady	Y	Y	Y	N	Y	N	N
Speciality Hospital Uzhavoor	N	Y	Y	N	Y	N	N

The table indicates that most secondary and tertiary care facilities in the district have access to laboratory and basic imaging services, while advanced imaging such as CT/MRI is available only in select higher-level institutions. The current distribution of life-support and diagnostic assets highlights the district's readiness for high-acuity respiratory outbreaks. 50% of the major government referral centres (MCH, GH, DH Mavelikkara, W&C) are equipped with functional oxygen-generating systems (PSA Plants). All listed facilities (100%) maintain a Backup Oxygen Source. Strengthening oxygen infrastructure and expanding diagnostic capacity remain important components of health system preparedness, particularly during pandemics and other large-scale respiratory disease outbreaks.

## **h. Oxygen Security and Dealer Network**

The district maintains a tiered oxygen supply system to ensure that both major hospitals and home-isolated patients have uninterrupted access to medical-grade oxygen.

Sl. No.	Name of Agency	Place
1	Kerala Oxygen	Adoor
2	Gasco Industrial Gas Pvt Ltd Kottayam	Alappuzha
3	Vigneswara Oxygen	Athani
4	Ambady Oxygen gas Agencies	Changanassery
5	Carezone Surgicals	Chengannur
6	Manorama Oxygen PVT Ltd	Ernakulam
7	Medicity Pharmaceuticals	Haripad
8	SB Gas Agencies	Ernakulam
9	Cochin Air Products	Ernakulam
10	Sultan Industrial Gases Kottayam	Kottayam
11	Southern Surgical	Kottayam
12	Deepa Gas Agencies	Kottayam
13	Ozone Gas Agencies	Kunnamthanam, Kottayam
14	Oxygen Plant, Kunnupuram	Kunnupuram, Kottayam
15	Medizone Health Specialities	Mavelikkara
16	Evergreen Surgicals	Neerkunnam
17	Kadavil Oxygen	Thiruvalla
18	Thrissur Oxygen	Thrissur
19	Southern gas Lmt	Trivandram
20	Sree Vinayaka Gas	Trivandram

The presence of multiple oxygen manufacturing units and suppliers across the district strengthens the healthcare system's ability to maintain an uninterrupted oxygen supply during routine healthcare delivery as well as during public health emergencies. Effective coordination between healthcare facilities and oxygen suppliers is essential to ensure timely

replenishment and distribution of medical oxygen during surge situations.

### **i. District-Level Diagnostic Facility Mapping**

Diagnostic services are an essential component of the healthcare system, enabling timely detection, confirmation, and monitoring of diseases. A well-distributed network of laboratories and imaging facilities supports clinical management, disease surveillance, and outbreak investigation.

To manage a district-wide outbreak, Kottayam utilises a Public-Private Integrated Laboratory Network. This ensures that high-volume testing does not bottleneck at a single institution.

**Table 2.7 Diagnostic Facility Mapping at the District Level**

<b>Item</b>	<b>Govt</b>	<b>Private</b>	<b>Total</b>
General laboratories	83	363	446
Microbiology laboratories	2	12	14
RT-PCR laboratories	0	-	-
USG units	5	36	41
CT/MRI units	2	20	22
Research laboratories	1	0	1
Labs of other departments	IUCBR, Puthupally		

The district possesses a well-developed healthcare infrastructure comprising public and private healthcare facilities, specialised medical services, training institutions, and a strong network of diagnostic laboratories. The 12 Private Microbiology labs and 3 Private RT-PCR units are earmarked for surge testing. Under the Disaster Management Act, these facilities can be requisitioned to provide standardised, capped-cost testing for the general public during a Level 3 surge. Since 90% of these advanced units are in the private sector, the district establishes "Diagnostic Referral Corridors" to ensure patients in government Taluk hospitals have priority access to these private machines during emergencies.

### **j. Social and Community Infrastructure for Surge Planning**

Social and community infrastructure plays an important role in supporting emergency response operations during public health crises, natural disasters, or large-scale displacement events. Facilities such as schools, community halls, religious institutions, and other public buildings can be repurposed as temporary shelters, isolation centres, relief camps, or vaccination sites when required. The following inventory provides an overview of key community and logistical infrastructure available within the district that may support surge response planning.

Table 2.8 Social and Community Infrastructure Inventory for Surge Planning

<b>Category</b>	<b>Total Count</b>
Anganwadis	2049
Schools	910
Colleges	59
Medical colleges (Govt/Private)	1
Nursing colleges (Govt/Private)	13
Nursing Schools (Govt/Private)	17
Dental colleges (Govt/Private)	1
Paramedical institutes (Govt/Private)	2

### **3. HUMAN RESOURCES**

This section focuses on the human capital available within the district. In any emergency—be it a pandemic, flood, or industrial accident—infrastructure is only as effective as the people operating it.

#### **3.1. Medical & Clinical Personnel**

This table tracks the "Frontline" providers responsible for diagnosis, treatment, and clinical management. A detailed directory with the contact numbers of all workers is maintained in **Annexure**.

<b>Cadre</b>	<b>Govt (No.)</b>	<b>Private (No.)</b>	<b>Total</b>
Doctors—Modern Medicine	812	792	1604
Doctors – AYUSH	136	139	275
Doctors – Veterinary	87	13	100
Doctors – Dental	21	314	335
Nursing officers	574	1020	1594
Lab technicians	192	601	793
Pharmacists	207	505	712
Psychologists	31	32	63
Counsellors	27	44	71

### **3.2. Public Health & Field-Level Workforce**

These individuals are the backbone of surveillance, maternal-child health, and decentralised care.

<b>Cadre</b>	<b>Health services</b>	<b>Municipal common services</b>	<b>Total</b>
HS (Health Supervisors)	11	11	22
HI (Health Inspectors)	51	21	72
LHS (Lady Health Supervisor)	19	3	22
LHI (Lady Health Inspectors)	61	8	69
JPHN (Jr Public Health Nurses)	322	48	370
JHI (Jr Health Inspectors)	222	53	275
MLSP (Mid-Level Service Providers)	314	0	314
Palliative Nurses	103	0	103
RBSK Nurses	63	0	63
PRO	25	0	25
Epidemiologist	9	0	9
Entomologist	2	0	2
Data Manager	11	0	11

### 3.3. Community & Support Cadre

This group represents the surge capacity of the district—people who can be called upon for logistics, rescue, and specialised support.

Cadre	Number
ASHA Workers	1487
AWW (Anganwadi Workers)	2049
Emergency Medical Volunteers (Trained)	3542
Kudumbashree	31943
MNREGS	48284
Purusha Swayam Sahaya Sangham	4066
Police Ex-Servicemen	124
Ex Army	103
BSF	49
CRPF	22
Assam Rifles	12
CISF	4
Delhi Police	2
Navy	2
NCC/NSS Volunteers	6301
One Health Community Volunteers	65856
One Health Community Mentors	9408

### 3.4. Community Organisations

This section details the presence of community-based organisations (CBOs), non-governmental organisations (NGOs), faith-based organisations (FBOs), Kudumbashree Self-Help Groups (SHGs), and Ayalkootams within the District. These groups enhance grassroots mobilisation, resource distribution, and support networks crucial for pandemic response and community resilience.

Category	Total Count
NGOs	300
Religion-based organisations	535
Foreign-based organisations	45
Sports Club/youth clubs	457
Kudumbashree SHGs	13502
Political organisations	352
Residential organisations	571

### 3.5. Administrative & Emergency Services

This section outlines the availability of key non-health emergency support services and infrastructure within the district, which are essential for effective pandemic preparedness and response. These facilities support law enforcement, disaster response, water supply, logistics, mobility, and community-level interventions during public health emergencies.

Category	Total Count
Police Stations	32
Fire & Rescue Stations	08
	<ul style="list-style-type: none"> <li>● Kottayam</li> <li>● Pala</li> <li>● Changanassery</li> <li>● Erattupetta</li> <li>● Kanjirapally</li> <li>● Pamapady</li> <li>● Kaduthuruthy</li> <li>● Vaikom</li> </ul>
Water Pumping Points (with water treatment plants)	11
Water Pumping Points (with water treatment plants)	27
Water pumphouse locations	38
Public Distribution System (PDS)	926

### 3.6. Information regarding resources

The availability of essential transport and support resources plays a quiet but critical role in saving lives. Equipment such as ambulances, mobile mortuaries, amphibious ambulances, and motorised boats ensures that patients, samples, and healthcare teams can move swiftly—even in flooded, remote, or difficult terrains. Heavy vehicles like JCBs, cranes, tractors, and torus lorries support logistics, waste management, emergency infrastructure, and rapid conversion of spaces into care or isolation facilities. Taxis, four-wheel-drive vehicles, and trucks help maintain continuity of essential services, reach vulnerable populations, and support home-based care and supply delivery.

Means of transportation	Total Count
JCB	55
Back hoe loader	15
Road roller	1
Ambulances	List annexed
Mobile mortuaries	List annexed

## 4. One health & environmental surveillance

The One Health method integrates environmental, animal, and human health to enable proactive pandemic preparedness. District-level surveillance needs to be improved to detect and treat zoonotic and environmentally transmitted diseases early. Surveillance is strengthened through systematic assessment of animal populations, veterinary infrastructure, poultry and slaughter facilities, intersectoral coordination, and specialised tools, such as GIS-based avian influenza seasonality mapping from previous outbreaks to enable predictive alerts and ward-specific sampling to support effective pandemic preparedness in high-risk areas.

### 4.1. Animal & Bird Population

Mapping animal and bird populations at the district level is essential for identifying and prioritising zoonotic disease hazards such as rabies, avian influenza (H5N1), leptospirosis, anthrax, and Nipah-like spill over events. Risk classification, targeted surveillance, vaccination planning, and early epidemic detection made feasible by comprehensive population mapping enhance One Health-based pandemic preparedness.

District	Local Body	Total Owners	Owners with Livestock	Total Livestock Animals	Cattle	Buffalo	Goat	Sheep	Pig	Other Animals
Kottayam	Thalayazham	253	252	908	729	20	2	0	157	1
Kottayam	Chempu	147	146	400	393	5	2	0	0	1
Kottayam	Maravanthuruthu	154	154	477	413	38	1	0	25	0
Kottayam	TV Puram	86	86	272	265	4	0	0	3	0
Kottayam	Vechoor	169	169	311	282	21	0	0	8	0
Kottayam	Udayanapuram	160	158	510	490	18	1	0	1	2
Kottayam	Kaduthuruthy	130	127	284	278	2	0	0	4	3
Kottayam	Kallara	102	102	282	200	24	0	0	58	0
Kottayam	Manjoor	470	470	1572	1313	172	0	0	87	0
Kottayam	Mulakulam	156	154	451	444	5	0	0	2	2
Kottayam	Njeezhoor	474	474	1521	1296	86	0	0	139	0
Kottayam	Thalayolaparambu	127	126	290	254	15	1	0	20	1
Kottayam	Velloor	302	302	893	796	32	0	0	65	0
Kottayam	Aimanam	246	246	780	763	16	1	0	0	0
Kottayam	Athirampuzha	52	51	165	165	0	0	0	0	1
Kottayam	Arpookara	76	76	140	115	12	0	0	13	0
Kottayam	Neendoor	192	192	896	339	50	0	0	507	0
Kottayam	Kadaplattom	240	239	741	458	21	0	0	262	1
Kottayam	Marangattupally	133	133	486	335	73	0	0	78	0
Kottayam	Kanakkari	358	356	1100	1052	38	0	0	10	2
Kottayam	Veliyanoor	239	239	490	409	58	1	0	22	0
Kottayam	Kidangoor	162	162	504	417	57	29	0	1	0
Kottayam	Kuravilangad	252	252	662	594	20	0	0	48	0
Kottayam	Uzhavoor	130	130	240	216	23	0	0	1	0
Kottayam	Ramapuram	348	346	1042	806	27	0	0	209	2
Kottayam	Bharananganam	530	335	817	592	43	167	0	15	247
Kottayam	Karoor	136	134	342	330	10	2	0	0	2
Kottayam	Kozhuvanal	339	339	1262	1099	80	2	0	81	0
Kottayam	Kadanad	180	153	569	351	10	17	0	191	29
Kottayam	Meenachil	174	173	361	298	23	1	0	39	1

Kottayam	Mutholy	175	174	507	426	59	0	0	22	1
Kottayam	Melukavu	195	195	394	369	23	0	0	2	0
Kottayam	Moonilavu	47	47	70	67	2	0	0	1	0
Kottayam	Poonjar	64	64	169	162	7	0	0	0	0
Kottayam	Poonjar Thekkekara	194	194	482	437	13	0	0	32	0
Kottayam	Thalappalam	67	66	203	102	35	0	0	66	1
Kottayam	Teekoy	157	157	403	378	25	0	0	0	0
Kottayam	Thalanad	97	97	265	136	9	0	0	120	0
Kottayam	Thidanad	153	153	287	266	21	0	0	0	1
Kottayam	Akalakunnam	122	122	230	223	2	0	0	5	0
Kottayam	Elikulam	210	209	381	322	42	4	0	13	1
Kottayam	Kooroppada	203	203	481	405	57	0	0	19	0
Kottayam	Pampady	72	65	112	106	6	0	0	0	7
Kottayam	Pallikkathode	337	336	692	618	74	0	0	0	1
Kottayam	Meenadom	90	84	158	137	18	1	0	2	6
Kottayam	Ayarkkunnam	478	478	1129	940	111	1	0	77	0
Kottayam	Kumarakom	127	126	409	331	14	0	0	64	1
Kottayam	Puthuppally	378	186	656	514	88	0	0	54	193
Kottayam	Panachikkad	191	191	518	478	29	0	0	11	0
Kottayam	Thiruvarpu	147	146	425	364	60	0	0	1	1
Kottayam	Vijayapuram	182	174	556	464	91	0	0	1	8
Kottayam	Manarcad	278	276	1000	839	84	0	0	77	2
Kottayam	Karukachal	280	246	540	460	44	6	0	30	34
Kottayam	Kurichy	225	221	555	481	54	0	0	20	4
Kottayam	Madappally	55	42	71	69	0	2	0	0	13
Kottayam	Paippad	207	198	713	643	68	2	0	0	9
Kottayam	Thrikkodithanam	212	165	545	467	16	5	0	57	47
Kottayam	Vakathanam	284	249	478	412	63	3	0	0	37
Kottayam	Vazhappally	291	282	1079	976	98	3	0	2	9
Kottayam	Chirakkada vu	275	260	558	467	12	15	0	64	15
Kottayam	Kangazha	302	299	802	742	28	1	0	31	4

Kottayam	Nedumkunnam	428	369	1066	933	30	36	0	67	72
Kottayam	Vellavoor	431	409	1017	962	42	13	0	0	26
Kottayam	Vazhoor	171	170	482	471	7	1	0	3	1
Kottayam	Erumeli	513	499	1105	883	128	11	0	83	15
Kottayam	Kanjirappally	384	351	1111	923	68	10	0	110	33
Kottayam	Koottickal	36	35	113	55	13	0	0	45	1
Kottayam	Manimala	476	472	1193	1007	50	21	0	115	7
Kottayam	Mundakayam	220	215	539	495	32	3	0	9	5
Kottayam	Parathode	57	42	95	69	10	5	0	11	15
Kottayam	Koruthode	163	161	358	311	24	0	0	23	2
Kottayam	Pala	157	154	605	447	44	1	0	113	3
Kottayam	Vaikom	44	43	162	140	21	1	0	0	1
Kottayam	Changanassery	134	87	381	281	79	3	0	18	47
Kottayam	Kottayam	8	1	1	1	0	0	0	0	7
Kottayam	Erattupetta	1	1	2	0	0	2	0	0	0

The main risk of zoonotic diseases, Leptospirosis, in Kottayam is concentrated in almost all LSGs, which is explained by the high density of pig farms, cattle congregation areas, and poultry units. The stray dog population in market areas, fish landing sites, and bus stations remains a substantial challenge for rabies surveillance and bite prevention. There is a considerable risk of avian influenza introduction and amplification during November - December due to the seasonal presence of migratory and resident water birds near ponds/canals/rivers/backwaters/paddy fields. Clusters of pig farms and animal shelters vulnerable to flooding further raise the risk of leptospirosis and other zoonoses mediated by the environment, especially during monsoon floods.

## 4.2. Veterinary Infrastructure

Veterinary institutions are a core pillar of One Health surveillance, enabling early detection of zoonotic diseases through vaccination, investigation of unusual animal illnesses or deaths, sample collection, and timely outbreak reporting. A well-mapped and responsive veterinary network strengthens coordination with human health and District systems, ensuring rapid response during zoonotic events and pandemics.

Sl.No.	Clinical Institution	No.of institution
1	Veterinary Dispensaries	60
2	Veterinary Hospitals	19
3	Veterinary Polyclinics	4
4	District Veterinary Centre	1
5	Mobile Veterinary Hospital	1
6	AHDI Veterinary Sub Centers Total	84

Category	Contact number
Government Veterinary Doctors	Details annexed
Private Veterinary Doctors	Details annexed

### 4.3. Veterinary Doctors & Workforce

### 4.4. High-Risk Interface Points (Surveillance Sites)

Kottayam's unique geography—characterised by extensive wetlands and a close-knit human-animal ecosystem—necessitates a robust **"One Health" surveillance strategy**. This section identifies the primary geographic and environmental "hotspots" where the risk of pathogen spillover from animals to humans is significantly elevated.

Regular monitoring of these interfaces enables early detection of zoonotic diseases and facilitates timely public health interventions. Surveillance activities at these sites are carried out in coordination with the health department, veterinary services, local self- government institutions, and other relevant stakeholders under the One Health framework.

#### 4.4.1 Identified High-Risk Surveillance Sites

The following matrix identifies the specific interface points where environmental, animal, and human factors converge, along with the associated public health hazards.

Type of High-Risk Interface	Health Hazard	High-Risk Locations
Wetlands & Backwaters	Avian Influenza (Bird Flu) outbreaks	Panachikkad Puthupally Ayarkunnam Vijayapuram Thalayazham Vechoor Udayanapuram Chempu TV Puram Arpookkara Aymanam Onamthuruth Kumarakom Thirubarpu Paippad Pallicathodu Thalayolaparambu, Ramapuram Manjoor Kanakkari
Backyard Poultry Farms	Avian Influenza (Bird Flu) outbreaks	Ayarkunnam Vijayapuram Vechoor , Maravanthuruthu Udayanapuram, TV Puram Koruthodu Kanjirapally Kumarkom Athirampuzha Changanassery Municipality, Paippad Changanassery Municipality, Paippad

<p>Cattle Sheds near Water Bodies</p>	<p>West Nile Fever and other vector-borne zoonotic diseases</p>	<p>Vijayapuram Maravanthurthu, TV Puram Thalappalam Mundakayam Koruthodu Ullanadu Thalayolaparambu Changanassery Municipality, Thrikkodithanam</p>
<p>Fish &amp; Meat Markets</p>	<p>Food-borne and zoonotic diseases</p>	<p>TV Puram Parathodu Mundakayam Kanjirapally Athirampuzha, Thiruvvarppu, Kumarakom Kadanad, meenachil Thalayolaparambu, Mulakkulam Erattupetta Changanassery Municipality, Madappally, Thrikkodithanam, Vazhappally Paippad , Kottayam Municipality</p>
<p>Community Slaughter Sites</p>	<p>Zoonotic disease transmission</p>	<p>Parathodu Athirampuzha Pallicakthodu Ettumanoor Municipality</p>

Migratory Bird Congregation Areas	Avian Influenza (Bird Flu) outbreaks	Panachikkad, Puthupally, Kurichy, Vijayapuram, Thalayazham, Chempu, TV Puram, Kumarakom, Arpookkara, Paippad, Thalayolaparambu, Mulakkulam Municipality
Rodent-Infested Grain Storage Areas	Leptospirosis and Scrub Typhus	Madappally, Kottayam Municipality

Strengthening surveillance at these high-risk interface points is essential for early detection of zoonotic diseases and for preventing potential spillover events that may lead to outbreaks affecting both human and animal populations.

### Vulnerability Mapping

Vulnerability mapping is the cornerstone of risk-based surveillance in Kottayam. By identifying populations, occupations, and geographic clusters with elevated exposure to environmental and socio-economic hazards, the district can optimise resource allocation and ensure that interventions reach those most in need during a public health emergency.

#### 4.2.1 District Vulnerability Matrix

The following matrix categorises high-risk factors and pinpoints the specific Local Self-Government Institutions (LSGs) and demographic groups that require priority monitoring.

<b>Risk Factor</b>	<b>High-Risk Wards</b>	<b>Key Locations</b>	<b>lsgd</b>	<b>Risk Level (High/Med/Low)</b>

The presence of backyard poultry, duck farming, wetlands, and migratory bird habitats in parts of Kottayam District highlights the importance of continued surveillance for zoonotic diseases such as Avian Influenza (H5N1). Strengthening coordination between public health, veterinary services, and local governance institutions is essential for early detection and prevention of outbreaks.

## 4.5 Historical Outbreak Analysis: Avian Influenza (H5N1)

Kottayam District is a documented hotspot for Highly Pathogenic Avian Influenza (HPAI) H5N1, primarily due to the dense population of domestic ducks in the Kuttanad region and their interface with migratory birds. This section tracks the temporal and spatial distribution of outbreaks from 2021 to 2025.

### 4.5.1 Longitudinal Outbreak Data (2021–2025)

The recurring nature of these outbreaks indicates that H5N1 has become regionally endemic, requiring permanent vigilance rather than seasonal response.

Year	Total Wards Affected	Top Impacted Areas	Species Affected
2025	3	Kanjiram, Panampady, Manjoor	Poultry, Quail, Crow
2024	5	Manarcad, Paippadu, Udayanapuram, Vazhapally, Vechoor	Duck, Poultry, Crow
2023	1	Kattikunu (Chembu), Panachikad	Duck, Poultry, Crow
2022	4	Thalayazham, Arpookara, Neendoor, Kallara	Duck, Poultry
2021	5	Onamthuruthu, Aymanam, Edayazham, Kumarakom, Kallara	Duck, Poultry

# AVIAN INFLUENZA

കോട്ടയം ജില്ല - തദ്ദേശസ്വയംഭരണ സ്ഥാപനങ്ങൾ

## LSGs

- Vechoor
- Kallara
- Aymanam
- Kumarakom
- Kottayam Municipality
- Manjoor
- Manarcaud
- Kanjirappally
- Thalayazham
- Chembu
- Kanjirappally



### 4.5.2 H5N1 Outbreaks in Kottayam District – 2025

The following locations reported H5N1 outbreaks during 2025.

Sl. No	Location	Seasonality Month	Ward	Species Affected
1	Kanjiram	December	W-37	Poultry
2	Panampady	December	W-38	Poultry
3	Manjoor	December	W-6	Quail

### 4.5.3 H5N1 Outbreaks in Kottayam District – 2024

During 2024, multiple

H5N1 outbreaks were reported across various locations in the district, affecting poultry, ducks, and wild birds.

<b>Sl. No</b>	<b>Location</b>	<b>Seasonality Month</b>	<b>Ward</b>	<b>Species Affected</b>
<b>1</b>	Manarcad	May	13	Poultry
<b>2</b>	Vechoor	July	10	Poultry
<b>3</b>	Vazhapally	May	1	Duck
<b>4</b>	Udayanapuram	June	1	Poultry
<b>5</b>	Paippadu	May	1	Duck
<b>6</b>	Vechoor	July	1	Poultry

#### 4.5.4 H5N1 Outbreaks in Kottayam District – 2023

<b>Sl. No</b>	<b>Location</b>	<b>Seasonality Month</b>	<b>Ward</b>	<b>Species Affected</b>
1	Chempu	January	W-2	Duck
2	Panachikad	February	W-14	Duck

#### 4.5.5 H5N1 Outbreaks in Kottayam District – 2022

<b>Sl. No</b>	<b>Location</b>	<b>Seasonality Month</b>	<b>Ward</b>	<b>Species Affected</b>
<b>1</b>	Thalayazham	December	<b>9</b>	Poultry
<b>2</b>	Kallara	December	<b>1</b>	Poultry
<b>3</b>	Neendoor	December	<b>13</b>	Duck
<b>4</b>	Arpookara	December	<b>2</b>	Duck

## 5. EPIDEMIOLOGICAL TRENDS (2021–2025)

Disease surveillance is the systematic collection, analysis, and interpretation of health data for planning, implementation, and evaluation of public health practice. This section presents the disease surveillance profile of the district based on routine reporting systems and outbreak investigations to identify priority diseases, seasonal patterns, and emerging public health threats.

### a. Disease Burden among human beings (Last 5 Years)

Analysis of disease-wise data for the last five years helps identify persistent public health problems, emerging diseases, and changes in disease burden. This information supports prioritisation of prevention, preparedness, and response activities at the district level.

Disease	2021	2022	2023	2024	2025	Trend
Dengue	333	314	1185	2286	789	Decreasing
Leptospirosis	383	320	258	212	262	Increasing
Hepatitis A	40	97	125	345	764	Increasing
Malaria	15	23	32	33	52	Increasing
Scrub Typhus	10	15	5	12	11	Decreasing
Typhoid	0	7	12	17	57	Increasing
Influenza	0	0	80	18	16	Decreasing
ADD	7890	17499	16946	16950	16613	Decreasing
Mumps	0	0	0	0	38	Increasing

Measles	0	0	8	7	0	Decreasing
Hepatitis B	23	76	90	91	9	Decreasing
Hepatitis C	0	13	13	29	0	Decreasing
Tuberculosis		1316	1151	1172	1079	Decreasing
Leprosy	14	11	12	14	11	Decreasing
COVID-19	268927	78637	3824	333	616	Decreasing

## **b. Seasonal Trend Analysis**

Seasonal analysis helps anticipate surges (e.g. dengue in monsoon, leptospirosis after floods, influenza in cooler months) and plan pre-emptive vector control, stockpiling of IV fluids, and awareness campaigns at the district level.

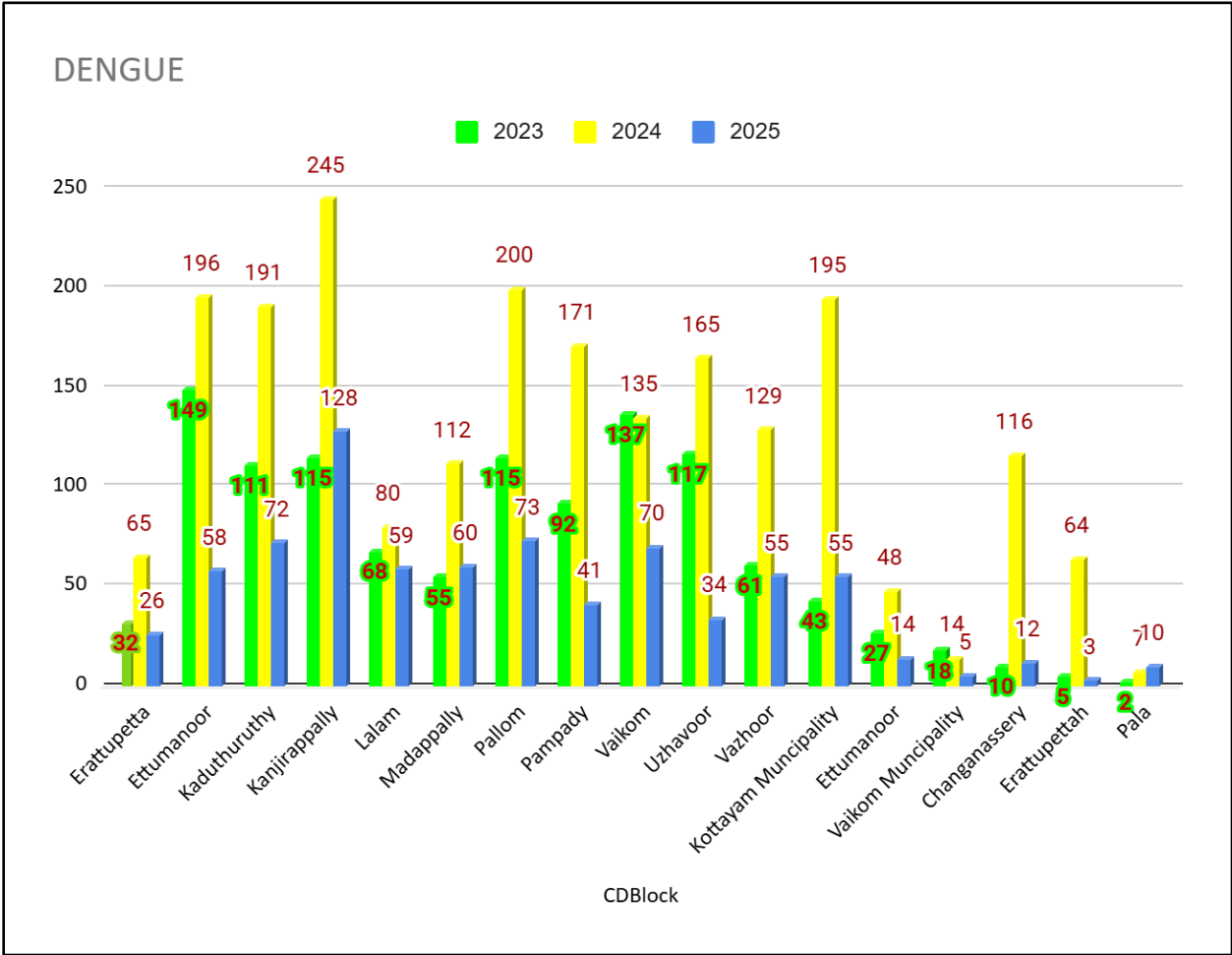
### **i. Dengue**

Dengue is a major seasonal vector-borne disease strongly associated with rainfall, water stagnation, and increased mosquito breeding during the monsoon period.

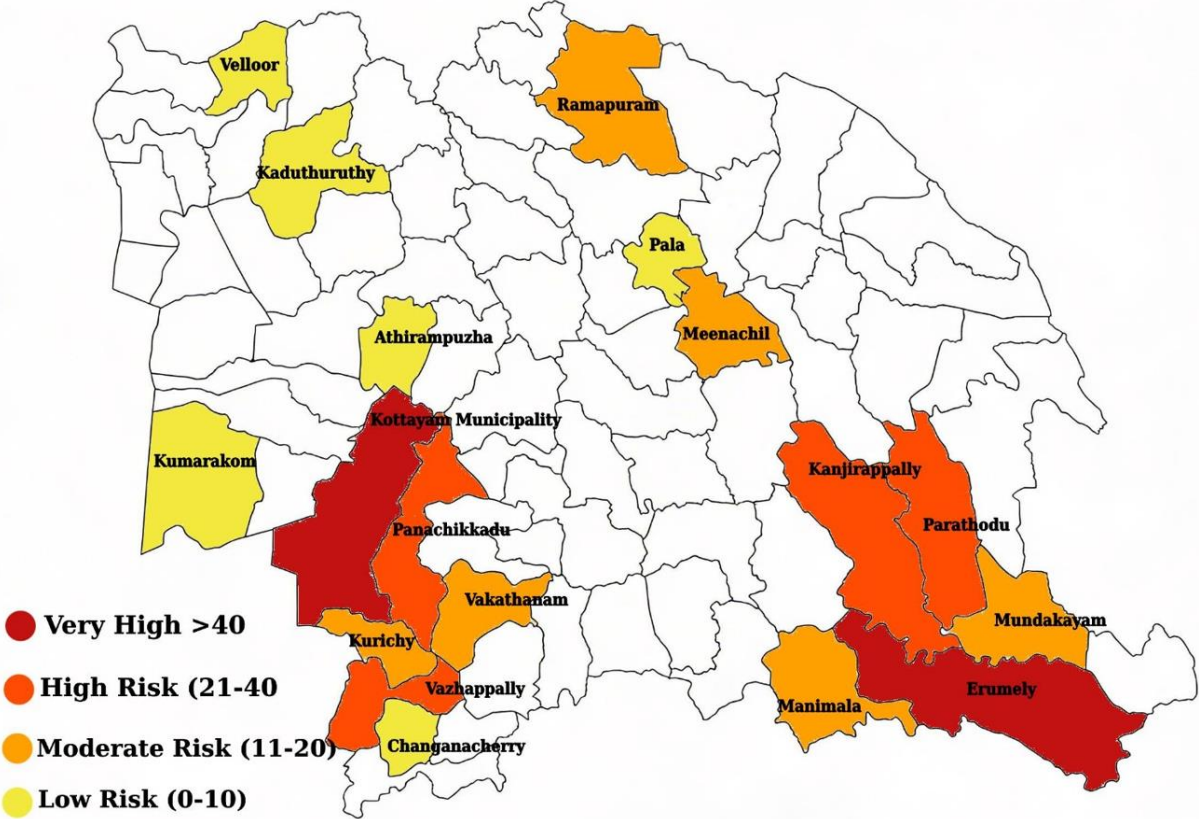
Peak: July–November

Dengue – Block-wise Yearly Distribution (2021–2025)

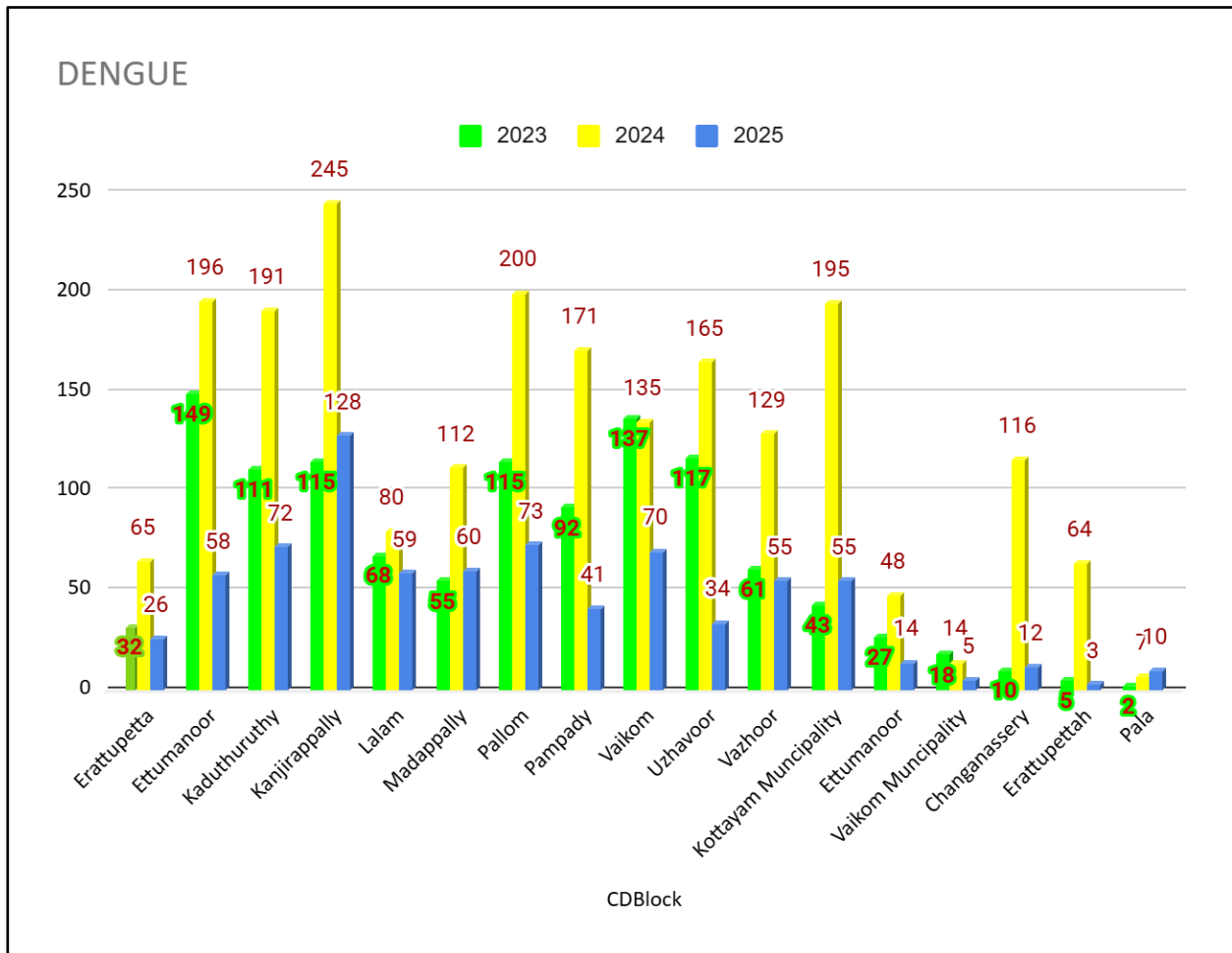
<b>CD Block/ Municipality</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>total</b>
Ayarkunam	115	200	73	388
Edamaruku	32	65	26	123
Edayarikkapuzha	61	129	55	245
Edayazham	137	135	70	342
Erumeli	115	245	128	488
Kumarakom	149	196	58	403
Madappally	55	112	60	227
Pampady	92	171	41	304
Ramapuram	117	165	34	316
Thalayolaparambu	111	191	72	374
Ullanad	68	80	59	207
Kottayam Municipality	43	195	55	293
Ettumanoor	27	48	14	89
Vaikom Municipality	18	14	5	37
Changanassery	10	116	12	138
Erattupettah	5	64	3	72
Pala	2	7	10	19
	<b>1157</b>	<b>2133</b>	<b>775</b>	<b>4065</b>



### DENGUE CHOROPLETH MAPPING 2025



The data indicates a noticeable increase in dengue cases across most blocks over the past five years, with a marked surge during 2023 and 2024. Blocks reported comparatively higher case burdens, reflecting localised transmission and possible environmental risk factors such as water stagnation and dense population clusters. Although a decline is observed in some blocks in 2025, dengue continues to remain a significant seasonal public health concern in the district. These trends highlight the need for intensified vector control activities, community awareness programs, source reduction measures, and strengthened surveillance, particularly



during the pre-monsoon and monsoon months.

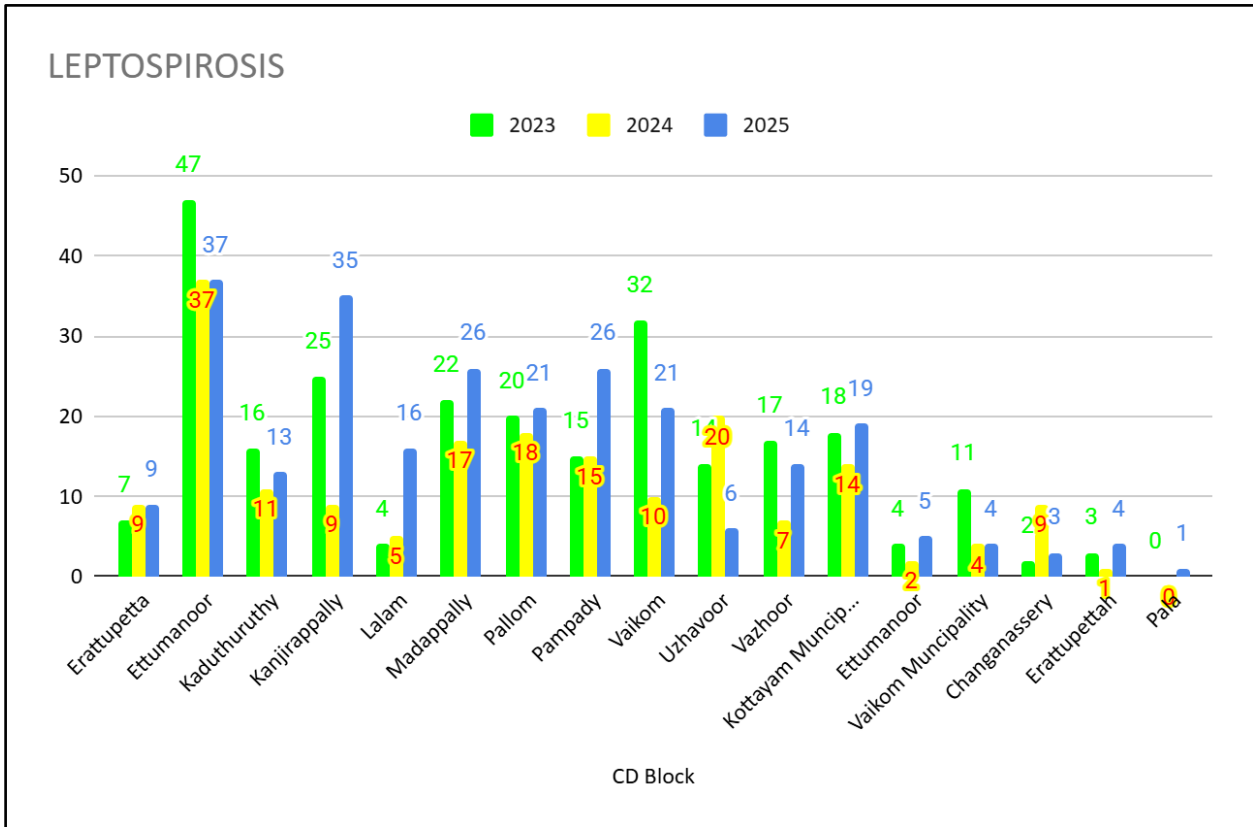
## ii. Leptospirosis

Leptospirosis cases are closely linked to monsoon rains, flooding, and occupational exposure, particularly in low-lying and waterlogged areas.

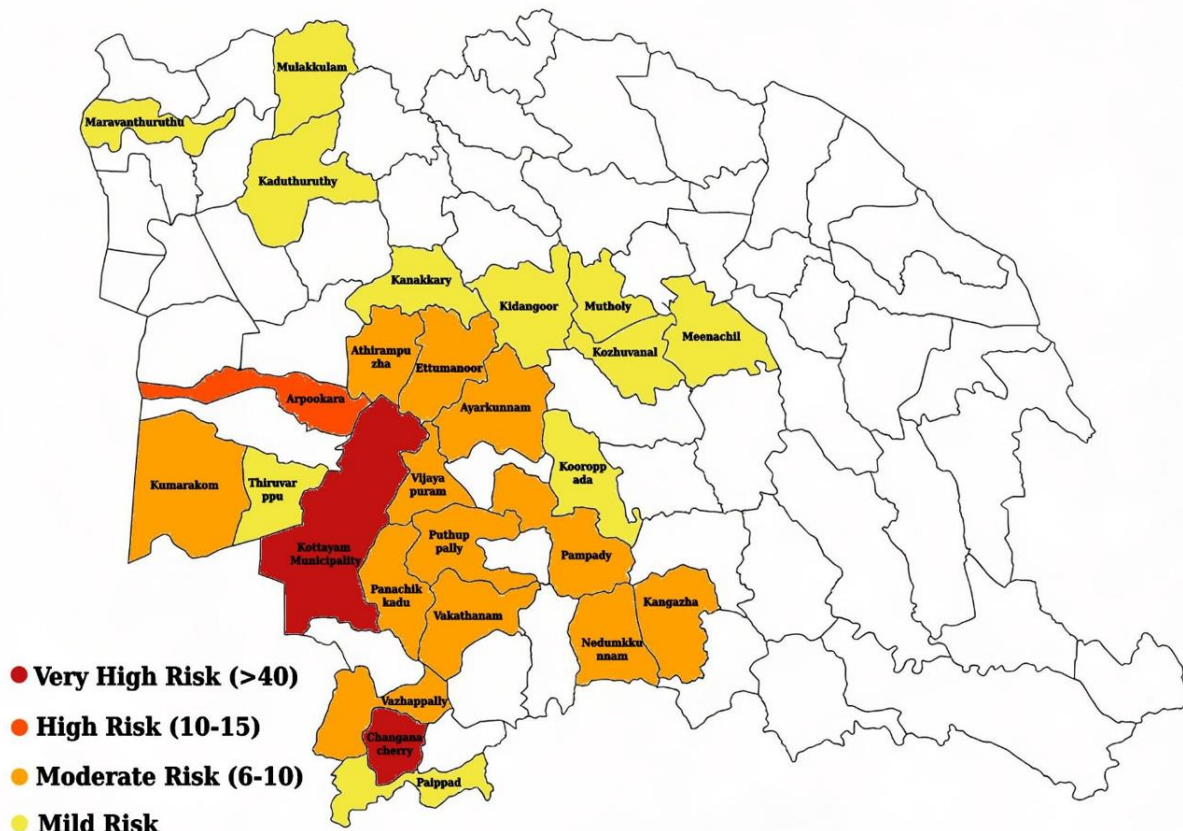
Peak: June - August

Leptospirosis – LSG-wise Yearly Distribution (2021–2025)

<b>CD Block/ Municipality</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>Total</b>
Ayarkunam	20	18	21	59
Edamaruku	7	9	9	25
Edayarikkapuzha	17	7	14	38
Edayazham	32	10	21	63
Erumeli	25	9	35	69
Kumarakom	47	37	37	121
Madappally	22	17	26	65
Pampady	15	15	26	56
Ramapuram	14	20	6	40
Thalayolaparambu	16	11	13	40
Ullanad	4	5	16	25
Kottayam Municipality	18	14	19	51
Ettumanoor	4	2	5	11
Vaikom Municipality	11	4	4	19
Changanassery	2	9	3	14
Erattupettah	3	1	4	8
Pala	0	0	1	1
<b>Total</b>	<b>257</b>	<b>188</b>	<b>260</b>	<b>705</b>



### LEPTOSPIROSIS CHOROPLETH MAPPING- 2025



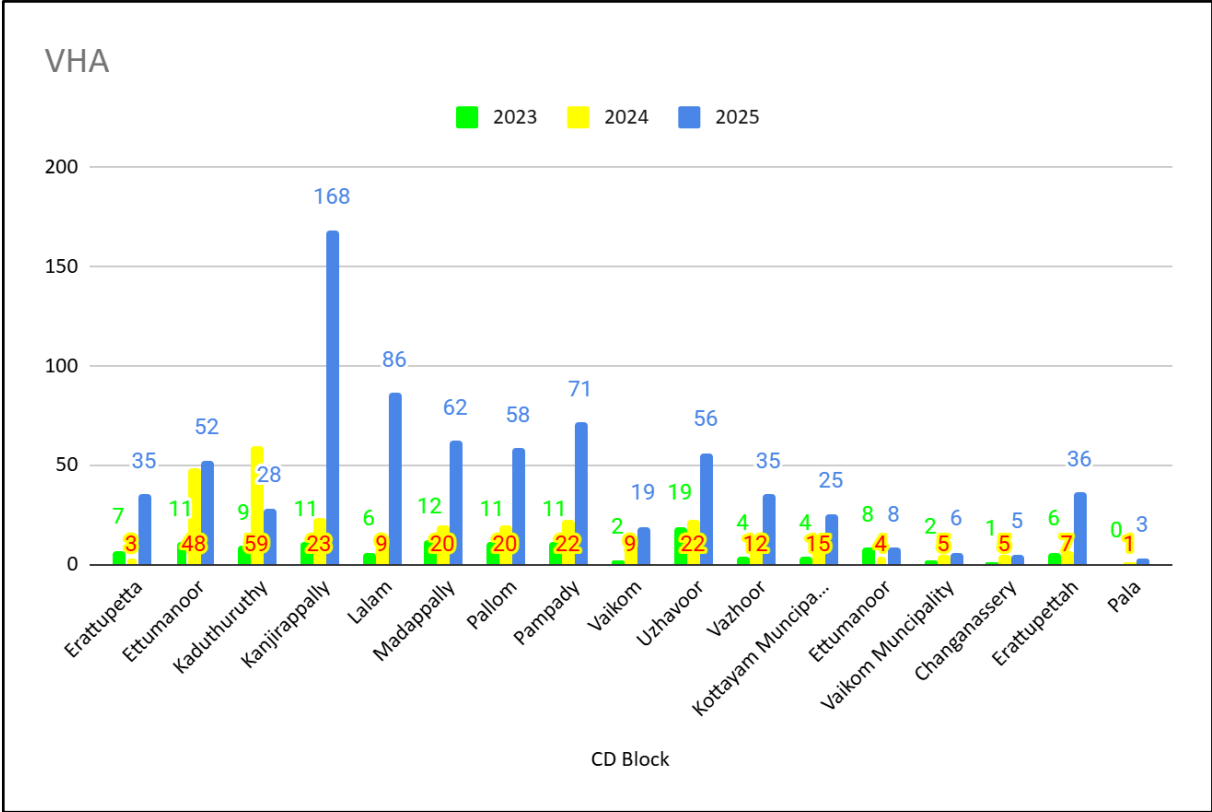
### iii. Viral Hepatitis - A

Hepatitis A cases are commonly associated with unsafe drinking water, food contamination, and breakdowns in sanitation, often presenting as clusters or outbreaks.

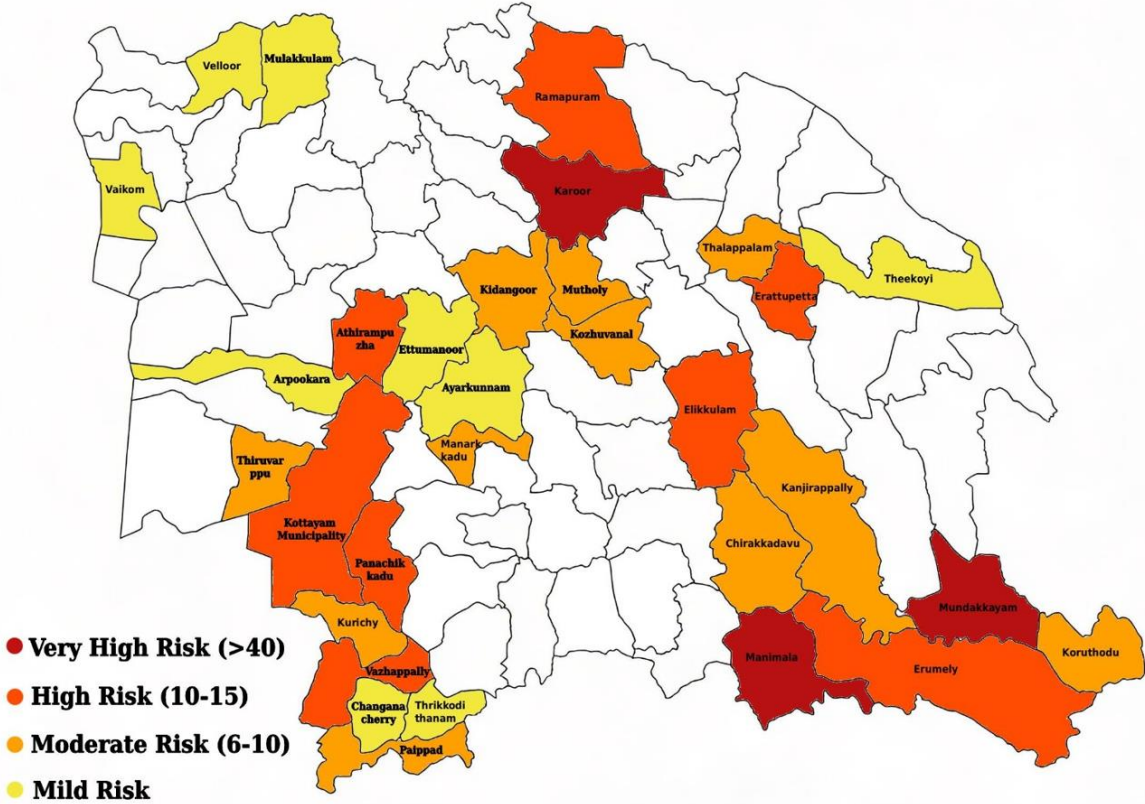
Peak: October - December

Hepatitis A – LSG-wise Yearly Distribution (2021–2025)

CD Block/ Municipality	2023	2024	2025	Total
Ayarkunam	11	20	58	89
Edamaruku	7	3	35	45
Edayarikkapuzha	4	12	35	51
Edayazham	2	9	19	30
Erumeli	11	23	168	202
Kumarakom	11	48	52	111
Madappally	12	20	62	94
Pampady	11	22	71	104
Ramapuram	19	22	56	97
Thalayolaparambu	9	59	28	96
Ullanad	6	9	86	101
Kottayam Municipality	4	15	25	44
Ettumanoor	8	4	8	20
Vaikom Municipality	2	5	6	13
Changanassery	1	5	5	11
Erattupettah	6	7	36	49
Pala	0	1	3	4
	<b>124</b>	<b>284</b>	<b>753</b>	<b>1161</b>



**VIRAL HEPATITIS A CHOROPLETH MAPPING- 2025**



## **6. INSTITUTIONAL FRAMEWORK & RESPONSE COORDINATION**

### **a. Mapping of existing plans and committees**

Effective pandemic preparedness requires strong coordination mechanisms and clearly defined institutional structures. Mapping existing plans, committees, and coordination platforms helps ensure that roles and responsibilities are well defined and that response actions can be implemented efficiently during public health emergencies.

As part of strengthening district preparedness, existing disaster management and health response committees can be harmonised and integrated under a unified **District Pandemic Emergency Operations Centre (EOC)** structure.

### **b. Committee Harmonisation**

#### **a. Establishing District Pandemic Emergency Operations Centre (EOC) Structure**

The **District Emergency Operations Centre (EOC)** serves as the central coordination hub for planning, monitoring, and responding to pandemic and public health emergencies. The EOC facilitates coordination between various departments, ensures efficient information flow, and supports timely decision-making during outbreak situations.

Key Functions of the District EOC

- 24×7 monitoring of the pandemic situation
- Coordination between government departments and field-level response units
- Information management and reporting to the State Emergency Operations Centre
- Resource mobilisation and logistical support for response activities
- Coordination of surveillance, containment, and public health interventions

**Structure of the District Emergency Operations Centre (EOC)**

Sl. No	EOC Position	Designated Officer	Key Functions
1	EOC Director	District Collector / District Magistrate	Overall command and supervision of pandemic response
2	EOC Operations Coordinator	District Disaster Management Officer	Coordination of field operations and response teams
3	Health Operations Lead	District Medical Officer	Surveillance, case reporting, treatment coordination
4	Surveillance & Data Management Officer	District Surveillance Officer along with District Surveillance Unit & PIED cells of the Medical Colleges under the Health Department	Data collection, case tracking, situation reports
5	Logistics & Supply Coordinator	Deputy Collector / RTO and District Supply officer/ Store Verification officer of the District under the District Medical Office, with representation from the Drug controller	Procurement and distribution of PPE, medicines, and equipment
6	Communication & Media Officer	District Information Officer & District Education & Media Officer	Public information, media briefing, risk communication
7	Law & Order Coordinator	Superintendent of Police Representative	Enforcement of containment zones and movement restrictions
8	Volunteer & Community Support Coordinator	Kudumbashree / NGO Representative	Volunteer mobilisation and community assistance
9	Essential Services Coordinator	Civil Supplies Department	Food distribution, essential commodity supply
10	Documentation & Reporting Officer	Planning Officer	Preparation of daily situation reports and documentation

## a. Establishing District Pandemic Incident Command Structure (ICS)

The **Incident Command System (ICS)** provides a standardised management structure for coordinating multi-sectoral response during public health emergencies. It enables clear lines of authority, rapid decision-making, and efficient deployment of resources during pandemic situations.

At the district level, the ICS framework ensures effective coordination between administrative authorities, the health sector, disaster management agencies, law enforcement, and other essential service providers.

Operational Objectives of the Incident Command System

- Early detection and disease surveillance
- Rapid response and containment of outbreaks
- Continuity of essential public services
- Protection of vulnerable populations

### District Pandemic Incident Command Structure

Level	Position / Authority	Designation in Pandemic ICS	Key Responsibilities
1	District Collector / District Magistrate	<b>Incident Commander</b>	Overall command, decision-making, coordination with the state government
2	District Medical Officer (DMO)	<b>Technical Advisor – Health</b>	Epidemiological guidance, surveillance strategy, clinical protocols
3	Additional District Magistrate / RDO	<b>Deputy Incident Commander</b>	Assists Incident Commander, coordinates interdepartmental operations
4	District Information Officer	<b>Public Information Officer</b>	Risk communication, media briefing, public advisories
5	District Police Chief / Superintendent of Police	<b>Safety &amp; Security Officer</b>	Enforcement of containment measures, movement control
6	District Disaster Management Officer/Deputy Collector DM	<b>Liaison Officer</b>	Coordination with DDMA, NGOs, and external agencies

Functional Sections under the Incident Commands System

<b>Section</b>	<b>Section Chief</b>	<b>Major Functions</b>
<b>Operations Section</b>	District Medical Officer / Health Department	Surveillance, case investigation, treatment, isolation facilities
<b>Planning Section</b>	District Planning Officer / Disaster Management Officer	Situation reports, forecasting, and resource planning
<b>Logistics Section</b>	Deputy Collector / Supply Officer	Medical supplies, PPE, equipment, transportation
<b>Finance &amp; Administration Section</b>	District Treasury Officer / Finance Officer	Budget management, compensation, and expenditure tracking

**b. Establishing Local Self-Government Disaster Management Committee (LDMC)**

The Local Self-Government Disaster Management Committee (LDMC) plays a crucial role in implementing pandemic preparedness and response measures at the grassroots level. The committee functions as the local operational unit for coordinating surveillance, community engagement, and essential services during public health emergencies.

The LDMC ensures effective coordination between Local Self-Government Institutions (LSGs), the Health Department, district administration, and community organisations. It supports early detection, reporting of cases, implementation of containment measures, and provision of essential services to the community.

Structure of the LSG Disaster Management Committee (LDMC)

<b>Sl No</b>	<b>Position in LSG Disaster Management Committee (LDMC)</b>	<b>Designated Role in Pandemic Task Force</b>	<b>Functional Responsibility During Pandemic</b>
<b>1</b>	LSG President / Municipal Chairperson / Panchayat President	Chairperson – Pandemic Task Force	Overall leadership, activation of local response mechanisms, and coordination with the District Disaster Management Authority (DDMA)
<b>2</b>	Vice President / Standing Committee Chair (Health)	Vice Chairperson	Oversight of response implementation, support to the Chairperson
<b>3</b>	Secretary, Local Self-Government Institution	Incident Coordinator	Administrative coordination, reporting to the District Administration and Health Department
<b>4</b>	Medical Officer (PHC/CHC/Taluk Hospital)	Technical Lead – Public Health	Clinical management, epidemiological surveillance, outbreak investigation
<b>5</b>	Health Inspector / Public Health Officer	Surveillance & Field Operations Lead	Disease surveillance, contact tracing, quarantine monitoring
<b>6</b>	Junior Health Inspector / Junior Public Health Nurse	Field Surveillance & Community Monitoring	Household surveillance, health education, and reporting suspected cases
<b>7</b>	ICDS Supervisor	Vulnerable Population Coordinator	Monitoring of pregnant women, children, and nutrition programs
<b>8</b>	Kudumbashree CD S Chairperson	Community Mobilisation Lead	Mobilisation of volunteers, support for home isolation families
<b>9</b>	Ward Members / Councillors	Ward-Level Pandemic Response Coordinators	Local monitoring, awareness generation, and community reporting
<b>10</b>	Police Station Representative	Enforcement & Security Coordinator	Enforcement of containment measures, crowd control
<b>11</b>	Education Department Representative	Institutional Surveillance	Monitoring schools and educational institutions

Sl No	Position in LSG Disaster Management Committee (LDMC)	Designated Role in Pandemic Task Force	Functional Responsibility During Pandemic
		ce Coordinat or	
12	Veterinary Officer	Zoonotic Diseas e Monitoring Lead	Monitoring animal-related disease threats
13	Civil Supplies / Supply Officer	Essential Suppl y Chain Coordinator	Ensuring an uninterrupted supply of food and essential commodities
14	Water Authority / Sanitation Officer	WASH (Wate r, Sanitation & Hygiene) Coordinator	Ensuring safe water supply and sanitation measures
15	Social Welfare Officer	Social Protectio n Coordinator	Support for elderly, disabled, and vulnerable populations

## **b. Sector-wise Roles and Responsibilities During Pandemic**

### **Departmental Coordination Framework**

Effective pandemic management requires multi-sectoral coordination across departments. The following framework outlines the major departments involved and their key responsibilities.

<b>Sector</b>	<b>Lead Department</b>	<b>Key Roles &amp; Responsibilities</b>
<b>Public Health &amp; Medical Care</b>	Health Department	Surveillance, testing, treatment, vaccination, outbreak investigation
<b>Law Enforcement</b>	Police Department	Enforcement of quarantine, lockdown measures, and crowd control
<b>Local Self-Government</b>	Panchayats / Municipalities	Community surveillance, sanitation, and awareness campaigns
<b>Food &amp; Essential Supplies</b>	Civil Supplies Department	Ensure the supply of food, ration distribution, and price control
<b>Water &amp; Sanitation (WASH)</b>	Water Authority / LSG	Safe drinking water, sanitation, and waste management
<b>Education</b>	Education Department	School closure protocols, health awareness among students
<b>Social Welfare</b>	Social Justice Department	Support for elderly, disabled, and vulnerable populations
<b>Women &amp; Child Welfare</b>	ICDS Department	Monitoring pregnant women, child nutrition programs
<b>Animal Husbandry</b>	Veterinary Department	Surveillance of zoonotic diseases
<b>Transport &amp; Mobility</b>	Transport Department	Regulation of public transport, movement restrictions
<b>Information &amp; Communication</b>	Information & Public Relations Department	Public awareness campaigns, media communication
<b>Volunteer &amp; Community Support</b>	NGOs / Red Cross / NSS / NCC	Volunteer mobilisation, relief support, and awareness activities
<b>Disaster Management</b>	District Disaster Management Authority	Overall coordination and monitoring of pandemic response

## **b. HEOC Integration and Health Signal Communication Flow**

An effective Health Emergency Operations Centre (HEOC) requires a well-defined reporting and communication system to ensure that early warning signals from the community level are rapidly detected and escalated to district authorities.

The health signal communication flow establishes a structured pathway for reporting unusual health events, such as clusters of illness, unexplained deaths, or emerging zoonotic threats. This system links community-level surveillance with district-level emergency response mechanisms, ensuring timely detection and coordinated response to potential outbreaks. The reporting mechanism begins at the community level, where residents, schools, institutions, and community-based surveillance volunteers identify unusual health events. These signals are transmitted through frontline health workers and local health institutions, eventually reaching the District Surveillance Unit (IDSP) and the District HEOC, where response actions are activated.

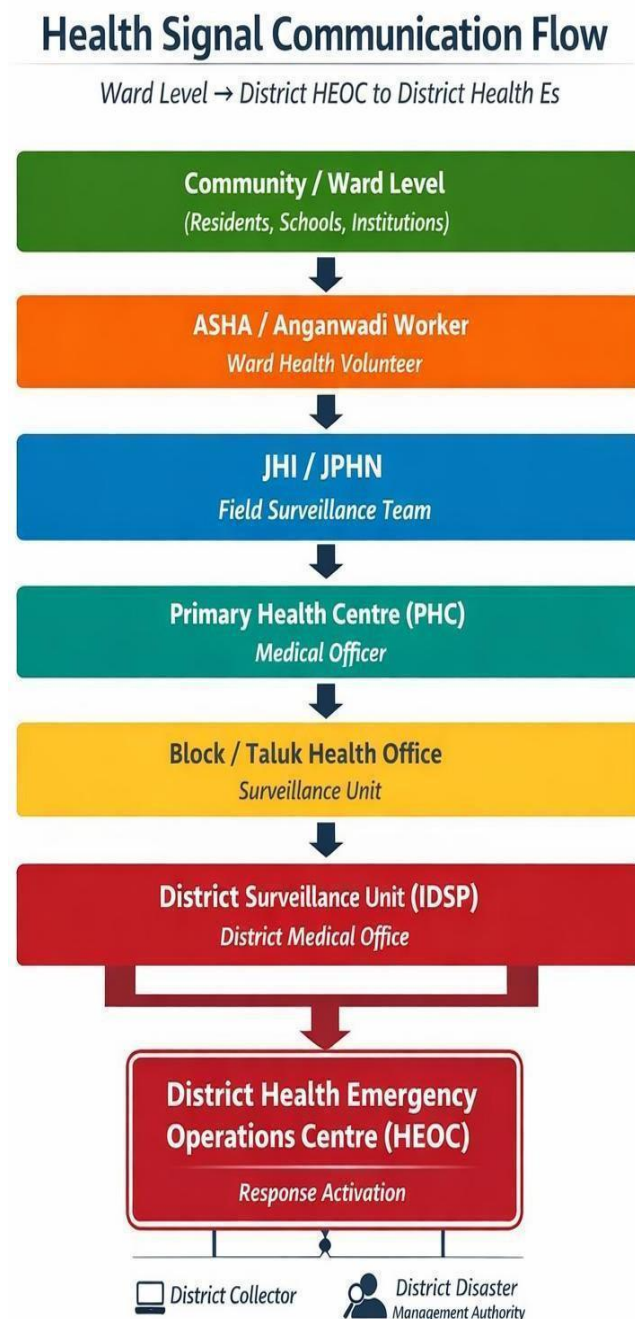


Figure 6.1: Health Signal Communication Flow from Ward Level to District Health Emergency Operations Centre (HEOC)

## Health Signal Reporting and Escalation Mechanism

The health signal reporting and escalation mechanism ensures timely detection, verification, and response to potential public health threats within the district. By establishing clear roles and responsibilities at each level—from community volunteers and frontline health workers to block and district surveillance units—the system enables early identification of unusual health events and rapid information flow.

Level	Responsible Unit	Action
<b>1. Signal Detection</b>	Community members, schools, institutions/CBS volunteers	Report unusual illness clusters or deaths
<b>2. Initial Field Reporting</b>	ASHA / Anganwadi / Ward Health Volunteers	Notify JHI /JPHN/at JAK
<b>3. Field Verification</b>	Junior Health Inspector / Health staff	Conduct a preliminary investigation
<b>4. Medical Reporting</b>	PHC Medical Officer	Record cases and alert the block health authorities
<b>5. Surveillance Reporting</b>	Block Public Health Unit	Send report to District Surveillance Unit
<b>6. District Analysis</b>	District Surveillance Unit	Analyse trends and confirm alerts
<b>7. Emergency Activation</b>	District HEOC	Initiate Rapid Response Teams and containment

This structured reporting pathway strengthens disease surveillance, facilitates prompt field investigation, and supports evidence-based decision-making. In the event of confirmed alerts, the District Health Emergency Operations Centre (HEOC) coordinates response activities, including activation of Rapid Response Teams, resource mobilisation, and interdepartmental coordination to effectively contain and manage public health emergencies.

### Key Principles of the Reporting System

#### 1. Rapid Detection

Early signals from community-level workers such as ASHA, Anganwadi workers, and ward

volunteers ensure quicker identification of potential outbreaks.

## **2. Structured Escalation**

Information flows systematically from Community → PHC → Block / Taluk Health Office → District Surveillance Unit → HEOC, enabling efficient monitoring and decision-making.

## **3. Centralised Coordination**

The District Health Emergency Operations Centre (HEOC) functions as the central coordination hub for analysing surveillance data and initiating response measures.

## **4. Integration with Disaster Management**

The HEOC operates in close coordination with the District Disaster Management Authority (DDMA) during large outbreaks or public health emergencies.

As defined above, the reporting officers at each level for daily reporting to IDSP will be established and a list of COVID-19 protocols (e.g., dead body management, quarantine rules) that have been formally adopted and simplified for local language use. Wherever needed, Resource Sharing Agreements- Signed MOUs or documented protocols for sharing ambulances or equipment with neighbouring LSGs during a surge will also be explored.

### **Resource Sharing and Surge Preparedness**

During large outbreaks or health emergencies, resource-sharing mechanisms will be activated to optimise available healthcare resources. These include:

- Resource Sharing Agreements (MoUs) with neighbouring Local Self-Government Institutions (LSGs)
- Sharing of ambulances, medical equipment, isolation facilities, and healthcare personnel
- Coordinated logistics support through district administration

### **Clinical Triage and Patient Referral Pathway**

A structured clinical triage system ensures that patients receive appropriate care while preventing unnecessary burden on higher-level hospitals.

### **Patient Care Pathway**

#### **1. Home Isolation**

Mild cases are managed at home under monitoring by local health workers.

## **2. Isolation / Intermediate Care Facilities**

Establishment of Local Treatment Centres (LTC) or Step-Down LTCs (SLTC) for mild to moderate cases requiring monitoring.

## **3. Referral-Based Escalation**

Patients are referred to higher-level facilities only when symptoms worsen.

## **4. Hospital-Based Care**

Severe cases are referred to Taluk Hospitals, District Hospitals, or Medical Colleges for specialised treatment.

### **c. Patient Care Pathway During Pandemic**

An organised patient care pathway is essential during a pandemic to ensure appropriate clinical management while preventing overcrowding of higher-level health facilities. The district adopts a tiered system of care, where patients are managed according to the severity of illness. Mild cases are managed through home isolation with community-level monitoring, while moderate and severe cases are referred to progressively higher levels of care, such as Local Treatment Centres (LTC), Step-Down LTCs (SLTC), secondary care facilities, and tertiary care hospitals.

This structured referral system ensures optimal use of healthcare resources, early detection of disease progression, and timely referral of critical patients to facilities equipped with advanced medical care.

#### **a. Home Isolation (Mild Cases)**

Home isolation is recommended for patients with mild symptoms who do not require hospitalisation. This strategy helps reduce the burden on healthcare facilities while ensuring that patients receive adequate monitoring and guidance.

Criteria	Description
Clinical condition	Mild symptoms such as fever, cough, or mild respiratory symptoms
Oxygen saturation	≥ 94% on room air
Comorbidities	No high-risk comorbid conditions
Home environment	An adequate isolation facility is available at home

### Monitoring Mechanism

Patients under home isolation are monitored through community health workers

Monitoring Component	Details
Teleconsultation	Daily follow-up through phone or telemedicine consultation
Field supervision	Monitoring by ASHA workers, Junior Health Inspectors (JHI), or Junior Public Health Nurses (JPHN)
Self-monitoring	Patients track temperature, oxygen saturation, and symptoms.

and teleconsultation systems.

### Escalation Criteria

Patients under home isolation must be referred to the next level of care if any of the following symptoms develop:

- Persistent fever
- Oxygen saturation below 94%
- Breathlessness or respiratory difficulty
- Progressive worsening of symptoms

If symptoms worsen, the patient will be **referred to an isolation facility or Local Treatment Centre (LTC)** for further evaluation and management.

### **b. Isolation Facility / Local Treatment Centre (LTC) / Step- Down LTC (SLTC)**

Isolation facilities such as LTCs and SLTCs function as intermediate care centres for patients who require clinical observation, testing, and supportive care but do not require intensive hospital treatment. These facilities help decongest hospitals while ensuring continuous clinical monitoring.

### Functions of Isolation Facilities

Function	Activity
Clinical evaluation	Physical examination and triage of patients
Testing	Sample collection and diagnostic confirmation
Initial treatment	Symptomatic treatment and observation
Oxygen support	Basic oxygen therapy if required
Monitoring	Short-term observation of moderate cases

### Possible Outcomes

Patients admitted to these facilities may follow one of the following pathways:

1. **Clinical improvement** – Patient may return to home isolation for continued recovery.
2. **Moderate illness** – Patient may continue admission and management in LTC/SLTC.
3. **Severe symptoms** – Patient will be referred to a **dedicated tertiary care facility** for advanced treatment.

### c. LTC / SLTC / Secondary Care Facility

Secondary care facilities are responsible for the management of moderate cases requiring oxygen support and close medical supervision. These facilities provide enhanced clinical care compared to isolation centres and play an important role in stabilising patients before referral if necessary.

#### Role of Secondary Care Facilities

- Admission and management of moderate cases
- Administration of oxygen therapy
- Continuous clinical monitoring

- Conducting laboratory investigations
- Early detection of complications

### Referral Criteria

Patients are referred to tertiary care hospitals if they develop severe clinical conditions such as:

- Severe respiratory distress
- Oxygen saturation below 90%
- Evidence of organ complications
- Requirement of intensive care or ventilatory support

Secondary care facilities function as an important intermediate level of care, ensuring timely management of moderate cases and facilitating appropriate referral to higher centres when required.

### **d. District Hospital (Tertiary Care)**

The District Hospital serves as the primary tertiary care referral centre in Kottayam District during a pandemic. It is equipped to manage severe and critical cases requiring specialised treatment and advanced life support.

#### Available Facilities

<b>Facility</b>	<b>Description</b>
Intensive Care Units (ICU)	Critical care management for severely ill patients
Advanced oxygen therapy	High-flow oxygen systems and respiratory support
Ventilator support	Mechanical ventilation for critical respiratory failure
Specialist care	Multidisciplinary medical specialists

#### Functions of a Tertiary Care Facility

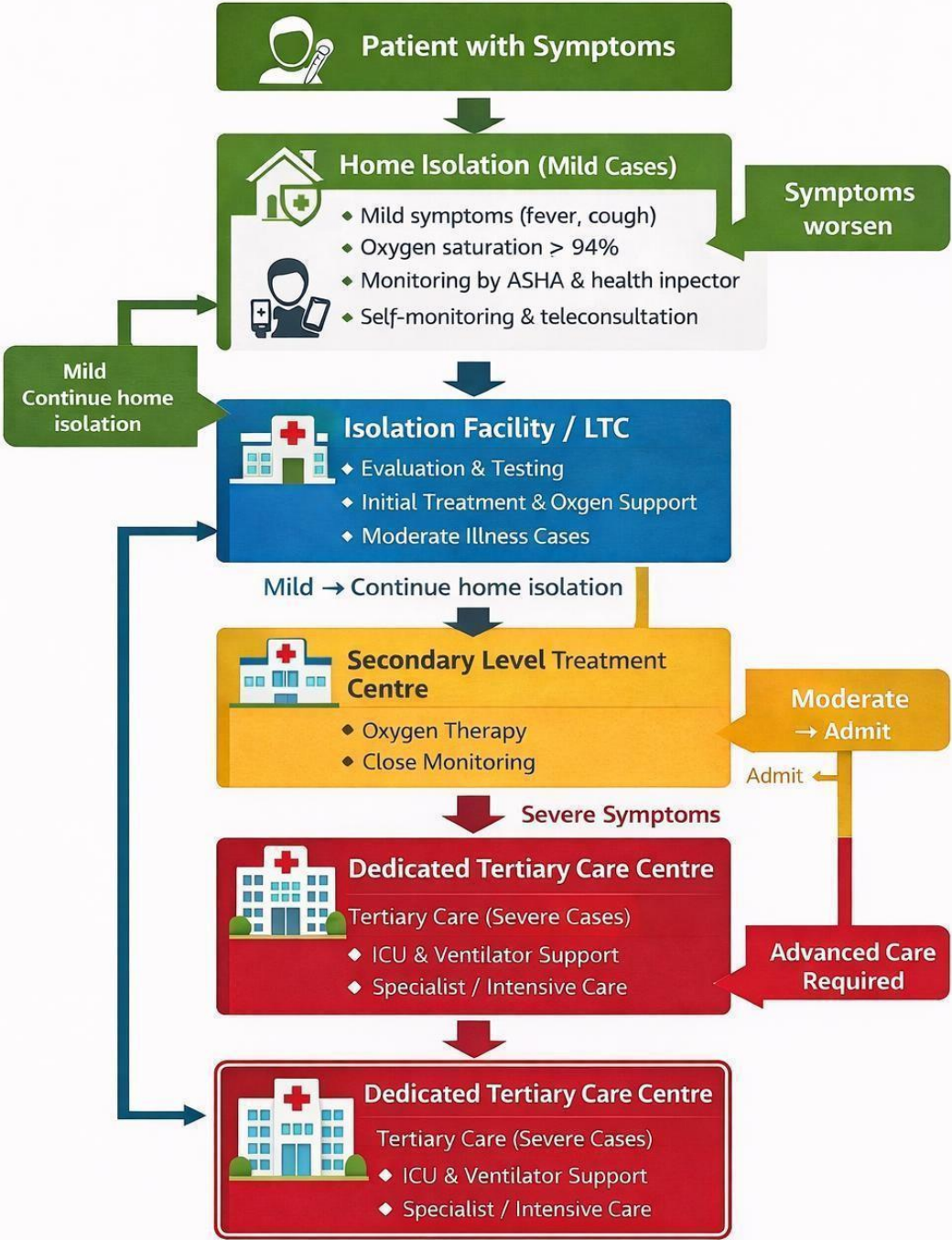
- Management of severe and critical cases

- Provision of advanced life-saving treatment
- Specialist consultation and multidisciplinary care
- Intensive monitoring and management of complications
- Coordination of referrals from secondary care facilities
- Referral to medical colleges or higher-level institutions when required

Thus, the district hospital plays a central role in providing advanced clinical care and ensuring effective management of critically ill patients during pandemic situations.

# Clinical Triage Plan

## Patient Care Pathway During Pandemic



## **d. Oxygen and Life Support Preparedness**

Adequate oxygen supply and life-support infrastructure are critical components of pandemic preparedness, particularly during respiratory disease outbreaks. The district maintains an Oxygen and Life Support Log, which includes a verified list of oxygen suppliers, refilling stations, and healthcare facilities with oxygen-supported beds within an operational radius of approximately 10 km. This system ensures rapid access to life-saving respiratory support during sudden increases in patient load.

The log is regularly updated and integrated into the District Health Emergency Operations Centre (HEOC) to facilitate efficient resource allocation, emergency logistics planning, and uninterrupted oxygen supply to healthcare facilities.

### **Operational Use in Pandemic Response Plan**

To ensure uninterrupted oxygen availability during health emergencies, the following operational measures will be implemented:

- Maintain a daily oxygen stock register in all major hospitals.
- Ensure a buffer stock of oxygen sufficient for at least 48 hours of operation.
- Maintain an updated supplier and distributor contact list at the District Health Emergency Operations Centre (HEOC).
- Map and monitor transport routes for emergency oxygen delivery.
- Establish rapid communication mechanisms between hospitals, suppliers, and district administration for supply escalation.

### **a. Rapid Oxygen Escalation Protocol**

During periods of increased demand or supply disruption, the district will implement a Rapid Oxygen Escalation Protocol to ensure continuity of oxygen availability for patient care.

<b>Situation</b>	<b>Action</b>	<b>Responsible Authority</b>
<b>Oxygen demand surge</b>	Immediate refill request to suppliers	Hospital Superintendent
<b>Cylinder shortage</b>	District stock redistribution Converting Industrial cylinders Enforcement for preventing artificial stockout	District Administration / District Medical Officer
<b>PSA activation</b>	Oxygen generation systems functionality	Hospital Superintendent
<b>Liquid oxygen shortage</b>	Emergency requisition	District Collector
<b>Severe supply disruption</b>	State-level oxygen allocation	Government of Kerala

This protocol ensures timely coordination between hospitals, district authorities, and state agencies to maintain an uninterrupted oxygen supply during pandemic emergencies.

### **e. Laboratory Logistics and Sample Transport System**

An efficient laboratory logistics system is essential for timely diagnosis, disease surveillance, and outbreak response during a pandemic. The district laboratory logistics plan establishes a structured mechanism for sample collection, transportation, testing, and reporting through coordination between health facilities, laboratories, and the Integrated Disease Surveillance Programme (IDSP).

The system ensures daily sample collection schedules, cold-chain maintenance, and clear communication channels between collection centres and designated laboratories. This integrated approach helps reduce testing delays and supports rapid public health decision-making.

Key objectives of the laboratory logistics system include:

1. Ensuring daily sample collection and transport schedules
2. Maintaining cold-chain integrity for biological samples
3. Establishing clear contact points for laboratories and courier services
4. Integrating laboratory reporting with the Integrated Disease Surveillance Programme (IDSP)

## **Laboratory Logistics Plan**

A robust laboratory logistics system is essential for the timely detection, diagnosis, and surveillance of infectious diseases during a pandemic. Efficient coordination between sample collection centres, transport systems, and designated laboratories ensures that suspected cases are identified quickly and that public health responses can be implemented without delay.

In Kottayam district, the laboratory logistics framework integrates Primary Health Centres, Taluk Hospitals, private healthcare facilities, and community testing units with designated district and national reference laboratories. The system also ensures safe sample handling, cold-chain maintenance, and structured reporting through the Integrated Disease Surveillance Programme (IDSP).

### **Sample Collection and Transport System**

The district has established a structured system for sample collection and transportation from various health facilities to designated laboratories. The following table outlines the key collection points, responsible personnel, and transport arrangements.

<b>Sl . N o</b>	<b>Collectio n Point</b>	<b>Responsib le Officer</b>	<b>Sample Collectio n Time</b>	<b>Transpo rt Mode</b>	<b>Destinati on Laborato ry</b>	<b>Courier / Transpor t Contact</b>
<b>1</b>	Primar y Health Centres (PHCs)	Medical Officer / JHI	9:00 AM – 11:00 AM	Cold-chain sample transport box	District Public Health Laboratory , Kottayam	District Surveillance Vehicle
<b>2</b>	Taluk Hospitals	Microbiologis t / Lab Technician	9:00 AM – 12:00 PM	Dedicat ed medical courier	Governme nt Medical College Laboratory	Distric t Health Courie r
<b>3</b>	Private Hospitals	Hospital La b Technician	10:00 AM – 12:00 PM	Approve d courier service	Distric t Public Health Laboratory	Authorised diagnostic courier
<b>4</b>	Fever Clinics / Mobile Units	Rapid Respons e Team	8:00 AM – 10:00 AM	Ambulance / Health Department vehicle	Medical College Laboratory	Emergenc y transport service
<b>5</b>	Communit y Testing Camps	Field Healt h Staff	8:00 AM – 11:00 AM	Insulated sample transport kit	Designated testing laboratory	District Health Logistics Unit

## Sample Transport Protocol

Standard biosafety procedures are followed for the safe handling, packaging, and transport of clinical specimens. The following protocol ensures sample integrity and the safety of health personnel during transportation.

<b>Step</b>	<b>Action</b>	<b>Responsible Authority</b>
<b>1</b>	Sample collection using PPE and viral transport medium	Health staff/lab technician
<b>2</b>	Proper labelling and barcode registration	Sample collection centre
<b>3</b>	Packing in a triple-layer biohazard transport system	Laboratory technician
<b>4</b>	Transport in a cold-chain box (2–8°C)	District courier vehicle
<b>5</b>	Receipt and logging at the testing laboratory	Laboratory supervisor

## Emergency Sample Transport Arrangement

During surge situations or unexpected increases in testing demand, additional transport mechanisms may be activated to ensure the timely delivery of samples to testing laboratories.

The district health system maintains contingency arrangements to ensure that samples collected from different health facilities reach designated laboratories without interruption. These arrangements include the deployment of additional transport vehicles, emergency courier services, and coordination with nearby laboratories when testing capacity is exceeded.

The following mechanisms are activated during emergencies to maintain uninterrupted laboratory logistics:

Scenario	Action	Responsible Unit
<b>High sample volume</b>	Deploy additional district vehicles	District Medical Office
<b>Urgent testing required</b>	Direct transport to the Medical College lab	Rapid Response Team
<b>Night sample collection</b>	Use an emergency ambulance courier	District Control Room
<b>Lab overload</b>	Divert samples to nearby district labs	State Health Department

### **Cold Chain & Specimen Transport Equipment Inventory**

The district maintains an inventory of equipment required for safe packaging, storage, and transportation of samples. These resources are distributed across health facilities and laboratories to support routine surveillance as well as large-scale testing during public health emergencies. Proper management of these resources also ensures compliance with biosafety standards and supports efficient laboratory operations.

Sl. No	Equipment	Quantity Available	Location	Responsible Officer	Purpose
1	Viral Transport Medium (VTM) Kits	218 kits	District Medical Store	District Medical Officer	Safe collection and preservation of clinical samples
2	Triple-layer Biohazard Transport Boxes	120	PHCs & Taluk Hospitals	Lab Technician / JHI	Secure specimen packaging
3	Ice-pack Cold Boxes	150	District Health Office	Cold Chain Technician	Maintaining 2–8°C during transport
4	Vaccine / Specimen Carriers	90	Primary Health Centres	Medical Officer	Sample transport from field units
5	Deep Freezers (–20°C)	2	District Public Health Laboratory	Microbiologist	Storage of specimens
6	Ultra-Low Freezers (–80°C)	2	Government Medical College Laboratory	Lab In-charge	Long-term specimen storage
7	Temperature Monitoring Devices	60	All testing facilities	Lab Supervisor	Cold chain monitoring
8	Dedicated Sample Transport Vehicles	1	District Surveillance Unit	Transport Officer	Daily sample transport

### District Laboratory Testing Capacity

Laboratory testing capacity in the district is supported by government laboratories as well as approved private diagnostic centres, ensuring adequate testing coverage during routine surveillance and outbreak situations.

Sl . No	Laboratory	Type of Testing	Number of PCR Machines	Maximum Daily Testing Capacity	Technical Staff	Remarks
1	Government Medical College Laboratory	RAT	Nil	~1,500 samples/day	Microbiologists , Lab Technicians	Major district referral laboratory
2	District Public Health Laboratory	RAT	NIL	~500 samples/day	Public health lab staff	Used for routine surveillance
3	Private Diagnostic Labs (District-approved)	RT-PCR / Antigen testing	3-4	~600 samples/day	Private lab technicians	Surge testing capacity
4	Referral Laboratory	NIV	High-capacity PCR	Variable	Scientists	Used for confirmatory testing

## Key Operational Guidelines

To maintain efficiency in the laboratory logistics system, certain operational procedures are followed regularly by responsible units.

Activity	Responsible Unit	Frequency
<b>Sample transport monitoring</b>	District Surveillance Unit	Daily
<b>Cold chain temperature logging</b>	Laboratory staff	Every transport cycle
<b>Testing capacity review</b>	District Medical Office	Weekly
<b>Surge testing activation</b>	District Health Emergency Operations Centre	During outbreak

## Mapping of Private Diagnostic Laboratories

Private diagnostic laboratories play an important role in strengthening the district's laboratory testing capacity during pandemic situations. In addition to government laboratories, these facilities support sample collection, diagnostic testing, and surge capacity when the number of suspected cases increases.

The following laboratories across Kottayam district provide diagnostic services that can support pandemic surveillance and laboratory testing.

Sl. No	Laboratory Name	Location	Key Services	Emergency Role	Contact / Remarks
<b>1</b>	DDRC Agilus Diagnostics	Across district	Pathology tests, molecular diagnostics, and imaging services	Sample collection and laboratory testing support	24-hour service with home sample collection options
<b>2</b>	Health Park Diagnostic Centre	Kottayam town	Clinical laboratory testing, imaging	Surge diagnostic capacity	Supports RT-PCR / molecular testing referrals

3	Medivision Diagnostic Centre	Regional network (nearby districts)	RT-PCR and advanced diagnostic testing	Referral testing during the surge	Used for specialised molecular tests
4	Neuberg Diagnostics	Regional laboratory network	Molecular and infectious disease testing	Confirmatory testing support	Regional referral laboratory
5	Private hospital laboratories	Across district	Routine pathology and antigen testing	Community-level screening support	Used for decentralised testing
6	Sankar's lab	Across district	RT PCR/RAT	Surge diagnostic capacity	Supports RT- PCR / molecular testing referrals

### Mapping of Private Diagnostic Laboratories (Kottayam District) Key Private Diagnostic Labs

#### 1. **Metropolis Healthcare Laboratory – Vandanam**

Location: Near Government Medical College Hospital, Vandanam

Services: Clinical pathology, microbiology, molecular diagnostics

Role in pandemic: RT-PCR testing support, confirmatory diagnostics.

#### 2. **DDRC SRL Diagnostics – Kayamkulam**

National diagnostic network

Supports molecular and biochemical testing

Previously included in the Kerala private COVID testing lab list.

**3. Aster Labs – Kayamkulam**

Offers advanced laboratory services, including microbiology and pathology testing.

**4. Care Labs & Diagnostic Centre – Thuravoor**

Address: Ponpuram Juma

Masjid Building, Parayakadu

PO Phone: +91 95445 87779

Role: Routine diagnostics and sample collection centre.

**5. Care Labs & Diagnostic Centre – Perumbalam**

Address: Market Jetty, Perumbalam PO

Provides pathology testing and blood sample processing.

**6. Pelican Biotech & Chemical Labs**

Location: Mc John Estate, Kuthia Road

Speciality: Laboratory testing and chemical analysis.

## Suppliers for Laboratory Consumables (Regional Supply Network)

Reliable supply of laboratory reagents, diagnostic kits, and consumables is essential for maintaining testing capacity during pandemics. The district may procure these materials through national and regional laboratory supply companies.

### Major Suppliers (Kerala Region)

- **HiMedia Laboratories Pvt. Ltd.**

Supplies culture media, RT-PCR reagents, and diagnostic kits.

- **Merck Life Science**

Supplies molecular biology reagents, chemicals, and laboratory consumables.

- **Thermo Fisher Scientific**

Supplies PCR kits, RNA extraction kits, and testing equipment.

- **Tarsons Products Limited**

Supplies laboratory plastics such as centrifuge tubes, pipette tips, and cryovials.

- **Transasia Bio-Medical Ltd.**

Supplies haematology analysers and diagnostic reagents.

### Typical Laboratory Consumables Required During a Pandemic

The following consumables are commonly required for large-scale diagnostic testing and infection control during pandemic situations.

Category	Examples
Sample collection	Viral transport media (VTM), swabs
Molecular testing	PCR kits, RNA extraction kits
Lab plastics	Pipette tips, microcentrifuge tubes
PPE	N95 masks, gloves, gowns
Disinfection	Alcohol swabs, disinfectant solutions

## **Supply Chain Buffer: 30-Day Minimum Stock Level (MSL)**

Maintaining adequate stocks of essential medicines, personal protective equipment (PPE), and infection-control supplies is critical for ensuring uninterrupted healthcare services during pandemic situations. Sudden increases in patient load can place significant pressure on health facility inventories, making advance planning of medical supplies essential.

To address this, a 30-day Minimum Stock Level (MSL) will be maintained at district health facilities. This buffer stock will support continuous treatment of patients, protect healthcare workers, and ensure that essential medical supplies remain available during periods of increased demand or supply chain disruptions.

### **Objectives**

#### **The key objectives of maintaining a 30-day buffer stock include:**

- Prevent stock-outs during a sudden surge in cases.
- Maintain continuous treatment capacity at hospitals and primary health centres.
- Allow sufficient time for procurement and resupply.

### **Recommended 30-Day Minimum Stock List**

Category	Item	Minimum Stock Level (30 days)	Storage Point
<b>Essential Medicines</b>	Paracetamol tablets	10,000 tablets	District Medical Store
	Antibiotics (Amoxicillin/Azithromycin)	5,000 courses	District Store & Hospitals
	IV Fluids (Normal saline / RL)	2,000 units	District Hospital
	Antipyretic syrups	500 bottles	PHCs
<b>PPE</b>	N95 masks	5,000 units	Central PPE Store
	Surgical masks	20,000 units	Hospitals & PHCs
	Disposable gloves	50,000 pairs	All facilities
	PPE kits	1,500 units	Isolation wards

<b>Infection Control</b>	Hand sanitizers	1,000 bottles	Hospitals
	Surface disinfectant (1% sodium hypochlorite)	500 litres	Hospitals
	Alcohol swabs	20,000 units	Labs & Wards

## Supply Monitoring Mechanism

Regular monitoring of stock levels is necessary to ensure that the minimum stock level is maintained across all healthcare facilities. The district health administration will implement a structured monitoring system to track inventory and identify potential shortages in advance.

The monitoring system will include the following measures:

1. Monthly stock audit at all health facilities.
2. Weekly reporting during outbreaks.
3. Buffer stock stored at:
  - District Medical Store
  - District Hospital pharmacy
  - Selected block PHCs.

## Replenishment Strategy

A structured replenishment mechanism is necessary to ensure that stock levels remain above the minimum threshold. Procurement and resupply will be coordinated through established government supply chains.

- Procurement will primarily be carried out through the **Kerala Medical Services Corporation Limited (KMSCL)** centralised supply system.
- Emergency procurement may be authorised by the **District Medical Officer (DMO)**

if stock levels fall below the 15-day threshold.

- In case of a sudden surge in demand, additional supplies may be sourced from approved private suppliers.

## Stock Monitoring Dashboard (Recommended)

To improve supply chain efficiency, the district may utilise a digital inventory monitoring system for tracking medical supplies. A digital platform will help health authorities monitor stock levels in real time and facilitate the timely replenishment of essential items.

Recommended features include:

- Real-time monitoring of stock levels at health facilities
- Automatic alerts when stock levels fall below the Minimum Stock Level
- Facility-wise reporting and centralised monitoring

Possible platforms include:

- eHealth Kerala Hospital Information System
- District supply chain monitoring dashboard

# 30-Day Minimum Stock Buffer System

## Preparedness for Pandemic Surge



**Minimum Stock Levels (MSL) maintained at:**

- District Medical Store
- District Hospital
- PHCs



District Medical Store



District Hospital



Primary Health Centres

### Key Supplies Covered:

**Essential Medicines**

**Tablets**

- Paracetamol 10,000
- Antibiotics (Amoxicillin / Azithronycin) 5,000 courses

**IV Fluids**

- Normal saline 2,000
- RL (Ringer's lactate) 2,000 units

**Personal Protective Equipment (PPE)**

- N95 Masks : 5,000 units
- Surgical Masks : 20,000 units
- Gloves 50,000 pairs

**Infection Control Supplies**

- Hand Sanitizers : 1,000 units (500ml bottles)
- Surface Disinfectant 500 liters (1% sodium hypochlorite)
- Alcohol Swabs 20,000 units

## Supply Monitoring Requirements

- 1 Weekly Reporting** Stock levels updated weekly in *eHealth Kerala* system.
- 2 15-Day Replenishment Threshold** Emergency procurement initiated if stock falls below 15-day level
- 3 District Medical Officer (DMO) Oversight** Reviews weekly stock report
- 4 Central Procurement Coordination** Replenishment via *Kerala Medical Services Corporation Ltd.*

VERIFY: ENSURE 30-DAY MINIMUM STOCK LEVELS

## **f. Industrial Support Network for Emergency Production of PPE, Sanitisers, and Medical Supplies**

Industrial establishments play an important role in supporting the healthcare system during public health emergencies. During pandemics, industries can contribute by manufacturing or supplying essential infection-control products such as hand sanitisers, personal protective equipment (PPE), masks, and disinfectants. Collaboration between the health sector and industrial units ensures the uninterrupted availability of critical protective supplies for healthcare workers and the general public.

The following industrial establishments and suppliers are identified as potential sources for the supply of sanitisers, PPE kits, and related infection-control materials during emergency situations.

### **Industrial Establishments for Supplying Hand Sanitiser & PPE**

<b>Sl No</b>	<b>Industry / Company</b>	<b>Location</b>	<b>Products Supplied</b>	<b>Role During Pandemic</b>	<b>Remarks</b>
<b>1</b>	Kerala State Drugs and Pharmaceuticals Ltd.	Kalavoor, Kottayam	Alcohol- based hand sanitisers, medicines	Government pharmaceutical manufacturing unit supplying hospitals	Produces WHO- recommended sanitiser formulations
<b>2</b>	Kitex Garments Ltd.	Kizhakkambalam , Kochi	PPE kits , protective garments	Large-scale PPE manufacturing during the pandemic	Supplied PPE kits to the healthcare sector
<b>3</b>	Safelyne Solutions India Pvt. Ltd.	Thiruvananthapuram	PPE kits, face shields, masks, safety equipment	Industrial safety and PPE supplier	Supplies multiple protective products
<b>4</b>	AKM Surgical Co.	Kozhikode	Sanitisers, N95 mask , PPE kits , gloves	Distributor of infection- control equipment	Supplies hospitals and medical institutions
<b>5</b>	Josco Ventures LLP	Kozhikode	Sanitisers, PPE kits , masks, disinfectants	Industrial manufacturer and distributor	Supplies hygiene and COVID- care products

## Additional Industrial Support Network

In addition to the identified establishments, several industrial sectors within the state have the capacity to support pandemic response by producing essential medical and hygiene supplies. These industries can quickly adapt their production lines to manufacture items such as PPE kits, sanitisers, masks, and other infection-control materials during emergency situations.

Sector	Examples	Role
Pharmaceutical industries	KSDP, regional pharma companies	Production of sanitisers and medicines
Garment manufacturing units	PPE coverall production	Rapid conversion to PPE manufacturing during outbreaks
Chemical industries	Alcohol-based sanitizer manufacturing	Bulk sanitiser supply
Safety equipment suppliers	PPE distributors	Supply masks, gloves, shields

## a. Local Industrial Conversion Plan

### Emergency Manufacturing Support During Pandemic

During severe outbreaks, existing industrial units may be requested to temporarily convert their manufacturing capacity to produce essential medical supplies. This strategy helps the district rapidly scale up production and reduce dependence on external supply chains. The following industries have the potential to support emergency manufacturing through production conversion.

Sl. No	Industry Type	Establishment	Possible Converted Production	Estimated Production Capacity	Responsible Coordination Agency
1	Pharmaceutical Manufacturing	Kerala State Drugs and Pharmaceuticals Ltd.	Alcohol-based hand sanitisers, disinfectants	5,000–10,000 bottles/day	District Health Department
2	Garment / Textile Manufacturing	Kitex Garments Ltd.	PPE kits, isolation gowns, masks	2,000–5,000 PPE kits/day	District Industries Centre
3	Chemical / Distillery Units	Local chemical industries	Sanitiser base (ethanol), disinfectant solutions	2,000 litres/day	Excise Department & Health Dept
4	Plastic Manufacturing Units	Local plastic fabrication units	Face shields, testing kit containers	1,000–2,000 units/day	District Industries Centre
5	Medical Equipment Suppliers	Regional distributors	Oxygen concentrators, medical devices	Variable supply	Health Department
6	Printing / Packaging Units	Local packaging industries	Packaging for medical supplies	5,000 units/day	District Supply Chain Unit

## b. Activation Mechanism

To ensure the timely mobilisation of industrial resources during emergencies, a phased activation mechanism will be followed. This mechanism outlines the actions to be taken at different stages of pandemic preparedness and response.

Stage	Action	Responsible Authority
Preparedness Stage	Identify industries capable of production conversion	District Industries Centre
Alert Stage	Issue an advisory to industries for emergency readiness	District Collector
Outbreak Stage	Activate emergency manufacturing orders	District Disaster Management Authority
Recovery Stage	Gradual return to normal industrial production	Industry Department

## c. Industrial Support Coordination Structure

Effective coordination between government agencies and industrial units is essential to ensure the timely production, procurement, and distribution of medical supplies. The following agencies will coordinate industrial support activities during pandemic situations.

Agency	Role
District Industries Centre	Identify industrial capacity and coordinate production
District Disaster Management Authority	Authorise emergency production
Health Department	Define product standards and demand.
Kerala Medical Services Corporation Limited	Procurement and distribution of supplies

## g. Volunteer Force and District Resource Inventory for Pandemic Management

Community participation plays a crucial role in effective pandemic preparedness and response. In addition to formal healthcare workers, a wide range of community volunteers, government departments, and local institutions can contribute to emergency response activities. Maintaining a structured inventory of available resources helps the district administration rapidly mobilise personnel and infrastructure when required.

A **registered database of trained volunteers** will be maintained, including members from Kudumbashree, Arogya Sena, NSS, NCC, and other community organisations. Volunteers will be categorised based on their skills, such as nursing assistance, food preparation, logistics support, data management, and driving. This classification will enable efficient deployment during emergencies.

### a. District Resource Inventory for Pandemic Management

The following table outlines the key human resources, institutional support systems, and infrastructure available within the district that can support pandemic response activities.

Resource Category	Resource Type	Estimated Availability	Responsible Department
<b>Health Workforce</b>	Doctors, Nurses, Paramedical Staff	District Hospitals, Taluk Hospitals, PHCs	Health Department
	Health Inspectors / Junior Health Inspectors	Field surveillance teams	Health Department
<b>Community Health Volunteers</b>	ASHA Workers	Community health outreach	National Health Mission
	Anganwadi Workers	Maternal & child health monitoring	ICDS Department

<b>Resource Category</b>	<b>Resource Type</b>	<b>Estimated Availability</b>	<b>Responsible Department</b>
<b>Community Support Groups</b>	Kudumbashree Workers	Large community network	Local Self-Government Department
	SHGs / Ayalkoottams	Local volunteer network	Kudumbashree Mission
<b>Youth &amp; Volunteer Forces</b>	NSS Volunteers	Educational institutions	Higher Education Department
	NCC Cadets	Schools and colleges	Defence / Education
	Red Cross Volunteers	Emergency support	Red Cross Society
<b>Government Institutions</b>	Hospitals & Health Centres	District & Taluk level	Health Department
	Educational Institutions	Schools and colleges for awareness/quarantine facilities	Education Department
<b>Infrastructure Resources</b>	Ambulances	Emergency transport	Health Department
	Community Halls / Schools	Temporary isolation/relief centres	LSGs
<b>Essential Services</b>	PDS Ration Shops	Food supply network	Civil Supplies Department
	Water Supply Systems	Safe drinking water	Water Authority / LSG
<b>Security &amp; Emergency Services</b>	Police Stations	Law enforcement	Police Department
	Fire & Rescue Stations	Emergency response	Fire & Rescue Services

## b. Volunteer Force Registry

### Trained Community Volunteers for Pandemic Response

Community-based volunteer networks significantly strengthen the district’s response capacity during health emergencies. These volunteers provide support in areas such as patient care assistance, logistics, food distribution, data management, and community outreach.

The following volunteer groups have been identified as key partners in pandemic response activities.

Sl. No	Volunteer Category	Organization	Key Skills	Estimated Number Available	Deployment Role
1	Community Health Volunteers	Kudumbashree Mission	Community outreach, food distribution and preparation, and distribution of essential supplies	500+	Support quarantine centres and community kitchens
2	Health Support Volunteers	Arogya Sena	Basic nursing care, patient support, and health awareness	150+	Assist hospitals and isolation centres
3	Disaster Response Volunteers	National Disaster Response Force trained community volunteers	Emergency rescue, logistic support, crowd management	50+	Support emergency operations and logistics
4	Data Management Volunteers	NSS / youth volunteers	Data entry, surveillance reporting, helpline operations	100+	Assist District Control Room

Sl. No	Volunteer Category	Organization	Key Skills	Estimated Number Available	Deployment Role
5	Transport Volunteers	Local drivers, associations	Driving ambulances, supply transport	80+	Medical transport and supply chain logistics
6	Community Kitchen Volunteers	Women SHGs	Cooking, food distribution	200+	Support isolation centres and relief camps

### Skill-Based Volunteer Classification

To ensure efficient deployment, volunteers will be categorised according to their primary skill sets. This approach helps the district administration assign appropriate roles based on the needs of the response operations.

Skill Category	Typical Tasks	Deployment Location
Nursing / Health support	Patient assistance, monitoring vital signs	Hospitals/isolation centres
Food preparation	Cooking for patients and quarantine facilities	Community kitchens
Data management	Case reporting, helpline support	District Control Room
Driving / Logistics	Transport of supplies, patient transport	Supply chain operations
Community outreach	Awareness campaigns, supply distribution	Local wards

### c. Volunteer Activation Protocol

A structured activation mechanism will be followed to mobilise volunteers during different stages of pandemic preparedness and response. This ensures that volunteers are deployed efficiently and safely.

Stage	Action	Responsible Authority
Preparedness	Maintain an updated volunteer database	District Disaster Management Authority
Alert Stage	Verify volunteer availability	District Control Room
Emergency Stage	Deploy volunteers based on skill category	District Medical Officer
Recovery Stage	Volunteer support for rehabilitation activities	District Administration

### Volunteer Coordination Structure

Effective coordination among government agencies and volunteer organisations is necessary to ensure smooth deployment and management of volunteers during emergencies.

Agency	Role
Kudumbashree Mission	Community mobilisation and food distribution
National Disaster Management Authority	Disaster management guidelines
National Disaster Response Force	Emergency rescue and technical support
District Disaster Management Authority	Overall coordination and deployment

## Volunteer Training & Capacity Building Plan

Effective coordination among government agencies and volunteer organisations is necessary to ensure smooth deployment and management of volunteers during emergencies.

Sl. No	Training Module	Target Volunteers	Training Agency	Frequency	Key Skills Developed
1	Basic Infection Prevention & Control	Community volunteers, SHG members	District Health Department	Quarterly	Use of PPE, hygiene practices
2	Patient Care & Basic Nursing Assistance	Health volunteers	Government hospitals	Twice a year	Monitoring vital signs, patient assistance
3	Emergency Response & Disaster Management	Disaster volunteers	National Disaster Response Force trainers	Annual	Emergency rescue, evacuation support
4	Data Reporting & Surveillance	Youth volunteers	District Surveillance Unit	Quarterly	Case reporting, digital data entry
5	Food Safety & Community Kitchen Management	Self-help groups	Kudumbashree Mission	Annual	Food preparation and safe distribution
6	Psychological First Aid	Social workers, volunteers	Health Department / NGOs	Annual	Mental health support for affected families

## d. Volunteer Deployment Matrix

Effective utilisation of community volunteers requires a structured deployment mechanism across different administrative levels. Volunteers will be deployed from the ward level up to the district level based on their skill sets and the operational requirements of the pandemic response. Clear supervisory structures will ensure accountability and efficient coordination.

### Ward → PHC → District Level

Level	Volunteer Category	Primary Role	Supervising Authority
Ward Level	Community volunteers, SHG members	Awareness campaigns, delivery of essential supplies	Ward Health Committee
Ward Level	Youth volunteers	Data collection and case reporting	Health Inspector
PHC Level	Health support volunteers	Assist doctors and nurses	Medical Officer
PHC Level	Logistics volunteers	Supply distribution and patient transport	PHC Administration
Taluk Level	Disaster response volunteers	Emergency evacuation and crowd management	Taluk Control Room
District Level	Specialized volunteers	Helpline support, data management	District Control Room

This structured deployment system ensures that volunteers are effectively utilised at the appropriate administrative level while maintaining coordination with the health system and disaster management authorities.

## **Build & Organise Critical Capacities**

Developing strong operational capacities is essential for an effective pandemic response. The district will focus on strengthening surveillance systems, early warning mechanisms, risk communication strategies, and rapid response capabilities. These capacities will enable timely detection of outbreaks, informed decision-making, and coordinated response actions.

### **Surveillance and data**

The objective of surveillance and data management during a pandemic is to ensure early detection of cases, timely reporting, monitoring of disease trends, and evidence-based decision-making. A strong surveillance system helps public health authorities identify outbreaks quickly and implement control measures to prevent further transmission.

### **Surveillance System**

Pandemic surveillance in the district will function through an integrated system combining facility-based, laboratory-based, and community-based surveillance under the framework of the Integrated Disease Surveillance Programme (IDSP).

#### **a) Indicator-Based Surveillance (IBS)**

Routine surveillance will be carried out through all government and private health institutions reporting suspected and confirmed cases of epidemic-prone diseases on a daily or weekly basis. Data will include:

- Number of suspected cases
- Laboratory confirmed cases
- Hospital admissions and deaths
- Demographic details and geographic location

## b) Event-Based Surveillance (EBS)

Information on unusual health events will be captured through:

- Media monitoring
- Community reports
- Local self-government institutions
- Field-level health workers such as ASHA, JHI, and Anganwadi workers

## c) Community-Based Surveillance

Community networks, including Kudumbashree units, volunteers, youth clubs, and NGOs, will support early identification of clusters of illness and unusual health events at the local level.

## d) Sentinel Surveillance

Selected hospitals and laboratories will function as **sentinel surveillance sites** to monitor disease trends, severity of illness, and complications associated with the pandemic pathogen.

## 2. Laboratory Surveillance

Laboratory networks will support early diagnosis and confirmation of pathogens. Key components include:

- District and state public health laboratories
- Accredited private laboratories
- Rapid diagnostic testing facilities
- Sample collection and transport systems
- Laboratories will report test results promptly to the district surveillance unit for integration into the surveillance database.

### 3. Data Collection and Reporting

Health facilities will report surveillance data through standardised formats under the

#### **Integrated Disease Surveillance Programme platform.**

Data reporting will occur at multiple administrative levels to ensure accuracy and timely analysis.

Level	Responsibility
Health Facility	Daily reporting of cases and deaths
Block / Taluk	Compilation and verification of data
District Surveillance Unit	Data analysis and district situation reports
State Surveillance Unit	Monitoring and policy guidance

### 4. Data Analysis and Interpretation

The district surveillance team will conduct regular analysis of collected data to identify trends and emerging risks. Analytical techniques will help understand the pattern of disease transmission and guide public health interventions.

- Disease trends and transmission patterns
- Emerging hotspots or clusters
- High-risk populations and vulnerable areas
- Burden on health facilities

Analytical tools such as epidemic curves, geographic mapping, and statistical trend analysis will be used to support decision-making.

## 5. Information Dissemination

Timely dissemination of surveillance information is essential for coordinated response. Key mechanisms include:

- Daily situation reports to the district administration
- Weekly surveillance bulletins
- Alerts to health institutions in case of outbreaks
- Communication to the public through official channels

These mechanisms ensure that stakeholders remain informed and prepared to respond effectively

## 6. Data Quality and Governance

Maintaining high-quality surveillance data is essential for reliable analysis and policy decisions. The district surveillance system will follow strict data governance principles. All surveillance data will adhere to the following principles:

- Accuracy and completeness of reporting
- Standardised case definitions
- Data validation at the district level
- Protection of patient confidentiality
- Secure digital storage and restricted access

## 7. Role in Pandemic Response

A robust surveillance and data management system enables the district administration to:

- Detect outbreaks at an early stage
- Initiate rapid containment measures
- Allocate healthcare resources effectively
- Monitor the effectiveness of public health interventions
- Provide evidence-based guidance to policymakers

## h. Early Warning System and Risk Communication



The Early Warning System aims to detect potential outbreaks at the earliest stage and provide timely alerts to authorities and the public. Early detection allows rapid implementation of control measures and helps prevent widespread transmission during a pandemic.

Early detection will be strengthened through the surveillance network operating under the Integrated Disease Surveillance Programme (IDSP) and the Integrated Health Information Platform (IHIP).

## **a. Early Warning Mechanisms**

### **a) Health Facility Reporting**

All Government and Private Hospitals, Primary Health Centres, and Clinics will report unusual increases in cases such as:

- Fever clusters
- Respiratory infections
- Gastrointestinal outbreaks
- Unusual deaths

Daily reporting will enable rapid detection of abnormal trends.

### **b) Community-Level Alerts**

Early signals will also be generated from the community through:

- ASHA workers
- Junior Health Inspectors (JHI)
- Anganwadi workers
- Community-based One Health volunteers
- Kudumbashree networks
- Local Self-Government Institutions (LSGIs)

Community volunteers will report unusual illness clusters or deaths to the nearest health facility.

### **c) Media and Event Monitoring**

Event-based surveillance will monitor:

Media reports

- Social media alerts
- Community complaints
- School absenteeism patterns

These signals will be verified by the District Surveillance Unit.

#### **d) Environmental and Seasonal Monitoring**

Seasonal trends such as heat waves, water scarcity, and monsoon-related diseases will be monitored to anticipate potential outbreaks.

##### *b.* Alert and Response Mechanism:

Once an early warning signal or unusual health event is detected through the surveillance system, a structured response mechanism will be activated to ensure rapid investigation and containment. The District Surveillance Unit will coordinate the verification of signals and initiate appropriate public health actions.

The response process will include the following steps:

1. The **District Surveillance Unit** verifies the reported information.
2. A **field investigation team** is deployed to the affected area.
3. Preventive measures such as **testing, isolation, and contact tracing** are initiated.
4. **Alerts and advisories** are issued to health institutions and local authorities.

These actions help ensure that outbreaks are identified early and appropriate control measures are implemented without delay.

## c. Risk Communication Strategy

Effective communication during a pandemic is essential to prevent misinformation, reduce panic, and encourage public cooperation with public health measures. A structured risk communication strategy will ensure that accurate and timely information reaches both health institutions and the general public.

### Communication Channels

Information will be disseminated through multiple official communication channels, including:

- District administration bulletins
- Local Self-Government Institutions (LSGIs)
- Health department press releases
- Social media platforms
- Community awareness campaigns

## d. Public Awareness Measures

Public awareness initiatives will focus on promoting preventive behaviours and providing clear guidance during outbreaks. Key measures include:

- Health education on symptoms and disease prevention
- Promotion of hygiene and sanitation practices
- Vaccination awareness campaigns
- Guidelines for schools, workplaces, and public gatherings

Transparent and consistent communication will help maintain **public trust and community participation** during pandemic response activities.

## **e. Rapid Response Teams (RRT) and Field Investigation**

Rapid Response Teams (RRTs) are specialised multidisciplinary teams established to investigate outbreaks, implement containment measures, and coordinate emergency public health responses during pandemics.

These teams enable the district health system to respond quickly to emerging health threats and limit disease transmission.

### Composition of Rapid Response Teams

District and Block-level Rapid Response Teams will include trained personnel such as:

- District Medical Officer
- District Surveillance Officer
- Medical Officer
- Microbiologist or Laboratory Specialist
- Epidemiologist
- Public Health Nurse
- Health Inspector / Junior Health Inspector
- Data Manager
- Representatives from local administration

These teams will function under the supervision of the **District Medical Officer or District Surveillance Officer**.

## **Functions of Rapid Response Teams**

### Outbreak Investigation

- Verification of suspected outbreaks
- Conducting field investigations
- Identification of the source and mode of transmission

### Case Detection and Contact Tracing

- Active case search in affected areas
- Identification and monitoring of contacts
- Implementation of isolation and quarantine measures

### Sample Collection and Testing

- Collection of clinical samples
- Transport of specimens to designated laboratories
- Coordination with laboratory networks

### Implementation of Control Measures

- Isolation and treatment of cases
- Disinfection of affected premises
- Community containment strategies

## Coordination with Local Authorities

Rapid Response Teams will coordinate closely with other departments to ensure effective outbreak control. Key partners include:

- District administration
- Police department
- Local Self-Government Institutions
- Disaster management authorities

## Logistics and Support

To ensure rapid deployment and effective field operations, the district will maintain essential logistics such as:

- Emergency transport facilities
- Personal Protective Equipment (PPE)
- Sample collection kits
- Communication equipment

## Reporting

After every field investigation, the Rapid Response Team will prepare and submit a **detailed outbreak investigation report** to the district administration and the **Integrated Disease Surveillance Programme surveillance unit**.

## f. Surveillance Monitoring and Reporting Mechanism

To ensure effective implementation of surveillance activities, a structured monitoring system will be maintained. Regular monitoring helps improve reporting compliance, data quality, and early detection of disease outbreaks across health facilities.

<b>Sl. No</b>	<b>Activity</b>	<b>Responsible Authority</b>	<b>Frequency</b>	<b>Monitoring Indicator</b>
1	Strengthen Indicator-Based and Event-Based Surveillance from PHCs, Government Hospitals, Private Hospitals, Diagnostic Laboratories, and LSG Institutions	District Surveillance Officer / Block Medical Officers	Continuous	% of institutions submitting regular surveillance reports
2	Ensure mandatory disease reporting through the Integrated Disease Surveillance Programme reporting system.	District Surveillance Unit (DSU)	Weekly	Completeness and timeliness of reporting
3	Conduct regular IDSP review meetings at the District and Block levels	District Surveillance Officer	Monthly	Number of meetings conducted vs planned
4	Monitor the conduct and documentation of IDSP meetings, including minutes and action taken reports.	District Surveillance Unit	Monthly	Availability of meeting records and follow-up actions
5	Prepare and update the line list of non-reporting institutions (public and private health facilities)	DSU / Taluk Surveillance Units	Monthly	Number of non-reporting institutions identified
6	Prepare a line list of non-reporting diagnostic laboratories	DSU	Monthly	% of laboratories reporting surveillance data

7	Monitor reporting from Local Self Government Departments (LSGD) regarding unusual health events.	Block Medical Officer / Health Inspector	Weekly	Number of event-based alerts received
8	Conduct follow-up visits or communication with non-reporting institutions	DSU / Field Surveillance Staff	Monthly	Reduction in the number of non-reporting institutions
9	Ensure proper maintenance of line lists and surveillance registers	Health Inspectors / Surveillance Assistants	Continuous	Data completeness and accuracy

### **g. Risk Communication Strategy:**

Effective communication is essential to prevent panic and promote public cooperation.

#### Communication Channels

Information will be disseminated through:

- District administration bulletins
- Local self-government institutions
- Health department press releases
- Social media platforms
- Community awareness campaigns

#### Public Awareness Measures

- Health education on symptoms and prevention
- Promotion of hygiene practices
- Vaccination awareness campaigns
- Guidelines for schools, workplaces, and public gatherings

Transparent communication will help maintain public trust and community participation during a pandemic response.

**e. Rapid Response Teams (RRT) and Field Investigation:**

Rapid Response Teams are established to investigate outbreaks, implement containment measures, and coordinate emergency public health response during a pandemic.

**Composition of Rapid Response Teams**

District and Block-level Rapid Response Teams will be constituted with trained personnel, which may include:

- District Medical Officer
- District Surveillance Officer
- Medical Officer
- Microbiologist or Laboratory Specialist
- Epidemiologist
- Public Health Nurse
- HS/Health Inspector / JHI
- Data Manager
- Representatives from the local administration

These teams will function under the supervision of the District Medical Officer/District Surveillance Officer.

## **Functions of Rapid Response Teams**

### **Outbreak Investigation**

- Verify suspected outbreaks
- Conduct field investigations
- Identify source and mode of transmission

### **Case Detection and Contact Tracing**

- Active case search in affected areas
- Identification and monitoring of contacts
- Isolation and quarantine measures

### **Sample Collection and Testing**

- Collection of clinical samples
- Transport of specimens to designated laboratories
- Coordination with laboratory networks

### **Implementation of Control Measures**

- Isolation and treatment of cases
- Disinfection of affected premises
- Community containment strategies

**Coordination with Local Authorities:** Rapid Response Teams will coordinate with:

- District administration
- Police department
- Local self-government institutions
- Disaster management authorities

**Logistics and Support:** To ensure rapid deployment, the district will maintain:

- Emergency transport facilities
- Personal Protective Equipment (PPE)
- Sample collection kits
- Communication equipment

### **Reporting**

After every field investigation, the Rapid Response Team will submit a **detailed outbreak investigation report** to the district administration and the **\*\*Integrated Disease Surveillance Programme surveillance unit**.

Sl. No	Activity	Responsible Authority	Frequency	Monitoring Indicator
1	Strengthen Indicator-Based and Event-Based Surveillance from PHCs, Government Hospitals, Private Hospitals, Diagnostic Laboratories, and LSG Institutions	District Surveillance Officer / Block Medical Officers	Continuous	% of institutions submitting regular surveillance reports
2	Ensure mandatory disease reporting through the <b>Integrated Disease Programme reporting system.</b>	District Surveillance Unit (DSU)	Weekly	Completeness and timeliness of reporting
3	Conduct regular IDSP review meetings at the District and Block levels	District Surveillance Officer	Monthly	Number of meetings conducted vs planned
4	Monitor the conduct and documentation of IDSP meetings, including minutes and action taken reports.	District Surveillance Unit	Monthly	Availability of meeting records and follow-up actions
5	Prepare and update the line list of non-reporting institutions (public and private health facilities)	DSU / Taluk Surveillance Units	Monthly	Number of non-reporting institutions identified
6	Prepare a line list of non-reporting diagnostic laboratories	DSU	Monthly	% of laboratories reporting surveillance data
7	Monitor reporting from Local Self Government Departments (LSGD) regarding unusual health events.	Block Medical Officer / Health Inspector	Weekly	Number of event-based alerts received
8	Conduct follow-up visits or communication with non-reporting institutions	DSU / Field Surveillance Staff	Monthly	Reduction in the the number of non-reporting institutions
9	Ensure proper maintenance of line lists and surveillance registers	Health Inspectors / Surveillance Assistants	Continuous	Data completeness and accuracy

**Community Level**

(ASHA, Anganwadi, Kudumbashree, Volunteers, Schools, LSG Institutions)

t

**Sub Centre / PHC Level**

(JHI, JPHN, Medical Officer – Case detection & preliminary reporting)

t

**Block / Taluk Level**

(Block Medical Officer, Taluk Surveillance  
Unit – Data compilation & verification)

t

**District Level**

(District Surveillance Unit, District Surveillance Officer)

t

**State Level**

(State Surveillance Unit)

t

**National Level**

## **h. Strengthening Lab-based Surveillance:**

Laboratory-based surveillance is critical for early detection, confirmation, and monitoring of infectious diseases during a pandemic. Strengthening the laboratory system ensures timely diagnosis, rapid response, and evidence-based public health decision-making. Strengthen laboratory-based surveillance by expanding the laboratory network, ensuring standardised sample collection and transport, reducing turnaround time, integrating laboratory data with IDSP, and maintaining quality assurance systems for timely detection and response to emerging infections.

### **Key Strategies**

#### **1. Expand Laboratory Network**

- Strengthen coordination between government laboratories, private laboratories, and medical college laboratories.
- Identify and notify designated referral laboratories for confirmatory testing.
- Establish district-level laboratory hubs to improve access and reduce delays.

#### **2. Improve Sample Collection and Transport**

- Standardise sample collection protocols across all health facilities.
- Ensure availability of sample collection kits and viral transport media (VTM).
- Develop a dedicated specimen transport system with cold chain maintenance.

#### **3. Reduce Laboratory Turnaround Time (TAT)**

- Ensure rapid processing and reporting of samples, ideally within 24 hours for priority pathogens.
- Implement real-time electronic reporting systems linking laboratories with surveillance units.
- It is an important indicator of the efficiency and responsiveness of a laboratory system, especially during outbreaks, surveillance, and pandemic situations.

### **Components of Lab Turnaround Time**

1. Sample Collection Time – Time when the specimen is collected from the patient.
2. Sample Transport Time – Time taken to transport the specimen to the laboratory.
3. Sample Processing Time – Time required for registration, preparation, and testing.
4. Analysis Time – Time taken to perform the laboratory test.

5. Result Validation & Reporting Time – Time required to verify and communicate the result to the clinician or surveillance system.

*Steps for optimising laboratory turnaround time (TAT) of ≤24 hours for priority infectious disease samples and ≤48 hours for confirmatory tests, with daily monitoring and reporting to district surveillance units.*

#### **4. Strengthen Reporting and Data Integration**

- Integrate laboratory reporting with the Integrated Disease Surveillance Programme (IDSP) and district surveillance units.
- Ensure daily reporting of positive, negative, and pending samples.
- Monitor non-reporting laboratories and ensure compliance.

#### **5. Quality Assurance and Biosafety**

- Implement internal and external quality assurance programs.
- Ensure laboratories follow biosafety and biosecurity guidelines.
- Conduct periodic training for laboratory personnel on infection control and testing protocols.

#### **6. Capacity Building**

- Train laboratory technicians in molecular diagnostics, sample handling, and outbreak investigation.
- Maintain a trained surge workforce for emergency situations.

#### **7. Logistics and Supply Chain Management**

- Maintain adequate stocks of reagents, consumables, PPE, and testing kits.
- Establish a buffer stock system to avoid supply disruptions during surges.

#### **8. Genomic and Advanced Surveillance**

- Facilitate genomic sequencing of pathogens to detect new variants.
- Coordinate with regional and national reference laboratories for advanced testing.

#### **9. Monitoring and Evaluation**

- Regular review of laboratory performance indicators, such as:
  - Sample rejection rate
  - Turnaround time
  - Testing capacity utilization

- o Reporting compliance

## **I. Strengthening Community-based surveillance**

Community-Based Surveillance in a Pandemic is a system where community members and local institutions actively participate in identifying and reporting unusual health events or symptoms in the population. It helps detect outbreaks early, especially in areas where routine health facility reporting may miss cases. It helps us for Early detection of unusual illness or clusters in the community, Rapid reporting to the public health system, Timely response to prevent the spread of disease, and strengthening linkages between communities and the health system.

### 1. Community Informants

- ASHA workers
- Anganwadi workers
- Kudumbashree members
- School teachers
- Local volunteers and youth clubs
- Community leaders and ward members

### 2. Event Identification

Community informants report unusual events such as:

- Sudden increase in fever, respiratory illness, diarrhoea, rash, or unexplained deaths
- Clusters of similar illnesses in households, schools, or workplaces
- Unusual animal deaths (possible zoonotic diseases)
- Travellers with symptoms from affected areas

### 3. Reporting Mechanism

- Immediate reporting to Junior Health Inspector (JHI) / Health Inspector (HI)
- Use of mobile reporting systems, WhatsApp groups, or helplines
- Integration with the Integrated Disease Surveillance Programme (IDSP)

### 4. Verification

- Health workers verify the reported event through field visits

- Line listing of suspected cases
- Collection of samples for laboratory confirmation

5. Response

- Rapid Response Team (RRT) investigation
- Isolation and treatment of cases
- Contact tracing and monitoring
- Community awareness and risk communication

6. Feedback to Community

- Regular updates to community volunteers
- Awareness of prevention measures
- Reinforcement of reporting mechanisms

In order to strengthen the CBS, the following steps shall be ensured.

- Training of community volunteers on symptom recognition
- Development of simple reporting formats
- Periodic review meetings at the PHC and district level
- Use of digital tools for real-time reporting
- Incentives or recognition for community reporters

**Strengthening CBS through community engagement** through meetings:

Community-level meetings are very important during a pandemic because they help in early detection, community awareness, and coordinated local response. The following community platforms can be effectively used:

1. Neighbourhood Meetings (Ayalkoottam / Ward Level)

- Conduct small neighbourhood meetings to discuss symptoms, prevention, and reporting mechanisms.
- Identify vulnerable individuals (elderly, pregnant women, persons with comorbidities).
- Encourage early reporting of fever or unusual illness to health workers.
- Promote community support systems for quarantine/isolation households.
- Disseminate information on vaccination drives and public health advisories.

2. WHSNC (Ward Health Sanitation and Nutrition Committee)

- Review the health situation in the ward and identify emerging outbreaks.
- Support sanitation, waste management, and vector control activities.
- Facilitate community surveillance and reporting to health authorities.
- Mobilise community resources for awareness campaigns and hygiene promotion.
- Coordinate with local self-government institutions and health staff.

3. JAS (Jan Arogya Samiti / Rogi Kalyan Samiti)

- Strengthen linkages between the community and health facilities.
- Discuss service delivery issues, patient feedback, and facility preparedness.
- Support community communication regarding testing, treatment, and vaccination services.
- Help in resource mobilisation and local problem-solving during emergencies.

4. MASI (Mahila Arogya Samiti)

- Engage women's groups in health promotion and surveillance.
- Spread awareness on infection prevention measures (mask use, hand hygiene, respiratory etiquette).
- Identify symptomatic persons and vulnerable families within the community.
- Support home isolation monitoring and care support.
- Promote maternal and child health services continuity during pandemics.

## j. Vaccination & Cold chain integrity

During a pandemic, **vaccination coverage** and **cold chain integrity** are critical components of the immunisation strategy to control disease transmission and reduce mortality. The key points are outlined below.

### 1. Vaccination Coverage in a Pandemic

Vaccination coverage refers to the **proportion of the target population that has received the recommended vaccine doses**.

#### Key Strategies

- **Prioritisation of Target Groups**
  - Healthcare workers
  - Elderly population
  - People with comorbidities
  - Essential service providers
  - High-risk communities
- **Micro-planning at the Local Level**
  - Prepare ward/LSG-level beneficiary lists.
  - Mapping of vaccination sites (PHCs, CHCs, hospitals, outreach camps).
  - Mobilisation through community groups such as **Kudumbashree**, NSS, and youth clubs.
- **Multiple Vaccination Platforms**
  - Fixed sites (hospitals, PHCs)
  - Outreach sessions in remote areas
  - Mobile vaccination teams for elderly and bedridden patients
  - Special vaccination camps in institutions (schools, factories, hostels)
- **Monitoring and Data Management**
  - Real-time digital reporting through platforms like **CoWIN**.
  - Daily coverage monitoring at the district and state level.
  - Identification of **low-coverage areas** and targeted interventions.
- **Community Engagement**
  - Awareness campaigns to address vaccine hesitancy.
  - Involvement of local self-governments and community leaders.

#### Cold Chain Integrity in a Pandemic

Cold chain integrity ensures that vaccines are **stored and transported within the recommended temperature range**, maintaining vaccine potency.

## Temperature Requirements

Most vaccines must be maintained between **+2°C and +8°C** from the manufacturer to administration.

### Key Components

- **Cold Chain Equipment**
  - Walk-in coolers and freezers
  - Ice-lined refrigerators (ILR)
  - Deep freezers
  - Vaccine carriers and cold boxes
- **Temperature Monitoring**
  - Continuous monitoring using digital thermometers/data loggers.
  - Twice-daily temperature recording at vaccine stores.
  - Immediate corrective action if temperature excursions occur.
- **Vaccine Logistics**
  - Proper stock management and the First Expiry-First-Out (FEFO) principle.
  - Adequate supply of ice packs and conditioned carriers.
- **Transportation**
  - Maintain temperature during transit from the district vaccine store to the session site.
  - Use insulated carriers with temperature indicators.
- **Supervision and Quality Assurance**
  - Regular cold chain audits.
  - Supportive supervision visits by district health authorities.
  - Training of vaccinators and cold chain handlers.

## 2. Monitoring Indicators

Important indicators include:

- Vaccination coverage rate (%) by target group.
- Vaccine wastage rate.
- Cold chain temperature compliance.
- Stock-out frequency.
- Adverse Events Following Immunisation (AEFI) reporting.

### k. Specific strategies for Vulnerable Groups

Sl. No	Vulnerable Group / Setting	Description / Examples	Key Risks in Pandemic	Preparedness & Response Measures	Responsible Agencies
1	High-density settlements	Urban slums, coastal fishing villages, backwater settlements, overcrowded wards	Rapid transmission due to overcrowding, poor ventilation, and limited sanitation	Active surveillance, fever camps, health education, sanitation drives, mask promotion, and early case detection	Health Department, LSGD, ASHA, Anganwadi Workers
2	Migrant clusters	Migrant labour camps, rented worker accommodations, and construction sites	High mobility, shared living spaces, and language barriers affect awareness	Mapping of migrant clusters, periodic health screening, multilingual IEC, coordination with the labour department, vaccination drives	Health Department, Labour Department, Industries, LSGD
3	Major workplaces	Factories, industrial estates, fish processing units, markets, ports, transport hubs	Workplace outbreaks due to crowding and close contact	Workplace infection control protocols, employee health screening, isolation	Health Department, Labour Department, Industries Department
				protocol for symptomatic workers, and workplace inspections	

4	Institutions	Schools, colleges, hostels, old age homes, prisons, orphanages, rehabilitation centres	Cluster outbreaks due to shared accommodation and common facilities	Institutional infection control guidelines, periodic health monitoring, outbreak investigation, isolation facilities, vaccination campaigns	Health Department, Education Department, Social Justice Department, Prison Department
5	High-risk Panchayats	Panchayats identified based on past outbreaks, hazard mapping, high-density population, and flood-prone areas	Higher vulnerability to outbreaks and rapid spread	Priority surveillance, community-based surveillance, rapid response teams, awareness campaigns, targeted vaccination	District Administration, Health Department, LSGD

## **7. GOVERNANCE & STRUCTURE**

An effective pandemic response requires a well-defined governance structure with clear roles and responsibilities at each administrative level. In Kerala's decentralised governance system, coordination between district authorities, health departments, local self-government institutions, and community networks is essential for timely decision-making and implementation of public health measures. The governance structure for pandemic preparedness extends from the **district level down to the ward and community levels**, ensuring coordinated action and accountability across all levels of administration.

### **7.1 Governance Structure from District to Ward Level**

The following framework illustrates the hierarchical structure for pandemic management and coordination.

### **7.2 Institutional Roles and Responsibilities**

Each administrative level has specific responsibilities to ensure coordinated pandemic preparedness, surveillance, and response activities. The following table outlines the key authorities involved and their respective roles.

<b>Level</b>	<b>Key Authority/Body</b>	<b>Composition</b>	<b>Key Responsibilities</b>
<b>District Level</b>	District Disaster Management Authority (DDMA), chaired by the District Collector	District Collector, District Medical Officer, Police, Revenue, LSGD, Animal Husbandry, ICDS, Education, Transport, Fire & Rescue	Overall pandemic preparedness and response, policy decisions, inter-department coordination, resource allocation, and monitoring
<b>District Public Health Emergency &amp; Pandemic Task Force</b>	Under DDMA	Health Department, Epidemiologists, Surveillance Officers, Disaster Management Officials	Technical guidance, surveillance review, outbreak investigation, containment strategy
<b>Taluk/Block Level</b>	Taluk Disaster Management Committee	Tahsildar, Block Medical Officer, Police, Panchayat representatives	Coordinate field response, supervise PHCs, ensure supply chain and reporting
<b>Panchayat / Municipality Level</b>	Local Self-Government (LSG) Pandemic Control Committee	Panchayat President/Chairperson, Medical Officer PHC, Health Inspector, ICDS Supervisor, Kudumbashree representatives	Implement containment measures, monitor home isolation, ensure essential services, and community engagement
<b>Ward Level</b>	Ward Health & Sanitation Committee / Ward Rapid Response Team	Ward Member, JHI/JPHN/ASHA, Anganwadi Worker, Volunteers	Community surveillance, contact tracing support, IEC activities, and monitoring quarantined households

## Coordination Mechanism

Coordination between different administrative levels is essential for effective pandemic management. Information and directives flow from the district administration

to local self-government institutions, while surveillance data and field reports move upward from the community level to the district authorities.

This two-way communication ensures timely reporting of health events, efficient resource mobilisation, and coordinated implementation of containment measures across the district.

### 7.3 Panchayat Level Responsibility Matrix (Health Vigilance Committee / Arogya Jagratha Samithi)

Local Self-Government Institutions play a crucial role in pandemic preparedness and response at the community level. In Kerala, the **Arogya Jagratha Samithi (Health Vigilance Committee)** functions as the primary coordination body at the Panchayat level for monitoring public health situations, strengthening surveillance, and supporting health department activities.

These committees coordinate with Primary Health Centres, community volunteers, Kudumbashree units, and local institutions to ensure early detection of cases, effective risk communication, and support for vulnerable populations.

#### Panchayat Responsibility Matrix Diagram

(Arogya Jagratha Samithi Functions)

The following matrix outlines the functional responsibilities of different stakeholders within the **Arogya Jagratha Samithi** framework. Each function area identifies the lead agency, supporting members, and key activities involved in pandemic response at the Panchayat level.

Function Area	Lead Agency	Supporting Members	Key Activities
<b>Surveillance &amp; Case Detection</b>	Health Inspector	JHI, ASHA	Community surveillance, symptom reporting, line listing
<b>Home Isolation Monitoring</b>	JPHN	ASHA, Ward Volunteers	Daily follow-up of isolated individuals
<b>Contact Tracing Support</b>	Medical Officer PHC	Health staff, volunteers	Identify contacts and monitor symptoms
<b>Quarantine Management</b>	Panchayat Secretary	Health Department	Identify quarantine centres, ensure facilities
<b>Risk Communication (IEC)</b>	Medical Officer	Kudumbashree, Ward Members, Health staff	Awareness campaigns, community announcements

Function Area	Lead Agency	Supporting Members	Key Activities
<b>Essential Services Support</b>	Panchayat Committee	Kudumbashree Units	Food, medicines, and essential supplies to quarantined families
<b>Sanitation &amp; Waste Management</b>	Health Inspector	Haritha Karma Sena	Biomedical waste handling and sanitation drives
<b>Volunteer Coordination</b>	Ward Member	Youth Clubs, NGOs	Mobilise volunteers for emergency response
<b>Vulnerable Population Support</b>	ICDS Supervisor & Health	Anganwadi Workers	Support the elderly, children, and special groups

This structured distribution of responsibilities ensures that **health surveillance, community support, and essential services** are coordinated effectively at the Panchayat level.

## 7.4 Panchayat Level Committee Structure

To ensure coordinated response and decision-making during public health emergencies, multiple committees function at the Panchayat level under the leadership of the Local Self-Government Institution. These committees bring together representatives from the health department, ICDS, community organisations, and local administration.

The following table outlines the key committees and their roles in pandemic preparedness and response.

<b>Committee</b>	<b>Lead</b>	<b>Members</b>	<b>Role</b>
<b>Arogya Jagratha Samithi</b>	Panchayat President	Medical Officer, Health Inspector, ICDS Supervisor, Kudumbashree	Overall health vigilance and pandemic monitoring
<b>Ward Level Health Committee</b>	Ward Member	ASHA, Anganwadi Worker, Volunteers	Household-level surveillance and awareness
<b>Rapid Response Support Team</b>	Medical Officer / Health Inspector	Health staff, volunteers	Immediate response to suspected outbreaks

These committees work in coordination with the District Health Department and Primary Health Centres to ensure effective implementation of public health measures.

## **7.5 Planning Principles & Legal Considerations**

Pandemic preparedness planning must be guided by clear principles and supported by appropriate legal frameworks. These principles ensure that response measures remain ethical, inclusive, and aligned with national and international public health standards.

### **Principles**

Pandemic response planning should follow key public health and governance principles to ensure fairness, effectiveness, and community trust.

- Equity in access to healthcare services and resources
- Gender sensitivity and protection of vulnerable populations
- Respect for human rights and dignity
- Inclusiveness and community participation
- Coherence and coordination between government agencies
- Balancing public health measures with individual rights
- Prioritisation of life-saving interventions during emergencies

### **Legal and Policy Considerations**

Pandemic preparedness and response must operate within established legal and policy frameworks that define responsibilities and ensure accountability.

- Legislative frameworks for public health emergency preparedness and response
- Clearly defined roles and responsibilities of government agencies and technical advisory groups
- Compliance with the International Health Regulations (2005) for global health security
- Policies governing data sharing, research, and innovation during public health emergencies
- Ethical guidelines for surveillance, quarantine, and public health interventions

## 7.6 Principles & policy framework in Pandemic preparedness

Pandemic preparedness planning must be guided by a set of core principles and supported by a strong legal and policy framework. These principles ensure that response actions remain ethical, inclusive, and aligned with national and international public health standards. A well-defined policy framework also clarifies the roles and responsibilities of institutions involved in pandemic response and facilitates coordinated action across sectors.

### Key Principles in Pandemic Response

Pandemic preparedness planning must be guided by a set of core principles and supported by a strong legal and policy framework. These principles ensure that response actions remain ethical, inclusive, and aligned with national and international public health standards. A well-defined policy framework also clarifies the roles and responsibilities of institutions involved in pandemic response and facilitates coordinated action across sectors.

### Legal and Policy Framework for Pandemic Preparedness

Effective pandemic management requires supportive legal frameworks and clear institutional mandates. National and state policies provide the legal authority for implementing public health measures such as quarantine, surveillance, and movement restrictions.

Component	Description
<b>Legislative Frameworks</b>	National and state laws enabling emergency response, disease control, quarantine, and movement restrictions
<b>Defined Roles &amp; Responsibilities</b>	Clear responsibilities for government agencies, local self-governments, health departments, and technical advisory bodies
<b>Technical Advisory Groups</b>	Expert committees providing scientific guidance on surveillance, treatment, vaccination, and risk assessment
<b>Compliance with International Health Regulations (2005)</b>	Ensures international reporting, coordination, and response to public health emergencies
<b>Data Sharing Policies</b>	Mechanisms for timely sharing of surveillance data between institutions, states, and international agencies
<b>Research &amp; Innovation Policies</b>	Support for vaccine development, diagnostics, public health research, and digital surveillance tools

## 7.7 Policy Framework Diagram

Pandemic preparedness policies operate through a multi-level governance system, linking global health regulations with national, state, district, and community-level implementation.

This layered policy structure ensures that international health obligations are translated into practical public health actions at the local level.

### Plan Development & Approach

The development of a pandemic preparedness plan requires a systematic and participatory approach. The planning process should involve multiple stakeholders, analyse existing health system capacities, and identify gaps that need to be addressed.

Component	Key Elements	Description / Purpose
<b>Development Methods</b>	Planning Committee – Terms of Reference	Define roles, responsibilities, decision-making authority, and accountability of the planning committee responsible for preparing the pandemic preparedness plan.
	Multisector & Multilevel Consultations	Engage stakeholders from health, local self-government, disaster management, education, police, civil supplies, private sector, NGOs, and community representatives at district, block, and panchayat levels.
	Analysis of Existing Systems	Review current health systems, surveillance mechanisms, workforce capacity, logistics, emergency response structures, and lessons learned from previous outbreaks.
<b>Approach</b>	Needs-Based Planning	Identify gaps and prioritise interventions based on local risk, vulnerability, and available resources.
	Scalable Strategy	Ensure the preparedness plan can expand or contract depending on the severity and spread of the pandemic.
	Integrated Systems	Align pandemic preparedness with disaster management plans, health system strengthening, and existing surveillance programs.
	Regular Updates	Periodic revision of the plan based on new evidence, simulation exercises, and emerging threats.
	Indicators & Milestones	Establish measurable indicators (e.g., response time, lab capacity, stock levels, vaccination coverage) to track preparedness progress.
<b>Operational Stages</b>	Planning Assumptions	Define possible outbreak scenarios, transmission patterns, and resource requirements.
	Funding Mechanisms	Identify financial sources, including government budgets, emergency funds, and partner support for preparedness activities.
	National & Sub-National Considerations	Ensure alignment with national guidelines while adapting strategies to district and local contexts.

## **Operational Stages of Plan Development**

The development and implementation of a pandemic preparedness plan typically occur through several operational stages. These stages help ensure that planning activities are completed systematically within a defined timeline.

<b>Operational Stage</b>	<b>Activities</b>	<b>Mont h 1</b>	<b>Mont h 2</b>	<b>Mont h 3</b>	<b>Mont h 4</b>	<b>Mont h 5</b>	<b>Month 6</b>
<b>Planning Assumptions</b>	Define outbreak scenarios, transmission patterns, and risk assessment	■ ■ ■ ■ ■					
<b>Funding Resource Mobilisation</b>	Budget allocation, identify emergency funds, and donor coordination	■ ■ ■ ■	■ ■ ■ ■				
<b>Committee Formation</b>	Establish planning committees, define ToR.	■ ■ ■					
<b>System &amp; Gap Analysis</b>	Assess healthcare capacity, surveillance, logistics, and workforce	■ ■ ■ ■ ■	■ ■ ■ ■ ■				
<b>Stakeholder Consultations</b>	Multisector & multilevel meetings		■ ■ ■ ■ ■	■ ■ ■			
<b>Plan Drafting &amp; Integration</b>	Draft pandemic preparedness plan, integrate with			■ ■ ■ ■ ■	■ ■ ■ ■ ■		

Operational Stage	Activities	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
	disaster plans.						
<b>Indicators &amp; Milestones Setup</b>	Define KPIs and a monitoring framework.			■ ■	■ ■		
<b>Capacity Building &amp; Simulation</b>	Training, tabletop exercises, mock drills				■ ■	■ ■ ■ ■	
<b>Plan Review &amp; Update</b>	Revise plan based on exercises, new evidence.					■ ■	■ ■
<b>Full Operationalization</b>	Activate plan at all levels, continuous monitoring						■ ■ ■ ■

A strong principles-based policy framework combined with systematic planning approaches ensures that pandemic preparedness efforts remain effective, adaptable, and aligned with national and global public health standards. Through coordinated governance, evidence-based decision-making, and community participation, districts can build resilient systems capable of responding to future health emergencies.

## **7.8 State Systems & Emergency Coordination**

Effective pandemic preparedness requires a well-coordinated governance and operational framework that connects state, district, and local health systems. Emergency coordination mechanisms ensure that decision-making, resource allocation, and operational response are streamlined across departments and administrative levels. These systems enable rapid communication, mobilisation of human resources, and integration of health services with other sectors such as disaster management, transport, police, and local self-governments.

The State Health Department, in coordination with the State Disaster Management Authority and the Integrated Disease Surveillance Programme (IDSP), provides technical guidance, resource support, and policy direction to districts during public health emergencies. At the district level, these directives are operationalised through the District Disaster Management Authority (DDMA) and the District Health Administration, ensuring timely response, effective containment strategies, and efficient use of available resources.

### **Surveillance & Laboratory Systems**

#### **Strengthening Lab-based surveillance :**

Laboratory-based surveillance is critical for early detection, confirmation, and monitoring of infectious diseases during a pandemic. Strengthening the laboratory system ensures timely diagnosis, rapid response, and evidence-based public health decision-making. Strengthen laboratory-based surveillance by expanding the laboratory network, ensuring standardised sample collection and transport, reducing turnaround time, integrating laboratory data with IDSP, and maintaining quality assurance systems for timely detection and response to emerging infections.

## Key Strategies

### 1. Expand Laboratory Network

Strengthen coordination between government laboratories, private laboratories, and medical college laboratories.

Identify and notify designated referral laboratories for confirmatory testing.

Establish district-level laboratory hubs to improve access and reduce delays.

### 2. Improve Sample Collection and Transport

- Standardise sample collection protocols across all health facilities.
- Ensure availability of sample collection kits and viral transport media (VTM).
- Develop a dedicated specimen transport system with cold chain maintenance.

### 3. Reduce Laboratory Turnaround Time (TAT)

- Ensure rapid processing and reporting of samples, ideally within 24 hours for priority pathogens.
- Implement real-time electronic reporting systems linking laboratories with surveillance units.
- It is an important indicator of the efficiency and responsiveness of a laboratory system, especially during outbreaks, surveillance, and pandemic situations.

## Components of Lab Turnaround Time

1. Sample Collection Time – Time when the specimen is collected from the patient.
2. Sample Transport Time – Time taken to transport the specimen to the laboratory.
3. Sample Processing Time – Time required for registration, preparation, and testing.
4. Analysis Time – Time taken to perform the laboratory test.
5. Result Validation & Reporting Time – Time required to verify and communicate the result to the clinician or surveillance system.

***Efforts should aim to maintain a laboratory turnaround time of ≤24 hours for priority infectious disease samples and ≤48 hours for confirmatory tests, with daily monitoring and reporting to district surveillance units.***

4. **Strengthen Reporting and Data Integration**
  - Integrate laboratory reporting with the Integrated Disease Surveillance Programme (IDSP) and district surveillance units.
  - Ensure daily reporting of positive, negative, and pending samples.
  - Monitor non-reporting laboratories and ensure compliance.
  
5. **Quality Assurance and Biosafety**
  - Implement internal and external quality assurance programs.
  - Ensure laboratories follow biosafety and biosecurity guidelines.
  - Conduct periodic training for laboratory personnel on infection control and testing protocols.
  
6. **Capacity Building**
  - Train laboratory technicians in molecular diagnostics, sample handling, and outbreak investigation.
  - Maintain a trained surge workforce for emergency situations.
  
7. **Logistics and Supply Chain Management**
  - Maintain adequate stocks of reagents, consumables, PPE, and testing kits.
  - Establish a buffer stock system to avoid supply disruptions during surges.
  
8. **Genomic and Advanced Surveillance**
  - Facilitate genomic sequencing of pathogens to detect new variants.
  - Coordinate with regional and national reference laboratories for advanced testing.
  
9. **Monitoring and Evaluation**
  - Regular review of laboratory performance indicators, such as:
    - Sample rejection rate
    - Turnaround time
    - Testing capacity utilization
    - Reporting compliance

## Collaborative Surveillance

Collaborative surveillance is a coordinated approach that involves multiple sectors, levels of government, and community stakeholders sharing data, resources, and responsibilities. This approach improves early detection of disease outbreaks and enhances coordinated response efforts. Collaboration between health departments, laboratories, veterinary services, environmental agencies, and community networks strengthens overall pandemic preparedness and response.

## 7.9 Community Protection & Communication

Community protection and effective risk communication are essential components of pandemic preparedness and response. They help reduce disease transmission, ensure public cooperation with health measures, and maintain social stability during health emergencies. A well-informed community is better equipped to adopt preventive behaviours and support containment efforts.

### Community Protection & Risk Communication in Pandemic

#### 1. Protection Mechanisms

Community protection focuses on reducing exposure, ensuring safety, and maintaining essential services during a pandemic.

##### *a. Infection Prevention*

Promote frequent handwashing with soap or alcohol-based sanitisers.

Encourage proper mask usage, including high-risk settings (crowds, healthcare facilities). Implement physical distancing measures in public spaces, workplaces, and schools.

Regular disinfection of frequently touched surfaces and communal areas.

##### *b. Vaccination*

Organise mass vaccination drives and mobile units for remote areas.

Prioritise high-risk groups: elderly, healthcare workers, people with comorbidities. Maintain cold chain integrity and track vaccination coverage in real time.

Address vaccine hesitancy through community outreach and trusted local leaders.

*c. Personal Protective Equipment (PPE)*

Supply PPE to frontline workers and vulnerable populations.  
Train community members and volunteers on correct PPE usage and disposal.  
Monitor stock levels to prevent shortages during peak demand.

*d. Social Welfare Measures*

Ensure food distribution, cash transfers, and shelter support for quarantined or affected families.

Coordinate with local NGOs, community kitchens, and volunteer networks.  
Include psychosocial support for stress, anxiety, and isolation.

*e. Essential Services Continuity*

Keep healthcare, water, sanitation, and power supply uninterrupted. Develop contingency plans for service disruptions.  
Promote safe access to markets, pharmacies, and banks during lockdowns.

**2. Risk Communication Strategies**

Effective communication is crucial for public understanding and compliance during a pandemic.

*a. Two-way Communication Mechanisms*

Establish hotlines, SMS alerts, and digital platforms for reporting and queries.  
Enable feedback from communities to authorities for localised problem-solving.

*b. Community Engagement*

Involve local leaders, religious figures, schoolteachers, and volunteers as trusted messengers.

Conduct door-to-door awareness campaigns, street plays, or community meetings.

*c. Media Outreach*

Use TV, radio, newspapers, social media, and mobile apps to disseminate updates. Share clear instructions on symptoms, prevention, treatment, and support services.

*d. Language and Cultural Adaptation*

Translate messages into local languages and dialects.

Use culturally appropriate communication methods (illustrations, storytelling, and infographics).

### 3. Misinformation and Infodemic Management

Monitor rumours, fake news, and misinformation through social media tracking, community reports, and surveys.

Establish **fact-checking units** to counter false information quickly.

Educate the public on identifying reliable sources, scientific reasoning, and vaccine facts. Strengthen community resilience by building trust in health systems and authorities.

### 4. Travel and Trade Risk Communication

Issue clear guidelines for travellers regarding vaccination requirements, quarantine, and testing.

Communicate protocols for screening at airports, railway stations, and highways.

Maintain risk communication about safe trade practices, import/export restrictions, and essential goods movement.

Provide updates on evolving travel advisories and localised containment measures.

### 5. Visuals for Implementation

Visual tools can improve public understanding and support the implementation of community protection measures.

*a. Infographic for Community Protection*

Central hub: **Community Safety**

Surrounding segments: Infection prevention, vaccination, PPE, social welfare, and essential services.

Use simple icons (handwash, syringe, mask, food basket, hospital)

#### Clinical Care & Essential Services

Clinical care and the continuity of essential services are critical components of pandemic response. Health systems must ensure that patients receive timely diagnosis and treatment while maintaining the functioning of essential public services. This requires coordinated efforts between healthcare institutions, public health authorities, and supporting sectors.

#### Clinical Care and Essential Services Responsibilities

<b>Domain</b>	<b>Key Activities</b>	<b>Defined Responsibilities</b>
<b>Clinical Care</b>	Scaling facilities	Hospital administrators to expand bed capacity; district health officials to coordinate temporary treatment centres.
	Diagnostics	Labs to ensure timely testing; clinicians to request and interpret tests; supply chain to maintain testing kits
	Case management	Doctors and nurses to manage patient treatment plans, follow clinical protocols, and monitor outcomes
	Telemedicine	Health IT teams to set up virtual consultation platforms; doctors to provide remote care
	Safe burials	Public health teams to guide and supervise burial practices; local authorities to enforce protocols
	Waste management	Hospital infection control teams to manage medical waste; municipal waste services to safely dispose of biohazard materials
<b>Essential Services</b>	Maintenance	Facility management teams are to ensure that utilities, equipment, and supplies are functional
	Workforce supplementation	HR and health authorities to recruit temporary staff; training teams to orient new workers

Domain	Key Activities	Defined Responsibilities
	Monitoring	Health administration to track service delivery, patient flow, and resource availability.
	Recovery	Public health planners to plan post-outbreak rehabilitation; community services to support affected populations
<b>Clinical Protection</b>	Infection control	Health facility infection control teams to enforce hygiene protocols, PPE usage, and isolation measures
	WASH (Water, Sanitation, Hygiene)	Local government and sanitation teams are to ensure clean water, proper sanitation, and hygiene facilities.
	Health worker safety	Administration to provide PPE, vaccination, mental health support, and training for staff safety
	Sectoral roles	Each sector (education, transport, food, etc.) should define continuity plans and protection measures relevant to their services.

## District-Level Responsibilities

Activity	District-Level Responsible Officer/Team	Oversight Role	Domain
Scaling Facilities	District Surveillance Officer (DSO)	Monitor facility capacity, coordinate temporary treatment centres, and ensure bed surge readiness	■ Clinical Care
Diagnostics	DSO & District Lab Coordinator	Ensure lab network functioning, timely testing, supply of test kits, and reporting to surveillance	■ Clinical Care
Case Management	DSO & District Clinical Committee	Supervise treatment protocols, monitor patient outcomes, and provide guidance to hospital teams	■ Clinical Care
Telemedicine	DSO & District Health IT Coordinator	Ensure telemedicine platforms are operational, accessible, and integrated	■ Clinical Care
Safe Burials	DSO & Technical Assistant	Oversee adherence to burial guidelines, coordinate with local authorities	■ Clinical Care
Waste Management	DSO & District Infection Control Team	Monitor medical waste handling, ensure compliance with standards	■ Clinical Care
Maintenance of Facilities	DSO & District Facility Management Unit	Ensure utilities, equipment, and essential supplies are functional	■ Essential Services
Workforce Supplementati on	DMO/DSO	Coordinate staffing needs, deploy personnel, and provide rapid training	■ Essential Services
Monitoring & Reporting	District Surveillance Team	Conduct review meetings, track patient flow, resources, and report to authorities	■ Essential Services
Recover y Plannin g	DSO & District Planning Team	Coordinate post-outbreak recovery efforts with local authorities and communities	■ Essential Services

Activity	District-Level Responsible Officer/Team	Oversight Role	Domain
Infection Control	DSO & District Infection Control Team	Conduct audits, supervise PPE use, isolation protocols, and training	■ Protection
WASH (Water, Sanitation, Hygiene)	DSO	Ensure clean water, sanitation, and hygiene compliance in facilities & communities	■ Protection
Health Worker Safety	DSO, SVO, RCH, DMHP	Monitor PPE, vaccination, mental health support, and overall workforce safety	■ Protection
Sectoral Roles	District Collector & DSO	Coordinate cross-sector preparedness with education, transport, food, and other departments	■ Protection

## Access to Countermeasures

Ensuring equitable and timely access to medical countermeasures such as vaccines, therapeutics, diagnostics, and protective equipment is a critical component of pandemic preparedness.

### Supplies & Stockpiles

Maintain essential supplies lists for pandemic response. Establish rapid scaling mechanisms for procurement and distribution. Utilise national and international stockpiles when required.

### Regulatory & Supply Chains

Strengthen regulatory frameworks to ensure safe and rapid approval of countermeasures. Address liability and safety considerations for emergency use.

Maintain resilient upstream and downstream supply chains.

Encourage research and development environments for innovative countermeasures.

### Visual Tools

Supply chain flowchart illustrating procurement to distribution. Operational checklist for countermeasure access and monitoring.

## Plan Activation & Operational Triggers

A clearly defined activation mechanism ensures that the pandemic preparedness plan can be rapidly implemented when early warning signals or outbreak indicators are detected.

### Activation

Define decision-making bodies responsible for activating the response plan. Identify stakeholder roles and responsibilities during activation.

Establish clear communication protocols for alerting departments and partners.

### Operational Stages

Pandemic response typically follows three operational stages:

**Prevent and Prepare** – surveillance, risk assessment, and preparedness planning.

**Respond** – containment, control, and mitigation measures to reduce transmission.

**Recover** – scaling down emergency operations while maintaining surveillance and strengthening health systems.

### Visual Tools

- Decision tree for pandemic plan activation.
- Timeline illustrating operational stages from preparedness to recovery.

## 8. HEALTH SYSTEM SURGE

Health system surge capacity refers to the ability of the healthcare system to rapidly expand beyond normal services to meet increased demand during public health emergencies such as pandemics. A strong surge plan ensures that healthcare facilities can manage a sudden increase in patient load while maintaining essential services and protecting healthcare workers.

Surge planning includes expanding hospital infrastructure, mobilising additional human resources, strengthening referral and transport systems, and ensuring an uninterrupted supply of oxygen, medicines, and equipment. Effective surge management requires coordinated planning between hospitals, district administration, local self-governments, and community networks.

### 8.1 Surge Capacity Assessment and Gap Analysis

A comprehensive gap analysis helps identify limitations in the current health system and estimate the additional resources required during a pandemic. The district health administration should periodically assess available infrastructure and plan for rapid expansion if demand increases.

#### Key Assessment Areas

- Hospital bed availability (general beds, isolation beds, ICU beds)
- Oxygen supply and critical care infrastructure
- Pediatric and obstetric care capacity
- Referral transport and emergency response systems.
- Availability of trained health workers.

#### Planning Expansion Beds

Pre-planning for expansion beds using existing infrastructure, such as hostels, auditoriums, and community halls, helps the district respond quickly during patient surges.

#### Key actions include:

- Identification of facilities suitable for temporary treatment centres

- Planning separate entry and exit points for ambulances
- Ensuring adequate sanitation, ventilation, and electricity
- Installing oxygen supply and basic medical equipment where required.

## **8.2 Specialised Care Capacity Audit**

Pandemics often affect vulnerable populations such as pregnant women, children, and critically ill patients. A specialised care audit ensures that essential maternal, neonatal, and pediatric services remain available.

### Specialised Care Audit Measures

- Identify the number of functional neonatal ventilators available in district hospitals.
- Assess pediatric ICU beds capable of managing infectious respiratory diseases.
- Identify labour rooms that can be isolated for infectious obstetric cases.
- Ensure referral pathways for high-risk maternal and neonatal cases.

This audit helps maintain continuity of essential services while managing infectious disease cases.

## **8.3 Oxygen Supply and Critical Care Readiness**

Oxygen is one of the most critical resources during respiratory pandemics. Districts must assess oxygen production capacity and maintain adequate reserves to handle peak demand.

### Oxygen Autonomy Calculation

- Calculate total litres-per-minute (LPM) oxygen production capacity from local oxygen plants and concentrators.
- Compare this with projected demand during peak infection periods (e.g., assuming 5% of active cases require oxygen support).
- Maintain backup oxygen cylinders and emergency refill arrangements.

### Oxygen Infrastructure Planning

- Maintain functional PSA oxygen plants in major hospitals.

- Ensure uninterrupted supply of oxygen cylinders and liquid medical oxygen.
- Develop emergency oxygen redistribution mechanisms across hospitals.

## **8.4 Secondary Infrastructure Mapping**

To manage large-scale outbreaks, additional care facilities may be required beyond hospitals.

### **Expansion Bed Mapping**

- Identify hostels, auditoriums, sports complexes, and community halls for temporary care facilities.
- Prepare floor plans for patient beds, triage areas, and staff zones.
- Establish separate entry and exit routes to reduce infection risk.
- Ensure availability of water supply, sanitation, electricity, and waste management.

These facilities can function as step-down care centres or isolation wards during peak patient loads.

Name of Institution	Sanctioned beds	Functional Beds	Isolation Bed with Oxygen	Incase of Expansion with Oxygen	Incase of Expansion without Oxygen
THQH Vaikom	272	163	15	25	
FHC Ramapuram	49	49	3	28	
THQH Pampady	150	125	5	15	
KM Mani Memorial Govt GH Pala	341	370	12	70	
THQH Kuraivilangad	54	31	0	0	16
GH Kanjrapally	142	154	37	10	
GH Changanaserry	225	173	36	75	
GH Kottayam	374	149	5	29	

## 8.5 Referral Transport and Emergency Response System

Efficient referral transport systems ensure the timely movement of patients between healthcare facilities.

### Referral Transport Matrix

Available vehicles should be categorised into:

#### *Type A – Basic Life Support Transport*

- Basic patient transport vehicles
- Equipped with oxygen cylinders and first aid supplies

#### *Type B – Advanced Life Support Transport*

- Ambulances with advanced monitoring equipment
- Ventilators and trained paramedics

#### *Additional planning measures include:*

- Pre-negotiated fuel credit lines with local petrol pumps
- Dedicated ambulance dispatch coordination
- GPS-based tracking systems for emergency vehicles

## 8.6 Surge Staffing and Human Resource Planning

Human resources are often the most critical limitation during health emergencies. A surge staffing plan ensures that adequately trained personnel are available during patient surges.

### Staff-to-Bed Ratio Analysis

District health authorities should calculate:

- Required nurse-to-patient ratios
- Number of respiratory therapists
- Availability of intensive care specialists
- Additional support staff, such as technicians and ward assistants

### Surge Workforce Strategies

- Temporary recruitment of healthcare professionals
- Deployment of medical interns and trainees
- Mobilisation of retired healthcare professionals
- Training volunteers and community health workers for support roles

## Standardised Triage, Cohorting and Infection Prevention

Standardised triage and infection prevention protocols help prevent healthcare facilities from becoming transmission hubs.

### Physical Cohorting Zones

Healthcare facilities should be divided into clearly defined zones:

- Green Zone – Non-infectious patients and routine healthcare services
- Yellow Zone – Suspected cases and triage area
- Red Zone – Confirmed infectious disease, patients

This zoning system helps minimise cross-infection and improves patient management.

## Triage “Door-to-Bed” Protocol

Entry gate staff should follow a 5-point rapid triage checklist:

- Check the respiratory rate
- Measure oxygen saturation (SpO<sub>2</sub>)

- Identify fever and respiratory symptoms
- Determine travel or contact history
- Direct patients to appropriate care zones

This triage process should be completed within 3 minutes of patient arrival.

## **On-Site Mentoring and Training**

Continuous training improves healthcare worker preparedness.

Key initiatives include:

- Shadow training programs where specialists from district hospitals visit primary health centres.
- Hands-on training for ventilator use and oxygen therapy.
- Practical demonstrations on correct PPE use and infection prevention.

## **Infection Prevention and Control (IPC) Monitoring**

Daily monitoring helps ensure adherence to infection control standards.

### **IPC Compliance Checklists**

Supervisors should conduct daily safety walk audits to verify:

- Availability of hand hygiene stations
- Proper biomedical waste segregation
- Environmental cleaning of frequently touched surfaces
- Availability and correct use of PPE

## **Healthcare Worker Protection**

Healthcare worker safety is essential to sustain health services during pandemics.

Key measures include:

- Regular health monitoring of healthcare workers
- Vaccination programs for frontline staff

- Mental health support services
- Rotational duty schedules to prevent burnout
- **Supply Chain Strengthening for Surge Response**

An efficient logistics and supply chain system ensures the continuous availability of medical supplies during a pandemic. Supply chain planning should include procurement, storage, transportation, and distribution of essential commodities.

### **District–Community Logistics System**

The logistics system operates through a multi-tier structure involving district administration, block authorities, local self-governments, and ward-level community networks. Each level plays a specific role in planning, procurement, storage, monitoring, and distribution of supplies. Effective coordination between these levels ensures a timely response to sudden demand surges and prevents stock-outs during emergencies.

**Map and formalise supply chains with contingency routes, framework agreements, and a simple inventory**

Logistics / Supply Function	District Administration / DDMA	Block / Taluk Level	Panchayat / Municipality (LSG)	Ward / Community Level
<b>Planning &amp; Coordination</b>	Develop a district logistics plan, allocate resources, coordinate health, disaster management, and supply departments.	Consolidate block-level requirements and coordinate between PHCs and LSGs	Prepare a local micro-plan based on population, risk groups, and facilities	Ward committees identify household needs and vulnerable populations
<b>Stock Procurement</b>	Bulk procurement of PPE, diagnostics, medicines, oxygen, and equipment	Receive and distribute supplies to health institutions and LSGs	Procure locally permitted items (masks, sanitisers, basic medicines) as per emergency bylaws	Support the distribution of locally produced items through volunteers

<b>Logistics / Supply Function</b>	<b>District Administration / DDMA</b>	<b>Block / Taluk Level</b>	<b>Panchayat / Municipality (LSG)</b>	<b>Ward / Community Level</b>
<b>Stock Storage &amp; Warehousing</b>	Maintain district medical warehouses and oxygen storage facilities	Maintain block-level storage and ensure supply to PHCs/CHCs	Maintain emergency buffer stock at the LSG office/health institutions	Temporary storage and distribution points for emergency supplies
<b>Consumption Monitoring</b>	Establish consumption norms and track district-wide supply data	Monitor stock utilisation in PHCs and hospitals	Maintain daily stock registers for PPE, medicines, and home-care kits	Report shortages or unusual demand patterns
<b>Diagnosics Supply &amp; Cold Chain</b>	Ensure supply of diagnostic kits and cold chain equipment	Monitor lab capacity and reagent stock at block facilities	Verify refrigerators/freezers for kit storage and maintain temperature logs	Assist in transporting samples and kits safely
<b>Home-Care Kit Distribution</b>	Approve standard kit composition and allocate funds	Supply kits to PHCs and LSGs	Maintain a ready stock and distribute to households under home isolation	Deliver kits and provide instructions through ASHA/volunteers
<b>Local Production &amp; Vendor Engagement</b>	Issue quality guidelines and approvals	Identify potential local suppliers	Maintain a registry of <b>MSMEs / SHGs (e.g., Kudumbashree)</b> for mask and sanitiser production.	Support local tailoring units and community groups.

<b>Transportation &amp; Last-Mile Delivery</b>	Arrange district logistics transport, ambulances, and oxygen tankers	Coordinate transport to health institutions	Arrange local vehicles for supply movement	Volunteers assist with household delivery
<b>Emergency Procurement</b>	Declare emergency procurement provisions and release funds	Facilitate rapid approvals and financial monitoring	Purchase essential items from local vendors under emergency bylaws	Assist in identifying reliable local suppliers
<b>Monitoring &amp; Reporting</b>	District-level dashboard for supply chain monitoring	Weekly review of block stock and supply gaps	Submit stock and consumption reports to the block authorities	Real-time reporting through ward volunteers and health workers

The above framework ensures that logistics planning and implementation are decentralised while maintaining strong district-level oversight. Ward committees and community volunteers play a crucial role in identifying vulnerable households, reporting shortages, and supporting last-mile distribution of essential supplies.

## 8.7 Supply Chain Contingency Planning

Supply chain disruptions can occur due to lockdowns, natural disasters, or transportation restrictions. Contingency planning ensures continuity of supply during such disruptions.

**Map and formalise supply chains with contingency routes, framework agreements, and a simple inventory**

Component	Description	Key Actions	Responsible Level
<b>Contingency Routing Maps</b>	Identification of alternate transport routes for medical supplies if primary roads become inaccessible due to lockdowns, floods, protests, or disasters.	<ul style="list-style-type: none"> <li>• Map primary and secondary routes for supply transport</li> <li>• Coordinate with police, transport department, and disaster management authorities</li> <li>• Update route maps periodically and share with logistics teams</li> </ul>	District Administration, Transport Department, Health Department
<b>Framework Agreements (Rate Contracts)</b>	Pre-signed agreements with suppliers to ensure stable pricing and uninterrupted supply	<ul style="list-style-type: none"> <li>• Fix prices for key commodities (PPE, masks, oxygen accessories, medicines) for <b>12–24 months</b></li> <li>• Identify multiple vendors to avoid</li> </ul>	District Procurement Committee, Health Department

Component	Description	Key Actions	Responsible Level
	of essential medical commodities during emergencies.	supply disruption • Include clauses preventing price escalation during emergencies	
<b>Simplified Digital Ledger</b>	A mobile-friendly inventory tracking system enabling rapid stock entry and monitoring at the facility level.	• Develop a <b>one-page digital tracker</b> for stock entry • Record incoming and outgoing supplies with a single click • Integrate with district-level dashboard for real-time monitoring	District Health Office, IT Support Team
<b>Buffer Stock Trigger Points</b>	Predefined re-order thresholds to prevent stock-outs of critical supplies.	• Define <b>minimum stock levels (e.g., 25% of capacity)</b> • Automated alerts sent to District Health Emergency Operations Centre (EOC) • Initiate replenishment process immediately	District Warehouse, Health Logistics Team
<b>Last-Mile Volunteer Network</b>	Community-based delivery system for essential medicines and supplies in areas inaccessible to large vehicles.	• Identify trained <b>two-wheeler/bicycle volunteers</b> • Link volunteers with ASHA workers and ward-level teams • Provide basic training, ID cards, and safety kits	Panchayat, Community Volunteers, Health Workers

## District–Panchayat Logistics Responsibility Matrix for Pandemic Supply & Distribution

During large-scale health emergencies, clear delineation of responsibilities across administrative levels is necessary to maintain efficient supply chain management. The District–Panchayat Logistics Responsibility Matrix outlines the roles of district authorities, block or taluk administrations, local self-governments, and community networks in managing pandemic supplies. By defining responsibilities at each level, the system ensures coordinated procurement, effective inventory monitoring, reliable transportation of supplies, and timely delivery of essential commodities to healthcare facilities and households.

Function / Activity	District Level (District Collector / DMO / EOC)	Block / Taluk Level	Panchayat / LSGD Level	Ward / Community Level
<b>Supply Chain Planning</b>	Develop district logistics plan; estimate demand for PPE, medicines, diagnostics; coordinate procurement.	Consolidate requirements from PHCs and hospitals; monitor stock availability.	Identify local demand and vulnerable areas; report shortages	Assist in identifying households needing medicines or supplies
<b>Contingency Routing Maps</b>	Prepare district transport maps, including alternate routes; coordinate with police & transport departments.	Validate local routes and road accessibility	Identify village-level alternative paths for supply delivery	Guide delivery teams through local routes and narrow lanes

Function / Activity	District Level (District Collector / DMO / EOC)	Block / Taluk Level	Panchayat / LSGD Level	Ward / Community Level
<b>Framework Agreements (Rate Contracts)</b>	Finalise contracts with vendors for PPE, medicines, oxygen accessories and other essential items	Coordinate with district procurement teams and ensure supply to block stores.	Support local procurement for emergency small-scale needs	Assist in the distribution and monitoring of supplies
<b>Inventory Monitoring (Digital Ledger)</b>	Maintain district-level digital dashboard and logistics control room	Update stock status from block stores and PHCs	Maintain a simple digital/physical register of incoming and outgoing supplies.	Inform ASHA/health workers about shortages or urgent needs.
<b>Buffer Stock Management</b>	Define minimum stock levels and trigger points; maintain district buffer stock warehouse.	Maintain block-level emergency reserves	Maintain a limited local stock for emergency response	Report rapid consumption or shortage of medicines
<b>Distribution &amp; Transport</b>	Arrange bulk transport to block warehouses and	Distribute supplies to	Organise local transport for supplies to	Support last-mile delivery to households

## 9. PREPAREDNESS AND RESPONSE PROTOCOL AT DISTRICT LEVEL

This section describes the operational framework for the district once a pandemic is declared. It explains how the district and health system will move from routine data collection to active response, using a One Health approach.

### 9.1 Constitution of One Health Committee

The district shall constitute a one health committee comprising the district collector, medical officers (modern medicine, AYUSH, and veterinary), the health inspector, and the veterinary surgeon.

**Objective:** The One Health Committee coordinates human, animal, and environmental health to prevent and control pandemics.

Sl No	Designation	Department/Institution	Role in Committee
1	District collector	District Administration	Chairperson
2	District Medical Officer (Health)	Health Dept	Member Secretary
3	District Animal Husbandry Officer	Animal Husbandry	Member
4	Deputy Director, Panchayats	Local Self Government Department (LSGD)	Member
5	District Agriculture Officer	Agriculture Department	Member
6	District Fisheries Officer	Fisheries Department	Member
7	District Forest Officer	Forest Department	Member
8	District Food Safety Officer	Food Safety Department	Member
9	District Surveillance Officer	Health Department / IDSP	Member
10	District NKKP2 Nodal Officer (Convener)	Health Department	Member
11	Civil society Representative	Non-Governmental Organization / Community Organization	Member
12	Line Department representations	Police Department, Education Department, ICDS, Disaster Management Authority, Transport Department	Member

Key Responsibilities:

- Review disease surveillance data (human + animal)
- Conduct ward-wise risk assessment and vulnerability mapping
- Approve quarantine/isolation centre locations
- Coordinate with the district for resources (PPE, oxygen, ambulances)
- Periodically review health system surge capacity, including beds, oxygen, human resources, and ambulances.
- Approve and monitor risk communication and community engagement strategies, including rumour management.
- Ensure protection and service continuity for vulnerable groups (elderly, persons with disabilities, dialysis patients, coastal populations).
- Conduct quarterly mock drills
- Monitor equity measures for vulnerable groups

### Meeting Schedule:

Quarterly (normal times) | Weekly (outbreak alert) | Daily (pandemic phase)

## **9.2 Pandemic Response Workforce**

To ensure a coordinated and timely response during a pandemic, a dedicated Pandemic Response Workforce shall be constituted at the LSG level. The workforce will function under the overall supervision of the One Health Committee and in close coordination with the health authorities. Team-based deployment will enable efficient surveillance, case management, quarantine and isolation management, logistics support, and risk communication. Each team shall have a clearly designated team leader, defined roles, and an identified pool of personnel to allow rapid activation, rotation of duties, and continuity of services during prolonged emergencies.

<b>Team Name</b>	<b>Composition</b>	<b>Key Responsibilities</b>	<b>Team Leader</b>
<b>Surveillance and Contact Tracing Team</b>	HI, JHI, JPHN, ASHAs and Volunteers	Case detection, contact listing, home visits, reporting	HI
<b>Case Management Team</b>	Doctors, Nurses, MLSP, Palliative Nurses	Patient care & referral	Doctor / Medical Officer
<b>Quarantine &amp; Isolation Team</b>	DISTRICT staff, Volunteers	Facility management	JHI
<b>Psychosocial support</b>	Counsellors, Trained health care workers	Provide mental health support, counselling for patients and families, and address anxiety, stress, and stigma.	Counsellor
<b>Logistics &amp; supply chain Team</b>	DISTRICT staff, Storekeepers, Drivers 3	Supplies & transport [PPE, medicines, oxygen, transport, waste management]	Ward Member
<b>Communication Team</b>	Ward members, Kudumbashree, Youth clubs, AWW workers and other self- help groups	IEC, community meetings, countering misinformation	Medical Officer / DMO
<b>Transportation</b>	KSRTC, educational institutional buses	Patient transport, staff transport, movement of supplies and emergency evacuation support	Health inspector
<b>Media Surveillance</b>	Medical Officers at the Institution level, along with the team District Medical Officer at the District	Patient transport, staff transport, movement of supplies and emergency evacuation support	Medical officer DMO
<b>Intersectoral coordination and convergence</b>	District Medical Officer at the District and Medical Officer at the LSG level	Coordinate activities between health, police, LSGD, education, and other departments for pandemic response.	DMO/DSO/ Medical Officer
<b>Collaborative surveillance</b>	District Surveillance officer and PIED cell at the District HQ, and Medical officer at the LSG	Coordinate activities between health, police, LSGD, education, and other departments for pandemic response.	DSO/Medical Officer

All teams shall be activated immediately upon outbreak alert or pandemic declaration and shall report daily to the LSG Incident Commander/Medical Officer, with consolidated reporting to the Block PHC. Duty rosters and alternate personnel shall be maintained to ensure uninterrupted services during staff shortages or prolonged response periods. Team composition and numbers may be revised based on the magnitude of the outbreak and availability of human resources.

## Activities and Measures before and during the Pandemic

### 9.3 PHASE 1 - Alert / Preparation

#### ➤ Activate One Health Committee

- Immediately activate the **One Health Committee** at the LSG level. Convene an **emergency meeting** to review risk assessment, roles, and preparedness. Ensure coordination between Health, Veterinary, Agriculture, Local Self Government, and allied departments.
- Prepare and circulate a contact directory of all committee members and emergency services.
- Ensure documentation of decisions and action points with timelines.
- Escalation hierarchy to be finalised (LSG to Institution to Block to District).

#### ➤ Surveillance and Reporting

Objective: To ensure early detection, timely reporting, and response to potential outbreaks through enhanced facility-, community-, and event-based surveillance

#### ● **Enhanced syndromic surveillance:**

The LSGD shall initiate enhanced surveillance for priority syndromes and events such as:

- Fever
- Influenza-like illness (ILI)
- Severe acute respiratory infection (SARI)
- Unusual illness clusters (any unexpected increase in similar symptoms in a defined area or group)

#### 2. **Data sources for surveillance:**

- Ward-wise household surveillance (through ASHAs/JPHNs/ward volunteers)
- Outpatient surveillance from all government facilities (PHC, FHC, CHC, GH, etc.)
- Private hospitals, clinics and labs

**3. Event-based triggers (to be monitored and reported):**

- School absenteeism above the usual pattern (to be monitored through the headmaster/PTA nodal person)
- Sudden increase in pharmacy sales of fever/cough/cold medicines
- Workplace illness clusters (multiple staff reporting similar symptoms within a short period)

**3. Zoonotic and animal health surveillance**

## Logistics and Stock Preparedness

- Identify and empanel local vendors and define emergency procurement mechanisms in accordance with existing LSGD and Health Department norms.
- Prepare and maintain an essential logistics checklist covering medical supplies, consumables, and support equipment.
- Pre-identify secure storage locations for emergency stocks and ensure maintenance of stock registers with regular updating.
- Finalise emergency transport arrangements, including availability of vehicles and identified drivers for rapid deployment during alerts.
- Designate a Nodal Officer for Logistics to enable prompt decision- making, coordination, and communication during emergencies.
- Conduct rapid stock verification and ensure availability of minimum buffer stock, including:

Identify critical gaps in logistics and immediately communicate requirements to the Block and District authorities for timely replenishment and support. Monitor expiry dates and stock rotation.

## Identification of Quarantine and Isolation Facilities

- Identify and list suitable buildings for quarantine and isolation (schools, hostels, community halls, etc.).
- Categorise cases as per the severity and allocate to appropriate facilities (for instance, severe cases to classrooms, mild cases to an assembly hall in case of a school).
- Facility readiness checklist needed (beds, toilets, ventilation, etc).
- Find an alternate site if the primary sites are not available or are not in use.
- Identify facility managers and support staff
- Prepare basic SOPs for:
  - Admission and discharge
  - Food, water, and sanitation
  - Infection prevention and waste disposal
  - Ensure availability of basic amenities: water, sanitation, electricity, ventilation, and waste disposal. Prepare a rapid activation plan for these facilities in case numbers increase.

## Risk Communication and Community Preparedness

- Disseminate early warning messages on symptoms, preventive measures, and reporting mechanisms. Display IEC materials both in English and the local language

- in public places and ensure ward-level awareness.
- Sensitize elected representatives and community leaders on preparedness measures.
- Establish a rumour tracking and misinformation response mechanism to identify, verify, and promptly counter false or misleading information.
- Engage trusted local persons (ward members, ASHA workers, religious leaders, teachers, community volunteers) to communicate official public health messages and reinforce correct practices.
- Develop and deploy targeted IEC materials for:
  - Schools and educational institutions
  - Markets and commercial areas
  - Work sites and labour settings
- Conduct community sensitisation meetings at the ward level to promote preventive behaviours, address concerns, and strengthen community participation in preparedness and response.

## **Protection of Vulnerable Groups**

Vulnerable populations require priority protection through targeted line-listing, service continuity, and delivery mechanisms.

Prepare and regularly update **line-lists** of vulnerable populations, including:

- Elderly persons living alone
- Persons with disabilities
- Pregnant women
- Migrant workers

The detailed line-lists shall be maintained as Annexure and updated periodically.

## **Clinical Dependency Mapping**

Develop ward-wise dependency and vulnerability maps to identify households requiring regular support during emergencies. Ensure continuity of essential health services for vulnerable groups, including.

- Dialysis services (facility mapping, transport arrangements, and scheduling)
- Continuity of treatment for TB, HIV, and other chronic conditions requiring uninterrupted medication
- Mental health and psychosocial support services

Establish **delivery mechanisms** for food, essential commodities, and medicines to vulnerable households through coordinated action involving ASHAs, JPHNs, Kudumbashree, volunteers, and local administration.

## **2. Ensuring Continuity of Essential Health Services**

During pandemics or other public health emergencies, routine healthcare services must continue without interruption to prevent indirect health impacts. Disruptions in services such as dialysis, treatment of chronic diseases, maternal care, and mental health support can lead to severe complications and increased mortality. Therefore, district health authorities must implement strategies to maintain essential health services while simultaneously managing the outbreak response.

Continuity planning involves mapping health facilities, maintaining patient registries, ensuring medicine supply chains, arranging transportation for patients, and coordinating community support mechanisms through local self-governments and health workers.

### **A. Dialysis Services**

During pandemics or other public health emergencies, routine healthcare services must continue without interruption to prevent indirect health impacts. Disruptions in services such as dialysis, treatment of chronic diseases, maternal care, and mental health support can lead to severe complications and increased mortality. Therefore, district health authorities must implement strategies to maintain essential health services while simultaneously managing the outbreak response.

Continuity planning involves mapping health facilities, maintaining patient registries, ensuring medicine supply chains, arranging transportation for patients, and coordinating community support mechanisms through local self-governments and health workers.

<b>Component</b>	<b>Action</b>
Facility Mapping	List all dialysis centres in the district and nearby districts
Patient Registry	Maintain a ward-wise list of dialysis patients.
Transport Arrangements	Panchayat-arranged ambulance/vehicle support during lockdowns
Appointment Scheduling	Coordinate slots with dialysis centres to avoid overcrowding.
Emergency Backup	Identify alternate facilities if the primary centre becomes unavailable

### **B. Continuity of Treatment for Chronic Diseases**

Patients with chronic illnesses require uninterrupted access to medications, monitoring, and specialist care. Interruptions in treatment can worsen health outcomes and increase hospital admissions. District health authorities should ensure continuous drug supply, teleconsultation services, and community-based distribution of medicines through health workers.

<b>Disease / Condition</b>	<b>Key Measures</b>
TB	Ensure uninterrupted drug supply through DOTS providers and ASHAs
HIV	Coordinate ART drug refills through ART centres with multi-month dispensing.
Diabetes & Hypertension	Provide medicines through PHC/Sub-Centre distribution.
Cancer	Coordinate transport for chemotherapy/radiotherapy appointments.
Other chronic conditions	Maintain patient lists and medication refill schedules.

### C. Mental Health and Psychosocial Support

Pandemics often lead to psychological stress, anxiety, social isolation, and stigma. Individuals such as elderly persons living alone, people with pre-existing mental illness, and families affected by disease outbreaks require additional psychosocial support. A coordinated mental health response helps strengthen community resilience and supports affected individuals.

<b>Component</b>	<b>Action</b>
Identification	List individuals with mental illness, the elderly living alone, and people under stress
Tele-Counselling	Establish helplines and online counselling services.
Community Support	Trained volunteers and counsellors provide psychosocial support.
Referral System	Link severe cases to district mental health services.

### 3. Delivery Mechanisms for Essential Supplies

During emergencies, vulnerable households must continue to receive essential supplies such as food, medicines, and hygiene products. Local self-governments and community organisations play a crucial role in ensuring last-mile delivery through coordinated distribution networks.

#### Coordination Mechanism

<b>Stakeholder</b>	<b>Key Responsibilities</b>
ASHAs	Identify vulnerable households, monitor health needs, and coordinate medicine delivery.
JPHNs	Maintain vulnerability registers and supervise health service continuity.
Kudumbashree Units	Support food distribution, community kitchens, and supply chains.
Ward Volunteers	Deliver medicines and groceries to households.
Local Administration	Logistics coordination, vehicles, funding, and monitoring
Civil Society/NGOs	Additional volunteers and resource mobilisation

#### Supply Delivery System

A structured supply delivery mechanism ensures that essential goods reach households efficiently during movement restrictions or lockdown situations.

#### Key Components of the Delivery System

##### 1. Ward-Level Inventory

Maintain stock records of essential supplies such as medicines, food items, and hygiene products.

## 2. Household Request System

Requests for essential supplies may be made through: Telephone helplines  
WhatsApp-based helpdesks Reporting through ASHA workers

## 3. Distribution Channels

Community kitchens for cooked food distribution

Public Distribution System (PDS) outlets for food grains Medicine distribution through PHCs and health workers

## 4. Transport Support

Panchayat vehicles for supply movement

Volunteer transport networks using two-wheelers or local vehicles

## 5. Monitoring and Reporting

Daily reporting from ward volunteers and health workers Periodic review by Panchayat Emergency Coordination Cells Monitoring

### **Ward-Level Coordination Structure**

Effective coordination at the ward level ensures that vulnerable populations receive timely assistance and essential services. Community participation plays a critical role in monitoring needs and supporting local response efforts.

<b>Level</b>	<b>Responsibility</b>
Panchayat	Overall coordination and resource allocation
Ward Committee	Monitoring vulnerable households
Health Workers	Service delivery and health monitoring
Volunteers	Logistics and home delivery
Community Groups	Support for food and psychosocial care

## **9.4 PHASE 2 - Active Response**

### **1. Case Identification and Contact Tracing**

Case detection and contact tracing activities will be carried out in coordination with the Health authorities, following disease-specific SOPs and IDSP guidelines.

#### **Field Staff Involved**

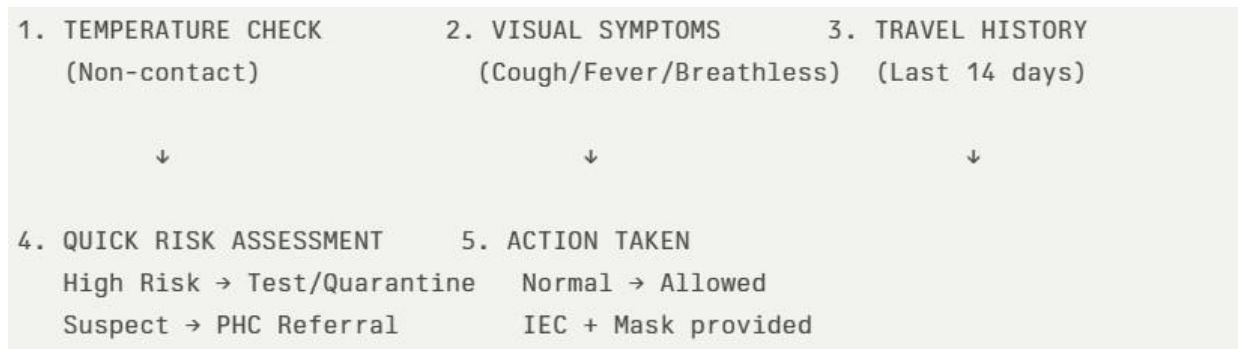
- Health Inspector (HI)
- Junior Health Inspector (JHI)
- Junior Public Health Nurse (JPHN)
- ASHAs and ASHA Supervisors
- Ward-level volunteers and Kudumbashree members (as required)

## 2. Screening Checkpoints

Screening checkpoints at high-traffic locations (transport hubs, markets, religious gatherings) for early detection of symptomatic travellers and crowd screening during outbreaks. Potential locations include bus stands, market entry points, and boat jetties, based on local context and risk assessment. Screening activities will be carried out by trained personnel such as ASHAs, ward members, and volunteers, with support from Health Department staff. Necessary equipment including non-contact thermometers and appropriate PPE shall be ensured prior to activation.

Location	Type (Bus stand/Jetty/Market/Railway)	Staff Deployed (ASHAs/Volunteers)	Screening Method	Reporting authority
Bus stand	Transport hub	One JHI One ASHA One health Mentors	1.Swab Collection. 2. Blood smears collection (RDT) 3.Thermal Scanners	Surveillance Nodal Officer in control room
Market entry	Market	One JHI One ASHA Male health volunteers	1.Swab Collection. 2. Blood smears collection (RDT) 3.Thermal Scanners	Surveillance Nodal Officer in control room
Boat jetty	Water transport	One JHI One ASHA Male health volunteers	1.Swab Collection. 2. Blood smears collection (RDT) 3.Thermal Scanners	Surveillance Nodal Officer in control room

### Standard Screening Protocol



The screening protocol shall include temperature screening, observation for visible symptoms, and inquiry regarding recent travel or exposure history. Individuals identified as suspects during screening shall be immediately referred to the nearest PHC/FHC for further evaluation, testing, and appropriate action as per prevailing guidelines.

#### 9.4.1 Pandemic Control Room

The Pandemic Control Room (PCR) serves as the central nerve center for real-time coordination, data aggregation, decision support, and communication during outbreaks. It consolidates information from all LSGD teams, health facilities and community sources to enable rapid response decisions.

#### Control Room Infrastructure and Location

**Primary Location:** Collectorate, Kottayam

**Backup Location:** DMO Office, Kottayam

#### Health System Control Room Framework

The PCR is organized into **seven functional pillars** to ensure no aspect of the response is overlooked:

- *Rapid Response Team (RRT)*
    - Provides immediate intervention during emergencies, clusters, and field alerts.
    - Coordinates urgent actions such as case investigation, contact tracing, isolation, and inter-facility referrals.
  - *Data Management & Analytics Team*
    - Collects, validates, and manages key health system indicators (cases, tests, beds, HR, supplies).
    - Analyses data trends, generates projections, and supports evidence-based decision-making for local authorities.
  - *Human Resource Deployment Team*
    - Allocates healthcare staff efficiently based on workload and need
    - Ensures adequate and equitable workforce distribution across facilities
  - *Laboratory Surveillance Team*
    - Oversees diagnostic testing coordination, sample transport, and timely reporting of results.
    - Monitors lab indicators (testing volume, positivity rate, turnaround time) for early detection of outbreaks
    -
2. *Vaccination Cell (If Required)*
- Plans and executes vaccination campaigns, including micro-planning and session scheduling.
  - Tracks coverage, identifies gaps, and coordinates corrective actions with field teams and outreach services.
3. *Infrastructure & Patient Occupancy Team*
- Monitors facility capacity, earmarked beds, oxygen and critical care resources across all linked facilities.
  - Ensures optimal patient distribution and referral management using updated bed status and resource data.
4. *Policy Execution & Strategy Team*
- Implements health policies, SoPs, and government orders within the LSGD jurisdiction.

- Develops local strategies, reviews compliance, and recommends modifications based on field feedback and data.

### **SOP for alert escalation/trigger point with mapping of responsibilities.**

- The Control Room shall be staffed with a designated In-Charge, data entry personnel, and communication staff with clearly defined roles and shift arrangements.
- It shall maintain updated records on daily monitoring indicators, including new cases, persons under active quarantine, and hospital bed occupancy.
- All reports and situation updates shall be shared daily with the Block and District Surveillance Unit.
- The Control Room shall act as a single point of contact for coordination with response teams, health institutions, and other departments.
- Contact details of the Control Room shall be widely communicated to field staff and stakeholders during activation.

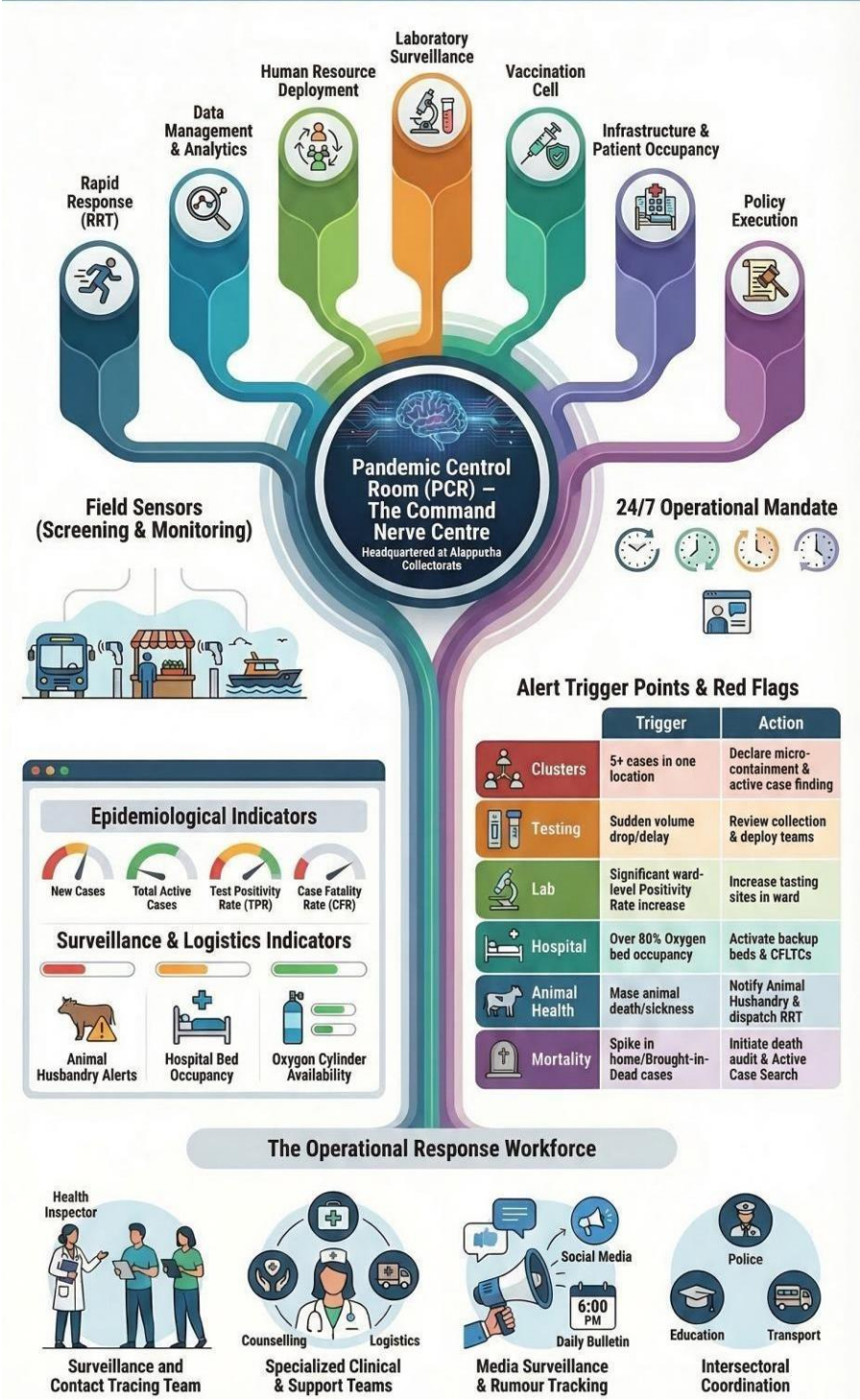
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### **CONTROL ROOM MANDATES**

- The control room will be operational 24\*7 managed by floor managers in rotation.
- Control room access is authorised only to those engaged in control room activities.
- Identity proof is mandatory
- In and out movement is written in the logbook
- Food items are not permitted inside the control room
- Team members of different groups have to work in their assigned areas
- Review meetings will be held in the mornings and evenings
- Minimum two members from all groups will participate in review meetings
- Critical appraisal of group activity will be done in the meetings
- The documentation team will record minutes of all meetings

- Decisions taken in the meeting will be communicated to the respective groups
- The implementation status of the decisions taken will be monitored
- Emergency meetings will be informed by phone to the respective teams by the documentation team
- The single window communication system will be operated by the documentation team
- All sub-teams communicate with the control room via their own email ID.
- All communications between the teams were coordinated through the control room.
- All communications are well documented.
- Advances in information technology are well utilised for communication
- Communication to the media will be done only through the media management team
- Health bulletin release at 6 pm
- A departmental coordination meeting at 6 pm
- Press briefing at 7 pm

# Phase 2 – Active Response



## ACTIVITIES OF VARIOUS TEAMS

Effective pandemic response requires coordinated actions by multiple operational teams at the district level. Each team performs specific functions such as surveillance, communication, logistics management, infrastructure development, training, and human resource management. Clearly defining the activities and responsibilities of each team helps ensure efficient coordination, timely decision-making, and effective outbreak control.

The following sections describe the key roles and activities of various response teams involved in pandemic preparedness and response.

### Surveillance team

#### Hospital surveillance

- The condition of the Symptomatic patients admitted to isolation wards of hospitals will be closely scrutinised, and reports will be updated to the surveillance team.
- Analysis of the reports

#### Field surveillance

- Those patients discharged from hospitals will be monitored by field workers in their corresponding PHC area.
- Those asymptomatic travellers/contacts in home isolation will also be monitored for 28 days by field workers, and reports will be sent to the DSO.

#### Lab surveillance

- The DSO and District nodal officers entrusted with sample collection will inform the lab surveillance team before sample collection.
- Sample requisition forms will be scrutinised before sending to the National Institute of Virology, Pune/Kottayam/designated labs.
- Liaison with districts and the sample collection point
- Support and supervise Surveillance activities at the district level
- Establishing a support system with SMO (WHO), a mechanism for strengthening the IDSP disease surveillance system.
- Daily LSG-wise monitoring at the state level
- Detailed data monitoring at the IDSP district unit.

- Identifying areas for inter-sectoral action & steps for the same.

## **24 X 7 Call Centre management team**

A dedicated call centre helps address public queries, provide health guidance, and coordinate emergency responses during pandemics.

### **To Set-Up**

A control room call centre should be set up in the state as well as the district. The call centre is set up with 3 laptops and 3 mobile/landline telephone facilities. Each Call Centre Operator is assigned both a telephone and a computer. One outgoing mobile facility is also available for answering pending calls. Two WhatsApp numbers are also available in the disaster control management room.

*Depending on the configuration of the call centre, each workstation has the following items:*

- Headset for hands-free answering;
- Reference materials (issued upon activation of call centre operations);
- Item to be used to request assistance from the supervisor (Paper and pen/pencil, register, etc.)
- All phone/computer banks are set up in proximity to power, telephone, and data sockets/ports.
- Call Centre Supervisors are to utilise a sign-in/sign-out sheet to keep track of Call Centre Operators.

## MANDATES FOR CALL CENTRE

1. Maintain discipline and professional conduct.
2. Ensure effective time management.
3. Operate the call centre 24 hours a day.
4. Maintain documentation of all call centre activities.
5. Submit daily consolidated reports by 4:30 PM.
6. Ensure sufficient communication connectivity.
7. Maintain linkage with the DISHA health helpline system.
8. Respond to medical, logistical, and administrative queries related to health issues.
9. Maintain records of second and third-level call referrals.

### Call Centre Reporting Format

Total number of calls till today	No: of calls on the date-- /--/2020	Total	Case follow-up till today	Case reported on - --/2020	Total fever

- DISHA Calls .....

## HR management

Human resource management is primarily coordinated at the district level to ensure adequate staffing during public health emergencies.

*Key responsibilities include:*

- Maintaining updated records of the health workforce distribution within the district.
- Identifying gaps in human resources at healthcare facilities.
- Coordinating the redistribution of staff based on workload and patient volume.
- Communicating additional HR requirements to the state if necessary.
- Monitoring staffing levels in isolation facilities and nodal centres.

- Compiling daily HR data to ensure no shortage of personnel in critical areas.

## Training and awareness generation

Continuous training and awareness programs are essential for ensuring preparedness among healthcare workers, volunteers, and community members.

### *Key Responsibilities*

1. The district should train all the necessary cohorts in a timely manner, and the data should be compiled at the state level. The state team has the responsibility for preparing the training materials according to the daily needs being discussed in the control room meetings. These training materials should be vetted by a group of experts and should be disseminated via control room mail id to all concerned (districts, agencies, groups, IMA, IAP, etc.)
2. Identify target groups in the government and private sectors requiring training.
3. Develop segment-specific training modules.
4. Prepare training manuals and guidelines.
5. Disseminate IEC materials, audiovisual aids, and training resources.
6. Prepare frequently asked questions (FAQ) and responses.
7. Conduct online or telephonic training sessions for district officials and health workers.
8. Train call centre personnel on communication protocols.
9. Develop a team of master trainers.
10. Organise demonstration sessions for infection prevention and response measures.

### Training Monitoring Format

Sl No	Segment	Subject	Place	Number of persons attended
	<b>Govt sector</b>			
	Doctors			
	Paramedical staff			
	Attendants			
	<b>Private sector</b>			
	Doctors			

	Paramedical Staff			
	Attendants			
	<b>Others</b>			
	ASHA			
	Line departments staff			
	LSGD representatives			
	Kudumbashree			
	Anganwadi Teachers			
	Ambulance Drivers			

### **Material management team**

Material management should be done at the institution level using all possible resources under the control of the superintendent; however, there might be a higher degree of needs arising in certain situations. The district and state has a mechanism of supporting these institutions according to the arising needs. The needs and activities should be compiled in the districts and coordinated with the state team/KMSCL. The state team is expected to compile the activities and challenges on a day-to-day basis and present at the control cell meeting, including the following details.

#### Inventory Monitoring Format

• **DATE :**

**INSTITUTION:**

<b>Sl No</b>	<b>Items</b>	<b>Opening stock</b>	<b>Distribution</b>	<b>Balance</b>

## Key Responsibilities

- The primary responsibilities of the material management team are:
- Prepare the list of items required at the Hospital for providing health care
- Monitor inventory position institution-wise
- Ensure the supply chain management of healthcare and other items required

## **Infrastructure (isolation ward and facilities) management team**

This team ensures that adequate infrastructure and isolation facilities are available for managing infectious disease patients.

### ***Key Activities***

- Identify an isolation place in each district for at least 50 patients
- Ensure all the required things are in the isolation ward of these facilities
- Set up a dedicated team in each district
- Train the dedicated team and other health functionaries
- Ensure that the strict protocol of infection control is followed in each district
- Identify spatially all the field units and fever clinics arrangements done in all districts
- Ensure and compile the referral of contacts from the field/call centres /DISHA to isolation facilities in the district
- Verify and compile the needs for additional isolation places if the number is increasing in each district
- The data should be collected in the following format at the district level and compiled at the state level

## Monitoring Format

• DATE

INSTITUTION

SI No	Indicator	Describe and give data
	Whether the isolation ward is identified and all the required things are set up	
	Whether the specific teams have been identified and trained Number of Doctors Number of Paramedical staff Number of Attendants	
	Whether to stand by the team identified and trained Number of Doctors Number of Paramedical Staff Number of Attendants	
	Duty roster prepared	
	Whether all inventory is ensured	
	Number of beds	
	Number of Patients admitted and their details	
	Infection control measures taken Details	
	Bio-medical waste disposal mechanism from the isolation ward	
	Institution requirements details	

## Media Surveillance team

The media surveillance team monitors print, electronic, and social media for information related to disease outbreaks, public perception, and misinformation.

### *Key Responsibilities*

- Monitor print, visual, and social media platforms for outbreak-related information.

- Identify misinformation or rumours circulating in the media.
- Validate information and take corrective actions where necessary.
- Address public concerns through official communication channels.
- Coordinate with district authorities to respond to logistical or human resource issues reported in the media.
- Compile media surveillance reports at the district level.

### **Media Monitoring Reporting Format**

<b>Sl no:</b>	<b>Description</b>	<b>Details</b>
1	Whether any misinformation was noticed	
2	Misinformation noticed Give details in brief	
3	Whether reported to take action and case booked	
4	Cases booked today	
5	Total cases Booked till today	

### **Operational Response Teams and Monitoring Framework**

During a pandemic, coordinated action by specialised operational teams is essential to ensure efficient surveillance, response, logistics management, communication, and healthcare service delivery. At the district level, multiple thematic teams shall function under the supervision of the District Pandemic Control Room, with defined roles, responsibilities, and reporting mechanisms.

Each team will submit daily reports to the control room to facilitate timely decision-making and resource allocation.

#### **1. Sample Tracing Team**

The Sample Tracing Team is responsible for monitoring sample collection, transportation, laboratory submission, and reporting of test results

## Key Responsibilities

1. Monitor samples sent to designated laboratories such as the National Institute of Virology (NIV), Pune, NIV Kottayam, and other approved laboratories.
2. Coordinate with Public Health laboratories and district surveillance units regarding sample submission.
3. Assist districts in sample transportation, documentation, and reporting procedures.
4. Ensure correct completion of laboratory requisition formats before dispatch.
5. Track sample testing status and ensure timely receipt of reports.
6. Inform relevant authorities regarding laboratory results.

## Reporting

All sample test results shall be reported daily to:

- Superintendent, Medical College Hospital
- District Collector
- Director of Health Services (DHS)
- Director of Medical Education (DME)
- Principal Secretary, Health and Family Welfare

### Sample Monitoring Format

- **DATE**

Sl No	Description	Number	Result received	Positive
1	Total Sample Collected Blood Urine Throat Swab			
2	Samples sent to Alpy NIV Blood Urine			

	Throat swab			
3	Samples sent to Manipal Laboratory Blood Urine Throat swab CSF			
4	Samples sent to NIV Pune Blood Urine Throat Swab CSF			

## IEC/BCC and Media Management Team

This team is responsible for developing and disseminating information, education, and communication materials to inform the public and reduce anxiety during a pandemic.

### Key Responsibilities

- Develop IEC materials related to preventive and promotive health practices.
- Disseminate accurate information through the Public Relations Department (PRD), television channels, All India Radio (AIR), newspapers, and social media.
- Ensure timely updating of official websites with health advisories.
- Prepare daily media briefings and press notes.
- Coordinate press conferences as directed by authorities.
- Act as media spokesperson for the Directorate of Health Services.

### Media Review Format

Press note	
Press brief	
Social media dissemination content	

## Documentation Team

The documentation team ensures systematic recording and communication of decisions, guidelines, and activities during the pandemic response.

### Key Responsibilities

- Document meetings conducted by the Minister, Principal Secretary, and the Directorate of Health Services.
- Communicate decisions and guidelines to district authorities and public health institutions.
- Ensure dissemination of SOPs and operational guidelines to relevant teams.
- Coordinate website and social media updates.
- Compile daily activity reports from all operational teams

## Private Hospital Surveillance Team

Private healthcare institutions play an important role in disease detection and patient management. This team monitors surveillance data from private hospitals.

### Key Responsibilities

- Collect and compile data on patients visiting private hospitals.
- Identify suspected cases or contacts who may have been missed by the public health system.
- Maintain strong coordination with private hospital associations.
- Integrate private hospital reporting into district surveillance systems.

### Reporting Format

	Cumulative
Number of persons who visited private hospitals	
Suspected cases/contacts identified	

## Expert Study Coordination Team

This team coordinates visits by external expert groups and research institutions.

### Key Responsibilities

- Facilitate visits of expert agencies after verifying institutional approvals.
- Ensure submission of request letters to the **Principal Secretary, Health and Family Welfare.**
- Confirm logistical arrangements for visiting experts.
- Provide expert teams with situational information.
- Review the feasibility and implications of expert recommendations.

### Reporting Format

Sl no		Details
1	Expert / Expert Group Institution Govt or private	
2	Names:	
3	Activities undertaken	

## Transportation and Ambulance Management Team

Efficient patient transport is essential for timely referral and treatment.

### Key Responsibilities

- Maintain data on ambulance availability, drivers, and training status.

- Ensure continuous **24×7 availability of ambulance services.**
- Coordinate the transport of patients from home isolation to healthcare facilities.
- Monitor post-transport sanitisation of vehicles.
- Compile district-level transport data.

### **Transport Monitoring Format**

Sl no	Vehicle number	Driver	From	To	Post-trip sanitisation

### **Interdepartmental Coordination Team**

Pandemic response requires collaboration across multiple government departments.

#### **Key Responsibilities**

- Maintain coordination with departments such as:
  - Local Self Government Department (LSGD)
  - Animal Husbandry
  - Tourism
  - Police
  - Kudumbashree Mission
  - Suchitwa Mission

- Facilitate multi-sectoral response activities.
- Address operational issues requiring interdepartmental collaboration.

## Community-Level Volunteer Coordination Team

Community volunteers provide essential support for monitoring quarantine and supporting affected families.

### Key Responsibilities

- Monitor field-level activities related to quarantine and community support.
- Coordinate with Kudumbashree and ASHA programme representatives.
- Manage food kit preparation and distribution for households under quarantine.
- Maintain records of contacts and quarantine households.

### Reporting Format

SI No	Description	Details
1	Number of Contacts under Home Quarantine	
2	Number of Kits prepared and provided to Homes where contact is in quarantine	
3	Kits stock	
4	Kits distribution	
5	Kits balance	

## Psychological Support Team

Pandemics often cause psychological distress, anxiety, and trauma among affected individuals.

### Key Responsibilities

- Establish district and field teams for psychological support.
- Provide counselling services to individuals in quarantine or isolation.
- Identify cases of post-traumatic stress and mental health issues.
- Coordinate referrals to mental health professionals where required.
- Present daily reports during control room meetings.

## Data Management Team

The Data Management Team ensures the timely compilation, analysis, and dissemination of pandemic data.

### Key Responsibilities

- Use digital tools such as **Google Sheets and other MIS platforms** to compile data from operational teams.
- Develop district-specific data sheets with automatic consolidation features.
- Ensure dynamic updating of surveillance and logistics data.
- Provide technical support to districts through NHM MIS managers.
- Share consolidated data with state authorities, including the **State Mission Director and Principal Secretary**.

## Finance and Budgeting Team

The Finance and Budgeting Team manages financial planning and resource allocation during the pandemic response.

## Key Responsibilities

- Identify funding requirements for various response activities.
- Mobilise financial resources from government funds and emergency allocations.
- Coordinate financial approvals and administrative sanctions.
- Ensure timely release of funds to avoid delays in pandemic response activities.

## **District Pandemic Response Teams**

<b>Sl no</b>	<b>Name of team</b>	<b>Team Leader</b>	<b>Members</b>
	<b>Overall coordination</b>	Dr Priya N ,District Medical Officer	
<b>1</b>	<b>Surveillance team</b>	Dr Jessy Joy Sebastian, District Surveillance Officer	District Epidemiologist, District Data Manager, DEO
<b>2</b>	<b>Call Centre management team.</b>	Dr Praseeda , RCH Officer	SMT Nancy MCH Officer in Charge, Smt Kanjana DPHN I/C
<b>3</b>	<b>HR management</b>	Dr Vyas Sukumaran, DPM	Sri Joy Philip SS , DMO Office, Smt Deepthi Arogya keralam
<b>4</b>	<b>Training and awareness and generation</b>	Dr ASHA , JAMO	Dr Sushanth , Dr Mammen Cherian
<b>5</b>	<b>Material management team</b>	Sri Anil Kumar ,Store Verification Officer	Smt Renjini PSK, Sri Jaleel, Store Supdt ,GH Kottayam
<b>6</b>	<b>Infrastructure (isolation ward and facilities) management team</b>	Dr Santhosh Kumar R, Dy DMO	Dr Vidyadharan, Arogyakeralam, Dr Abilash Supdt Gh Pala
<b>7</b>	<b>Sample Tracing team</b>	Dr Linto, One Health Nodal Officer	Dr Anupama Microbiologist, Sri Prakash, DLO I/C
<b>8</b>	<b>Media Surveillance team</b>	Sri Kalidas TA	Sri Anil Kumar , HS Athirampuzha, Sri Manoj HS Ullanad
<b>9</b>	<b>IEC/BCC and Media Management team</b>	Sri Vineesh JC Arogyakeralam	Sri Vinod HS Panachikad, Sri Shibu HI Kuruppanthara FHC
<b>10</b>	<b>Documentation team</b>	Dr Sithara Dy DMO	Sri Biju Dy Mass Media Officer in Charge, , Block PRO and Major Hospitals PRO
<b>11</b>	<b>Private hospital surveillance team</b>	Sri AnilKumar TA Gr 2	Smt Kukku JHI, Data Managers , Block Epidemiologist/Entomologist
<b>12</b>	<b>Expert study coordination team</b>	Dr ASHA , JAMO	Smt Asha Stat, Smt Shemy Stat, Smt Saritha Epidemiologist

<b>Sl no</b>	<b>Name of team</b>	<b>Team Leader</b>	<b>Members</b>
<b>13</b>	<b>Transportation and ambulance management team</b>	Dr Vyas Sukumaran , DPM	Dr Savan Supdt GH Kanjirapally, Dr Sineesh Supdt Kuravilangad THQH
<b>14</b>	<b>Interdepartmental and coordination team</b>	Dr Suresh Supdt KRNMSH Uzhavoor	Sri Shiju Foreman, Dr Shanthi Dy Supdt , GH Kottayam
<b>15</b>	<b>Community-level volunteer coordination team</b>	Dr Sreejith , DTO	Dr Twinkle Supdt THQH Vaikom, Dr Anil Supdt GH Changanassery
<b>16</b>	<b>Psychological support team</b>	Dr Prasanth( UHWC)	Dr Viniya Mutholy, Dr Smitha MO Pallickathode
<b>17</b>	<b>Data Compilation</b>	Dr Soumya Susheelan , Psychiatrist GH Kottayam	DMHP Team
<b>18</b>	<b>Budget and financing</b>	Smt Shereefa ,DNO	Block Data Managers
		Smt Sheela V Nair, AA,	Sri Sajikumar JS, Smt Umalalu JS DMO Office

### 9.4.2 Daily Monitoring Indicators

To ensure timely decision-making and effective response, the following key indicators shall be monitored and updated daily by the Pandemic Control Room:

#### **Epidemiological Indicators:**

New cases reported today, Total active cases, Test Positivity Rate (TPR), Case Fatality Rate (CFR)

#### **Surveillance Indicators:**

Persons under home quarantine, High-risk contacts identified, Fever, ILI, SARI or other symptoms (syndromic surges), Travellers (symptomatic or high-risk arrivals), Animal husbandry surveillance (zoonotic alerts, unusual animal deaths, poultry/bird flu signals), Mortality surveillance (excess deaths, unexplained fatalities, verbal autopsy reports)

#### **Logistics and Infrastructure Indicators:**

Hospital / CFLTC beds occupied, Oxygen cylinders/concentrators available, Ambulances on standby

## Alert Findings

The following table outlines category-specific **trigger points (red flags)** from surveillance indicators and corresponding immediate actions for the Pandemic Control Room. These enable rapid response to alert findings like testing anomalies, positive cases exceeding thresholds, clusters, and WGS reports.

<b>Lab</b>	Test Positivity rate increases	Increase testing sites in that ward.
<b>Hospital</b>	>80% Oxygen bed occupancy	Activate backup/CFLTC beds.
<b>Travel</b>	Cluster of cases from a single flight/train or high-risk arrival group.	Trace all passengers in adjacent seats; implement mandatory institutional quarantine.
<b>Animal</b>	Mass poultry/wildlife death or unusual sickness	Notify Animal Husbandry, sample the area, and dispatch RRT for environmental sampling and zoonotic check.
<b>Mortality</b>	Sudden spike in home deaths or brought-in-dead (BID) cases	Audit the deaths and the Active Case Search drive
<b>Additional investigations like Whole Genome Sequencing (WGS)</b>	Detection of a <b>Variant of Concern (VOC) or Variant of Interest (VOI)</b>	Implement strict micro-containment; update clinical protocols to match variant severity.

### 1. Communication of Public Health Information

A Community Communication Hub shall be established to ensure the timely, accurate, and consistent dissemination of information during a pandemic. The Hub will function under the coordination of the president and act as the nodal point for public communication, risk messaging, and community engagement. **It will support the dissemination of official advisories, promote preventive behaviours, address rumours and misinformation, and ensure that messages reach all sections of the population through trusted local channels and leaders.**

## Key communicators

Channel	Responsible Person	Contact
District-level announcements	District Collector	
Social media	District Mass Media Wing	
Local Cable TV/Radio	Public Relations Department (PRD) Officer	

- All messages disseminated through the Hub shall align with advisories issued by the Health Department and District authorities.
- Community leaders shall be sensitised to support behaviour change, reduce stigma, and counter misinformation.
- Special efforts shall be made to reach vulnerable and hard-to-reach populations using locally appropriate communication methods.

**Rumour Tracking:** A designated **Media Surveillance Team** at the district level will monitor local social media platforms and messaging groups to identify misinformation. Verified clarifications will be issued promptly through official district communication channels.

## 9.5 Coordination with District/State Authorities & Other Organisations

Effective coordination with Block, District, and State authorities is essential to ensure timely reporting, technical guidance, and uninterrupted supply of essential resources during a pandemic. The LSG shall establish clear communication channels, designate responsible officers, and adhere to prescribed reporting timelines to support coordinated public health action and efficient resource mobilisation.

Reporting Schedule and Protocols:

<b>To Whom</b>	<b>What to Report</b>	<b>Frequency</b>	<b>Nodal Person</b>
Directorate of Health Services (State)	District Situation Report (cases, testing, beds, deaths)	Daily	District Medical Officer
<b>State Surveillance Unit (IDSP)</b>	Outbreaks/Clusters/Unusual Events (>5 cases in the same ward)	Immediate	District Surveillance Officer
<b>Animal Husbandry Department</b>	Animal health events/Zoonotic alerts	As required	District Veterinary Officer
<b>State Cell</b>	Emergency alerts and inter-sectoral events	Immediate	District Collector

## 9.6 Supply Chain Coordination

The LSG shall coordinate closely with Block, District, and State authorities (KMSCL) to ensure uninterrupted availability of essential goods, medical supplies, and logistics during a pandemic. Supply requirements shall be assessed regularly based on case load and communicated promptly to the appropriate authorities for timely replenishment.

### Key Points:

- Maintain updated contact details of District and Block nodal officers for health logistics, oxygen supply, ambulances, and essential medicines.
- Submit timely indent requests for PPE, testing kits, medicines, oxygen, and other critical supplies through prescribed channels.
- Monitor stock levels at LSGD facilities, quarantine/isolation centres, and field teams through daily stock registers and dispensing logs to prevent shortages.
- Coordinate with District authorities, Karunya/Neethi medical shops, and local purchase committees for funds allocation and emergency procurement.
- Ensure regular monitoring of dispensing registers at all facilities to track usage, expiry, and pilferage—shortages being a perennial issue requiring proactive weekly audits.
- Activate surge procurement protocols during high caseloads, leveraging local purchase powers under LSGD funds alongside state supplies.

## 9.7 Collaboration with NGOs, PPP, and CSR

To augment government efforts during a pandemic, the LSG shall collaborate with

NGOs, voluntary organisations, and private sector partners through public–private partnerships and Corporate Social Responsibility (CSR) initiatives, in coordination with District authorities.

**Key Points:**

- Engage NGOs and community-based organisations for community outreach, awareness, and support to vulnerable populations.
- Leverage CSR support for procurement of medical equipment, PPE, oxygen concentrators, food kits, and sanitation materials, as permitted.
- Ensure all collaborations align with government guidelines and are routed through approved administrative and financial procedures.
- Maintain transparency and documentation for all external support received and utilised.

## **9.8 PHASE 3 - Surge Capacity**

Phase 3 is activated when there is a rapid increase in cases, high test positivity rates, or when existing health facilities and quarantine arrangements approach saturation. The focus of this phase is to expand isolation capacity, augment clinical care services, and mobilise additional resources through district and state support mechanisms.

### **Conversion of Community Facilities**

To manage increased case load, the district shall activate additional isolation facilities by repurposing identified community infrastructure such as community halls, auditoriums, schools, hostels, or other suitable buildings.

Name of facility	Facility Type	No. of Buildings	Surge Capacity (Beds)	Nodal Person
Isolation Ward, FHC Kalavoor	FHC Kalavoor	03	10	Dr Anu
Rhtc Chettikad	Upgraded CHC	06	155	Dr Vipin K Ravi
Dc Mills	Industrial building	04	300-400	Dr Melvin Gonzalvus
Madhava Community Hall, Karippad	Community hall	01	300	Dr Arun Jacob, HPD Supnd
Ls Noornadu	Specialty Hospital	03 functional buildings	200	Dr.Vidhya,

## 9.9 Recovery and rehabilitation phase

The recovery and rehabilitation phase begins once the immediate public health emergency is controlled and transmission is reduced to manageable levels. This phase focuses on restoring essential services, addressing long-term health and socio-economic impacts, and strengthening systems to prevent or better manage future pandemics.

### 9.9.1 Recovery

Recovery refers to the gradual return of communities and systems to normal functioning while continuing public health vigilance. It involves phased withdrawal of emergency measures, reopening of services, and reintegration of disrupted health and social systems. Recovery activities should be evidence-based, inclusive, and aligned with national and state guidelines to ensure sustainability and resilience.

#### Damage and Impact Assessment

Before long-term rebuilding can happen, the dust must be settled and the immediate risks managed. Damage and impact assessment is a critical step to understand the full extent of the pandemic's effects on health systems, communities, and livelihoods. This assessment evaluates disruptions to healthcare services, availability of infrastructure and workforce, morbidity and mortality patterns, and socio-economic consequences such as loss of income, education disruption, and food insecurity. The findings inform

evidence-based planning, prioritisation of interventions, and optimal allocation of resources during the recovery phase.

### Restoration of Health Services

Recovery requires moving beyond emergency trauma care. This sub-phase focuses on reopening primary care clinics, restarting routine Immunisation programs, and ensuring that patients with chronic conditions (like diabetes or hypertension) can once again access life-sustaining medications and check-ups.

## Environmental Cleanup and Sanitation

Post-disaster environments are often breeding grounds for secondary health crises. Cleanup efforts focus on removing debris, managing hazardous waste, and restoring water and sewage systems. Ensuring a "clean slate" is biologically necessary to prevent the spread of waterborne and vector-borne diseases.

### 9.9.2 Rehabilitation

Rehabilitation focuses on addressing the long-term physical, social, and economic impacts of the pandemic on affected individuals and communities. This includes medical rehabilitation for post-infection complications, nutritional support for vulnerable groups, and social assistance for households affected by illness, disability, or loss of livelihood. Rehabilitation efforts should promote reintegration into education, employment, and community life, with special attention to marginalised and high-risk populations.

#### Physical and Livelihood Rehabilitation

For those left with lasting injuries, rehabilitation involves providing physical therapy and assistive devices. Simultaneously, Livelihood Restoration addresses the economic health of the community; without the ability to earn an income, individuals cannot sustain their own long-term health and nutrition. Support for small businesses, informal workers, self-help groups, and skill development initiatives is essential to promote economic resilience and long-term recovery.

#### Psychosocial and Mental Health Support

The trauma of a disaster often outlasts the physical damage. Providing psychological first aid and long-term mental health counselling is vital for community

cohesion. This support helps individuals process grief and anxiety, reducing the long-term societal burden of PTSD.

### **Community Engagement and Confidence Building**

Recovery fails if the public does not trust the systems being rebuilt. Active communication and involving local leaders in the decision-making process help rebuild social capital. This ensures that the population feels safe returning to schools, workplaces, and hospitals. Active involvement of community leaders, local self-governments, and civil society organisations strengthens community ownership, promotes adherence to public health measures, and enhances preparedness for future emergencies.

#### **9.9.3 Vigilance and Disease Surveillance**

Disease surveillance during the recovery phase ensures early detection of resurgence, secondary outbreaks, or emerging variants. Surveillance systems should continue monitoring communicable disease trends, post-pandemic complications, and unusual health events. Strengthening laboratory capacity, sentinel surveillance, and community-based reporting mechanisms enables a timely response and supports sustained public health security.

#### **9.9.4 System Strengthening and Future Preparedness**

The final stage of recovery is an intellectual exercise in "Building Back Better," turning the tragedy of the past into the safety of the future.

##### **Documentation and After-Action Review (AAR)**

Once the immediate pressure has subsided, stakeholders must conduct a formal review of the response. This involves a candid look at what worked, what failed, and where communication broke down. These Lessons Learned are then transformed into Best Practices.

##### **Policy Revision and Health System Strengthening**

The ultimate goal of recovery is to ensure the next crisis is less damaging. This involves updating emergency protocols, revising public health laws, and investing in

more durable infrastructure. Through Research and data analysis, the health system is "hardened" against future threats, moving the community from a state of vulnerability to a state of permanent readiness.

## **Research**

Research during the recovery phase is essential to generate evidence on the long-term health, social, and economic impacts of pandemics. Operational, clinical, and policy research should examine the effectiveness of response and recovery interventions, community behaviours, and innovations in service delivery and surveillance. Research findings should inform future preparedness strategies and public health decision-making.

## **Recovery & Rehabilitation Master Checklist**

### **1. Assessment & Infrastructure Restoration**

- Conduct Multi-Sectoral Impact Assessment: Complete a full audit of damage to health facilities, equipment, and digital infrastructure.
- Restore Essential Utilities: Verify that hospitals and clinics have stable access to clean water, electricity, and medical gas.
- Re-establish Supply Chains: Transition from emergency "push" systems to routine procurement for medications and consumables.
- Environmental Safety Check: Clear all hazardous debris and certify that sanitation/waste management systems are fully functional.

### **2. Clinical & Public Health Continuity**

- Resume Primary Care: Transition staff from emergency roles back to routine services (Maternal health, NCDs, Immunisations)
- Launch Recovery-Phase Surveillance: Implement enhanced monitoring for infectious diseases common in post-disaster settings.
- Clear Patient Backlogs: Identify and schedule patients whose elective surgeries or treatments were delayed during the crisis.
- Environmental Health Audit: Test local water sources and food supply chains for

contamination post-cleanup.

### **3. Human-Centric Rehabilitation**

Deploy Psychosocial Support: Establish long-term mental health clinics and peer support groups for survivors and first responders.

Physical Rehab Integration: Provide specialised care, prosthetics, and occupational therapy for those with permanent injuries.

Livelihood Support Coordination: Partner with NGOs to provide micro-grants or vocational training to displaced healthcare workers or patients.

Community Feedback Loop: Create a "Town Hall" or digital platform for citizens to report gaps in the recovery process.

### **4. Administrative & System Strengthening**

Initiate After-Action Review (AAR): Schedule debriefing sessions with all stakeholders to document successes and failures.

Financial Reconciliation: Audit emergency spending and finalise insurance claims or international aid reports.

Knowledge Management: Compile a "Lessons Learned" report and share it with regional and national health authorities.

Update Preparedness Plans: Revise Standard Operating Procedures (SOPs) based on real-world data gathered during the crisis.

Research & Development: Identify areas where the response was slowed by a lack of data and initiate studies to close those gaps.

### **5. Confidence & Policy**

Launch Public Information Campaign: Use local media to inform the public that services have resumed and are safe to use.

Legislative Advocacy: Present findings to policymakers to secure funding for "Build Back Better" infrastructure projects.

Staff Wellness Check: Conduct mandatory mental health screenings for healthcare workers to prevent burnout and PTSD.

Recovery Component	District Administration / District Health System	Block / Taluk Level	Panchayat / Municipality	Ward Level / Community
<b>Damage &amp; Impact Assessment</b>	Lead district-wide impact assessment; compile morbidity, mortality, economic and health system data; coordinate with departments.	Consolidate block-level data from health institutions and panchayats	Conduct local assessments of affected families, health services disruption	Ward volunteers and ASHA workers identify affected households and vulnerable persons
<b>Restoration of Health Services</b>	Restore hospital services, diagnostics, and elective procedures; ensure medicine supply.	Coordinate PHCs/CHCs for resumption of services.	Support the reopening of local health facilities; mobilise the community for Immunisation and routine care.	Inform the community about service availability; assist patient follow-up.
<b>Rehabilitation of the Affected Population</b>	Implement social welfare packages, disability support, and compensation schemes.	Identify eligible beneficiaries through block offices	Facilitate access to welfare schemes for affected families	Community volunteers assist households in accessing benefits
<b>Psychosocial &amp; Mental Health Support</b>	Deploy district mental health programme teams; establish counselling services.	Organise outreach clinics and tele-counselling through block health offices.	Coordinate community counselling sessions and support groups	ASHA, teachers and volunteers identify persons needing support
<b>Disease Surveillance During Recovery</b>	Strengthen integrated disease surveillance; monitor resurgence or new outbreaks.	Ensure reporting from PHCs, labs, and hospitals	Support reporting of unusual illness clusters	Community-based surveillance through ASHAs and volunteers
<b>Environmental Cleanup &amp; Sanitation</b>	Issue biomedical waste and sanitation guidelines; monitor	Supervise sanitation drives and waste	Conduct sanitation campaigns;	Community participation in cleanliness

Recovery Component	District Administration / District Health System	Block / Taluk Level	Panchayat / Municipality	Ward Level / Community
	environmental safety.	management systems	ensure water safety and waste disposal	drives and WASH practices
<b>Livelihood Restoration</b>	Coordinate economic recovery programmes, link with employment and industry departments.	Support the implementation of livelihood schemes	Facilitate SHGs, local enterprises, and employment initiatives	Community support networks for vulnerable families
<b>Community Engagement &amp; Confidence Building</b>	District-wide risk communication and transparency initiatives	Support community awareness programmes	Organise community meetings and local engagement campaigns	Volunteers and local leaders disseminate information and rebuild trust
<b>Documentation &amp; After-Action Review</b>	Lead formal after-action review; compile district response report	Provide operational feedback and data	Document local experiences and challenges	Share community-level experiences and feedback
<b>Lessons Learned &amp; Best Practices</b>	Publish district best practices; share with state authorities	Identify effective local strategies	Promote successful local initiatives	Community volunteers highlight effective practices
<b>Health System Strengthening</b>	Invest in infrastructure, workforce training, labs, and digital systems	Strengthen PHC/CHC capacity	Improve local health infrastructure support	Community participation in health programs

<b>Policy Revision &amp; Preparedness Enhancement</b>	Update district pandemic preparedness plan	Provide operational recommendations	Integrate preparedness into local development plans	Community awareness and preparedness training
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<b>Recovery Component</b>	<b>District Administration / District Health System</b>	<b>Block / Taluk Level</b>	<b>Panchayat / Municipality</b>	<b>Ward Level / Community</b>
<b>Research</b>	Facilitate collaboration with research institutions and public health agencies.	Support field studies and data collection	Assist research teams in community access	Community participation in surveys and studies

## 10. CONCLUSION

Pandemic preparedness at the district level is a critical component of strengthening the overall public health system and ensuring a timely response to emerging health threats. This Pandemic Preparedness Plan for the district provides a comprehensive framework that integrates surveillance, healthcare infrastructure, laboratory capacity, logistics management, community engagement, and governance mechanisms to effectively detect, respond to, and manage public health emergencies.

The plan emphasises a multi-sectoral and coordinated approach, involving the Health Department, District Administration, Local Self-Government Institutions, disaster management authorities, and community organisations. By strengthening surveillance systems, laboratory networks, healthcare facilities, and supply chain management, the district aims to ensure early detection of outbreaks and rapid containment measures. The establishment of clear communication channels, emergency logistics arrangements, and structured response mechanisms further enhances the district's readiness to manage pandemic situations.

Community participation plays a vital role in pandemic preparedness and response. The involvement of community health workers, volunteers, Kudumbashree networks, youth groups, and local institutions ensures effective grassroots-level surveillance, awareness generation, and support for vulnerable populations. Strengthening community-based surveillance and risk communication will enable early identification of health events and promote public cooperation during emergencies.

The plan also highlights the importance of maintaining adequate stocks of essential medicines, personal protective equipment, oxygen supplies, laboratory consumables, and other critical resources. Coordination with industrial partners, private healthcare providers, and supply chain networks will help ensure the uninterrupted availability of essential supplies during periods of increased demand.

Effective governance and coordination mechanisms, from the district level to the ward level, are essential for implementing the preparedness plan. The roles and responsibilities of various departments and committees have been clearly defined to facilitate timely decision-making, efficient resource allocation, and coordinated response actions during a pandemic.

Pandemic preparedness is not a one-time effort but a continuous process that requires regular review, training, simulation exercises, and updating of protocols based on emerging risks and lessons learned from previous public health emergencies. Continuous strengthening of surveillance systems, laboratory capacity, health workforce training, and community engagement will improve the district's resilience against future health threats.

In conclusion, this district-level Pandemic Preparedness Plan serves as a strategic guide for coordinated action, resource mobilisation, and public health response

during pandemics and other health emergencies. Through sustained collaboration among government agencies, healthcare institutions, and communities, the district will be better equipped to protect public health, minimise the impact of outbreaks, and ensure the safety and well-being of its population.

## 11. RECOMMENDATIONS

### Strengthening Healthcare Infrastructure

- Establish a primary health response unit within the Panchayat with trained staff.
- Ensure availability of basic medical supplies (masks, sanitisers, PPE kits, oxygen cylinders).
- Create tie-ups with nearby hospitals for emergency referral and transport.

### . Community Awareness & Education

- Conduct regular awareness campaigns on hygiene, vaccination, and preventive measures.
- Use local communication channels (community radio, WhatsApp groups, notice boards) to spread verified information.
- Train volunteers to act as health ambassadors in each ward.

### Emergency Response & Coordination

- Form a Pandemic Preparedness Committee at the Panchayat level, including health workers, ward members, and NGOs.
- Develop a clear action plan for lockdowns, quarantine, and distribution of essentials.
- Maintain a database of vulnerable groups (elderly, differently abled, chronically ill) for targeted support.

### Supply Chain & Food Security

- Identify and support local suppliers and farmers to ensure an uninterrupted food supply.
- Create community kitchens during emergencies to serve vulnerable populations.
- Stockpile essential commodities in Panchayat-run outlets for crisis periods.

## Digital Preparedness

- Promote digital platforms for telemedicine consultations.
- Use the Panchayat's website/social media for real-time updates on health advisories.
- Encourage online grievance redressal to reduce crowding in offices.

## Training & Capacity Building

- Organise mock drills for pandemic response in schools, offices, and public spaces.
- Train Panchayat staff and volunteers in first aid, infection control, and crowd management.
- Collaborate with NGOs and health departments for capacity-building workshops.

## Long-Term Resilience

- Integrate pandemic preparedness into the Panchayat Development Plan.
- Allocate a dedicated budget for health emergencies.
- Encourage community participation in planning and monitoring preparedness measures.

## 12. MOCKDRILL SCENARIOS

Mock drills are an essential component of pandemic preparedness as they help test the operational readiness of health systems, administrative structures, and community response mechanisms. These exercises simulate real-life pandemic situations and allow authorities to assess the effectiveness of response plans, identify operational gaps, and strengthen coordination among stakeholders.

Mock drills will be conducted periodically at the **district, block, and ward levels** involving health departments, local self-government institutions, emergency services, and community volunteers.

### 12.1 Communication

Effective communication plays a critical role during mock drills to ensure the timely dissemination of information, coordination among teams, and community awareness.

#### Communication Strategies

- **Ward-level Rapid Response Teams (RRTs), Grama Sabhas, and vulnerability groups** will actively participate in preparing and executing pandemic response plans to identify local issues related to prevention, preparedness, response, and recovery.
- **Local community leaders** will be involved in awareness and response activities to strengthen trust and community participation.
- **Special trained informers** within vulnerable groups will help identify suspected cases and report early warning signals.
- **Multilingual workers** will facilitate communication with migrant workers and linguistically diverse populations.

- **NGOs and Resident Associations** will assist in awareness generation, resource mobilisation, and community support.
- A **simple reporting mechanism for the public** will be promoted using platforms such as the **Integrated Health Information Platform (IHIP)** or mobile applications, enabling quick reporting through messages or snapshot-based alerts.
- **Home isolation monitoring teams** consisting of trained community volunteers will support health workers in monitoring individuals under home isolation.

These communication mechanisms will ensure that accurate information reaches the community quickly while minimising misinformation.

### **Benefits of Community-Based Communication**

- **Sustainability:** Locally driven solutions are more likely to be sustained as communities take ownership of preparedness measures.
- **Faster Response:** Community networks enable quicker identification of cases and immediate reporting to health authorities.
- **Trust and Collaboration:** Active engagement builds trust between communities, local administration, and health agencies, improving cooperation during emergencies.



KOTTAYAM HEALTH DEPARTMENT

# PANDEMIC PREPAREDNESS: STRENGTHENING OUR RESPONSE THROUGH MOCK DRILLS & COMMUNITY COMMUNICATION

## MOCK DRILLS FOR READINESS

**DISTRICT**

**BLOCK**

**WARD**

**PERIODIC EXERCISES** involving Health, LSGIs, Emergency Services, Volunteers

- TEST SYSTEMS & PLANS
- IDENTIFY GAPS
- STRENGTHEN COORDINATION

## COMMUNICATION: A KEY COMPONENT

### COMMUNICATION STRATEGIES

#### LOCAL INVOLVEMENT

**Ward RRTs, Grama Sabhas & Vulnerability Groups**

**Local Leaders**

**ERANA SAGHA**

#### EARLY WARNING & SUPPORT

**Trained Informers in Vulnerable Groups**  
(Identify Suspected Cases)

**Multilingual Workers**  
(Support Migrants)

**BUILD TRUST & PLAN TOGETHER**

#### TECHNOLOGY & PARTNERS

**SIMPLE REPORTING**  
(IHIP/Mobile Apps)

**NGOs & Resident Associations**  
(Awareness, Resources)

#### HOME ISOLATION SUPPORT

**Community Volunteers monitoring Home Isolation**

### BENEFITS OF COMMUNITY COMMUNICATION

**SUSTAINABILITY:**  
Locally driven solutions

**FASTER RESPONSE:**  
Immediate case reporting

**TRUST & COLLABORATION:**  
Strong relationships for emergencies

**BE PREPARED, STAY SAFE. TOGETHER WE FIGHT PANDEMICS.**

A public health initiative of KOTTAYAM HEALTH DEPARTMENT.

# COMMUNICATION PLAN FLOW CHART

LSGD >>>> INSTITUTION >>>>>>

Pandemic Preparedness Capacity Building & Training Plan

## Background & Rationale

Pandemics pose serious threats to public health, safety, and socio-economic stability. Effective preparedness requires skilled human resources across multiple sectors. Capacity building ensures that frontline workers, administrators, and community volunteers are equipped with the knowledge and skills necessary to respond promptly and effectively to pandemic situations.

District-level preparedness plays a crucial role in early detection, containment, and mitigation of disease spread.

## Objectives of Capacity Building

- Strengthen the readiness of the health and allied sectors.
- Improve early detection, reporting, and response.
- Ensure inter-departmental coordination.
- Protect frontline workers and the community.
- Maintain essential services during pandemics.

## Target Groups for Training

### Health Sector (Government & Private)

- Doctors (all specialties)
- Nurses & Paramedical Staff
- Laboratory Technicians
- Public Health Staff
- ASHA workers & JPHNs
- Private Hospital Staff

### Police & Emergency Services

- Kerala Police & Traffic Police

- Home Guards
- Fire & Rescue Services
- Ambulance drivers & EMTs
- Roles: crowd control, quarantine enforcement, emergency response

### Local Administration & Governance

- District administration
- Municipalities & Panchayats
- Revenue Department
- Public Works Department
- Roles: logistics, containment zones, essential services

### Education & Community Groups

- School & College teachers
- Students & NSS/NCC volunteers
- Kudumbashree units
- Community-based organisations
- Religious & community leaders

### **Modes and Methods of Training**

Training programs will be conducted through multiple formats to ensure maximum participation and effectiveness.

- Classroom/workshop-based training
- On-site/hands-on training
- Online & virtual training modules
- Simulation exercises & mock drills
- Peer learning & cascade training
- Awareness campaigns
- Online media and social group

## Training Methods

- Lectures & Interactive Sessions
- Demonstrations & Skill Stations
- Case studies & role plays
- Table-top exercises
- IEC material & SOP dissemination

## Key Training Topics

### General Topics

- Disease surveillance & reporting
- Infection prevention & control (IPC)
- Use of personal protective equipment (PPE)
- Sample collection & transport
- Risk communication & community engagement

### Advanced & Sector-Specific Topics

- Hospital surge capacity management
- Quarantine & isolation management
- Psychosocial care & stress management
- Waste management during pandemics
- Law & order and ethical issues

### Institutional & Resource Support

- District Medical Office
- Kerala Health Services
- State Disaster Management Authority
- Medical colleges & Training institutes
- Police Training College

## Monitoring & Evaluation

- Pre- and post-training assessment
- Feedback mechanisms
- Periodic refresher trainings
- Mock drill evaluations
- Documentation & reporting

## Training Schedule (by Quarter)

	Jan-Mar	Apr-Jun	Jul-Sept	Oct-Dec
Climate events	Cool	Hot	Rainy, Flood	Cold
Disease events	ILI	HRI, Hep A	Avian, Dengue	Lepto
Training for HCWs	✓	✓	✓	✓
Training for Public	✓	✓	✓	✓
Budgeting	✓	✓	✓	✓
Monitoring & E	✓	✓	✓	✓

The schedule aligns training and preparedness activities with seasonal climate and disease patterns.

## Expected Outcomes

Implementation of the capacity-building and training plan is expected to achieve the following outcomes:

- Improved district-level preparedness and response capability
- A well-trained and confident workforce across sectors
- Stronger inter-sectoral coordination and collaboration
- Reduced morbidity and mortality during pandemic situations
- Enhanced community awareness and participation in disease prevention

## Conclusion

Pandemic preparedness requires a comprehensive and coordinated approach involving government institutions, healthcare systems, and communities. Effective communication mechanisms, structured training programs, and periodic mock drills are essential components in strengthening the capacity of districts to respond to public health emergencies.

Active community engagement, continuous capacity building, and systematic monitoring will enhance resilience and ensure that health systems remain prepared to manage future pandemics efficiently. By fostering collaboration across sectors and empowering local communities, districts can build a sustainable and responsive public health preparedness framework capable of minimising the impact of pandemics on population health and well-being.

# ANNEXURE

## ANNEXURE 2: MAJOR TEACHING INSTITUTES IN KOTTAYAM

### Art & Science Colleges

1. SN Arts & Science College Kumarakam.
2. Alphonsa College Pala
3. Assumption College Changanacherry
4. Baker College For Women, Kottayam
5. Baselius College Kottayam
6. BCM College Kottayam
7. Bishop Speechly College For Advanced Studies, Pallom
8. Bishop Vayalil Memorial Holy Cross College, Cherpunkal
9. BK College For Women Amalagiri
10. CMS College Kottayam
11. College Of Applied Science, Kaduthuruthy
12. College Of Applied Science, Kanjirappally
13. College Of Applied Sciences, Kaduthuruthy, Njeezhoor P.O
14. College Of Applied Sciences, Kanjirappally
15. College Of Applied Sciences, Puthuppally
16. Devamatha College Kuravilangad
17. Devaswam Board College, Keezhoor
18. Ettumanoorappan College, Choorakkulangara
19. Girideepam Institute Of Advanced Learning, Vadavathoor
20. Good Shepherd College, Nattakom
21. Government College, Nattakom P O, Kottayam - 686 013, Kerala, India.
22. HB College Melukavu
23. Indian Institute of Information Technology, Vellavoor
24. Indian Institute of Mass Communication, Pampady
25. KE College Mannanam
26. KG College Pampady
27. Kristu Jyoti College Of Management & Technology, Kurisummoodu P.O, Changanacherry
28. Labour India College, Marangattupilly, Meenachil
29. Mahatma Gandhi University, Priyadharshini Hills Kottayam
30. M.G.M Nss College, Lakkattoor, Kottayam
31. Mar Augusthinose College, Ramapuram Bazar P.O
32. MC Varghese College Of Arts & Science, Ettumanoor
33. MES College, Erattupetta

34. MES College, Erumely
35. MES Golden Jubilee College, Kottayam
36. NSS College Vazhoor
37. NSS Hindu College Changanassery
38. P G Radhakrishnan Memorial Sree Narayana College, Channanikadu
39. PGM College, Devagiri P.O, Kangazha
40. PRDS College Amara Changanassery
41. R Sankar Smaraka Sree Narayana College, Nedumkunnam, Changanacherry
42. Saintgits College Of Applied Sciences, Pathamuttom P.O
43. School Of Technology And Applied Sciences, Pullarikkunnu
44. Shermount College Of Arts & Commerce, Kanakapalam, Erumeli South
45. Sree Mahadeva College, Aiyerkulangara, Vaikom
46. Sree Narayana Paramahansa College Of Arts & Science, Poonjar, Meenachil
47. Sree Sabareeswara College Mundakayam
48. Sree Vidhayathi Raja NSS College, Vazhoor
49. Sreenidhi Institute Of Management & Science, Elampally P.O, Kodungoor
50. St Berchman'S College Changanassery
51. St Domanic College Kanjirappally
52. St George'S College Aruvithura
53. St Johns The Baptist's College of Education, Nedumkunnam
54. St Joseph'S Institute Of Hotel Management And Catering Technology, Pala, Kottayam
55. St Mary'S College Manarcaud
56. St Stephen'S College Uzhavoor
57. St Thomas College Pala
58. St. Joseph College Of Communication, Changanacherry.
59. St Xaviers College, Vaikom
60. Viswabharathi S N Arts & Science College, Bhajanamadam, Njeezhoor
61. S V R N S S College Vazhoor
62. Henry Baker College Melukavu

### **Medical Colleges**

1. Government Medical College, Gandhinagar, Kottayam 686008

### **Dental Colleges**

1. Government Dental College, Medical College Campus, Kottayam

### **Homeo College**

1. ANSS Homoeo Medical College, Sachivothamapuram, Kottayam

## **Nursing Colleges**

1. Govt. College of Nursing, Gandhi Nagar, P. O, Kottayam. 686 008
2. St Mary's Nursing & Paramedical College, Manarcadu
3. Caritas College of Nursing, Thellakom, P.O Kottayam. 686 630,
4. St. Thomas College of Nursing, Kurisumoodu. P.O, Chethipuzha, Changanacherry, Kottayam – 686 104.
5. Theophilus College of Nursing, MGDM Hospital, Devagiri. P.O, Kangazha, Kottayam - 686555
6. Mar Sleeva College of Nursing, Palai, Cherpumkal. P. O, Kottayam
7. BCF College of Nursing, Chemmanakary, Akkarapadam. P. O, Vaikom, Kottayam – 686 143.
8. Velankanni Matha College of Nursing, Oppt. Matha Hospital, Thellakom P.O, Kottayam. 686 630
9. Assisi College of Nursing, Propose. P.O, Erumely, Kottayam
10. Mercy College of Nursing, Mercy Hospital, Pothy, Midayikunnu P.O, Thalayolaparambu, Kottayam – 686605
11. Little Lourdes College of Nursing, Kidangoor. P.O, Kottayam, 686 572,
12. Thiruhudaya College of Nursing, Kolladi, Kattampakam, Kottayam
13. Leyamma College of Nursing, Mandiram Hospital, Kottayam

## **School of Nursing**

1. School of Nursing GH Kottayam
2. Govt. School of Nursing Kottayam, Medical College Campus
3. Institute of Nursing Education, School of Medical Education, Thalappady, Puthuppally, Kottayam
4. Institute of Nursing Education, School of Medical Education, Gandhinagar
5. Institute of Nursing Education, School of Medical Education, Pala
6. Institute of Nursing Education, School of Medical Education, Kanjirapally
7. Institute of Nursing Education, School of Medical Education, Thalappady, Puthuppally, Kottayam
8. Institute of Nursing Education, School of Medical Education, Gandhinagar
9. Azzizi School of Nursing, Erumely
10. IHM School of Nursing, Bharanganam
11. Marian School of Nursing, Pala
12. Mundakkayam Medical Trust School of nursing, Mundakkayam
13. Mary Catherine School of Nursing Pravithanam
14. Mary queen school of Nursing, Kanjirapally
15. Bharath School of Nursing, Kottayam
16. holy Ghost School of Nursing Muttuchira
17. St. Ritas School of Nursing, Changanasery, Nalukodi

### **Paramedical college**

1. Medical college Kottayam (DME)
2. Govt. College of Nursing, Gandhi Nagar, P. O, Kottayam. 686 008
3. BCF College of Physiotherapy, Vaikom, Kottayam
4. P St. Mary's College of Physiotherapy, Kangazha, Kottayam
5. Bharath College of Paramedical Science, Pala
6. Institute of Nursing Education, School of Medical Education, Arppokkara, Gandhi Nagar, Kottayam
7. St Mary's Nursing & Paramedical College, Manarcadu
8. Om College of Paramedical Sciences, Kottayam, Baker Hill
9. SH School of Medical Science, Kottayam
10. Manchester Institute of Paramedicals & Technology, Ettumanoor
11. Merins Academy of Paramedical Science, Nagampadom, Kottayam
12. National Vocational Training Center, Star Junction, Vyaskara, Kottayam

### **Engineering Colleges**

1. Govt. Engineering College, RIT, Kottayam
2. Amal Jyothi College Of Engineering, Kanjirappally
3. College Of Engineering, Poonjar
4. College of Engineering, Kidangoor
5. Gurudeva Institute Of Science And Technology
6. Kottayam Institute Of Technology And Science
7. Mangalam College Of Engineering
8. Saintgits College Of Engineering
9. St Josephs College Of Engineering And Technology Pala
10. Toms College Of Engineering For Startups
11. College Of Engineering, Poonjar

### **Polytechnic College**

1. Gregorian Institute Of Technology
2. GPTC, Kottayam
3. GPTC, Pala, Kottayam
4. GPTC, Kaduthuruthy, Kottayam
5. Model Polytechnic College, Poonjar

### **Training Colleges**

1. NSS Training College Changanassery
2. Mount Carmel Training College Kottayam
3. St Joseph's Training College Mannanam
4. St Thomas Training College Palai

### ANNEXURE 3: MAJOR FESTIVALS

Sl. No.	Name of festival	LSGD/ Municipality	Month detailing the periodicity
1	St. George's Syro-Malabar Church, Perunaal Thalayolaparambu	Thalayolaparambu	January
2	Thaliyil Mahadeva Temple, Kaduthuruthy	Kaduthuruthy	January
3	St. Marys Church Kaduthuruthy(Valiyapalli)	Kaduthuruthy	January
4	St Marys Forona Church Kaduthuruthy(Thazhathupalli)	Kaduthuruthy	January
5	Sree Saradha Vilasini Temple Kallara	Kallara	January
6	Thirukudumba devalayam Velloor	Velloor	January
7	Peruva Naramsimhaswamy Kshetram	Mulakkulam	January
8	Subramanya Swami Kshetram	Mulakkulam	January
9	Sri Dharmasastha Kshetram	Mulakkulam	January
10	Keezhoor Dharmasastha	Mulakkulam	January
11	Peruva Church Perunnal	Mulakkulam	January
12	Mannukunnu Church Perunnal	Mulakkulam	January
13	Sreekrishana Swami Temple	Njeezhoor	January
14	St.Joseph Church	Njeezhoor	January
15	St.Marys Church Kattampak	Njeezhoor	January
16	Sndp Vadakkenirappu	Njeezhoor	January
17	Alumekave Devi Temple	Njeezhoor	January
18	St.Kuriyakose Church	Njeezhoor	January
19	Madathikottaram Devi Temple	Njeezhoor	January
20	Vavar Mosque Chandanakkudam	Erumely	January
21	Manimala Perunnal	Manimala	January
22	kanjirappally pallipperunnal	Kanjirapally	January
23	Tharakettimaruthu temple	Parathodu	January
24	Church koovappally	Parathodu	January
25	St. Sebastian Chruch-Punchavayl	Mundakayam	January
26	Velanilam Chruch.Mundakayam	Mundakayam	January
27	Sndp Temple Vandanpathal	Mundakayam	January
28	St. Joseph Chruch . Kannimala	Mundakayam	January
29	Parthasarathy Temple. Mundakayam	Mundakayam	January
30	Orthodox Chruch.Annikunnu .	Mundakayam	January
31	Vishyakarma Temple. Anikunnu	Mundakayam	January
32	St.Josephs Lthheen Chruch	Mundakayam	January
33	Sndp Devi Temple Pachima	Mundakayam	January
34	St,Paule Chruch . Vadanpatahl	Mundakayam	January
35	Sree Dharma Shastha Shethram, Koruthodu	Koruthodu	January
36	St George Church, Pallipady	Koruthodu	January

<b>Sl. No.</b>	<b>Name of festival</b>	<b>LSGD/ Municipality</b>	<b>Month detailing the periodicity</b>
37	St Marys Jacobite Sirien Church, Koruthodu	Koruthodu	January
38	Kallidam Kavu Bhagavath Temple Thalanadu	Thalanadu	January
39	Sree Njanaswara Temple Thalanadu	Thalanadu	January
40	ST.Mary's Forane Church	Teekoy	January
41	St.Sebastian Church	Teekoy	January
42	Thiruvathira Maholsavam Mankuzhi	Poonjar Thekkekara	January
43	Sree Krishna Temple Festival	Thalappalam	January
44	St Joseph Church Maniyan Kulam Perunnal	Poonjar	January
45	St Antonys Church (Wd: 8)	Edamaruku	January
46	St Pious Xth Church (Wd:11)	Edamaruku	January
47	Bedesta Prayer Fest	Panachikkad	January
48	Holy Family	Kurichy	January
49	St Joseph	Kurichy	January
50	Thakidipalli	Kurichy	January
51	Snt. Sebastians Church	Ramapuram	January
52	St .Sebastian'S Church Kurinji	Ramapuram	January
53	St Jones Church Ezhachery	Ramapuram	January
54	Sree Krishna Swami Temple,Kurinji	Ramapuram	January
55	Sndp Areekkara Gurudeva Temple	Uzhavoor	January
56	St.Sebastine Church Mannakkandu	Marangattupilly	January
57	St.Anne'S Church Pulluvettam	Marangattupilly	January
58	St,Mary'S Chrucl Palakkattumala	Marangattupilly	January
59	Kuravilangad 3 Nombu Thirunaal	Marangattupilly	January
60	Perunnal Orthodex Church	Meenadom	January
61	St Ignathious Church	Meenadom	January
62	Orthodex Church	Meenadom	January
63	Subramanya Temple Vellloor	Pampady	January
64	St Marys Gramattam	Pampady	January
65	St Marys 8Th Mile	Pampady	January
66	T Johns Orthodex Church Kalachanda	Pampady	January
67	Csi Church Parayakunnu	Pampady	January
68	Sndp 7 Th Mile	Pampady	January
69	St.Tomas Orthodox	Pampady	January
70	St.Thomas Yacobites	Pampady	January
71	St. Thomas Orthodoxchurch Kuttickal	Pampady	January
72	Panchayat Kalolsavam (Arts/Sports)	Elikulam	January
73	Mukhyapurath Temple	Vellavoor	January
74	Infant Jesus Church Vazhoor	Vazhoor	January
75	St. Sebastian'S Church Nedumkunnam	Nedumkunnam	January
76	Infant Jesus Church Nedumkunnam	Nedumkunnam	January

<b>Sl. No.</b>	<b>Name of festival</b>	<b>LSGD/ Municipality</b>	<b>Month detailing the periodicity</b>
77	Thirunal, Ebenezer Church Thuruthel Bridge, Manganam	Kottayam Municipality	January
78	Mahadeva Mahavishnu Temple	Kottayam Municipality	January
79	Sree Subrahmaniya Temple- Thypooyam	Kottayam Municipality	January
80	St. Teresa'S Church, Pakkil	Kottayam Municipality	January
81	St Marys Forane Cuhrch Athirampuzha	Athirampuzha	January
82	St Joseph Church , Mannanam	Athirampuzha	January
83	Kottaram Devitemple, Amalagiri	Athirampuzha	January
84	St . Thomas Suriyani Church	Thiruvvarppu	January
85	Thattumkal Temple	Thiruvvarppu	January
86	Maniyamkeri Church	Thiruvvarppu	January
87	Govindapuram Temple Ulsavam	Vechoor	January
88	Church Perunal	Thalayazham	January
89	Mankav Temple-Thiruvathira	Tv Puram	January
90	S.H.Church.T.V.Puram Perunnal	Tv Puram	January
91	St.Josephs Churchpallipurathusseri-Perunnal	Tv Puram	January
92	Pazhuthuvally Temple Festival	Tv Puram	January
93	St.Antonys Church Chemmanathukara Perunnal	Tv Puram	January
94	Nadel Church	Vaikom Municipality	January
95	Vallikkattu Dayara Perunnal	Vakathanam	January
96	Manikandapuram Temple Sapthaham	Vakathanam	January
97	Sreedharma Sastha Kshethram Mulakkamthuruthy	Vazhappally	January
98	Sreedharma Sastha Kshethram Mulakkamthuruthy	Vazhappally	January
99	Valiyapally Church Perunal	Changanasserry	January
100	Parelpally Perunnal	Changanasserry	January
101	Perunna Temple Festival	Changanasserry	January
102	Sree Krishna Swami Kshethram, Bharananganam	Bharananganam	January
103	St. Albert Church, Elamthottam	Bharananganam	January
104	St. Joseph Church, Edappady	Bharananganam	January
105	St.Marys Church , Bharananganam	Bharananganam	January
106	St.Augustine Church Kadanad	Kadanad	January
107	Maria Gorethi Kavumkondom	Kadanad	January
108	Kollappalli Kurisupalli	Kadanad	January
109	Neeloor Sreedharama Satha Kshethram	Kadanad	January
110	St.Xavier'S Church Paika	Meenachil	January
111	St.Michael'S Church Edamattopm	Meenachil	January

<b>Sl. No.</b>	<b>Name of festival</b>	<b>LSGD/ Municipality</b>	<b>Month detailing the periodicity</b>
112	St.Sebastian'S Church Parapallil	Meenachil	January
113	Sacred Heart Church Poovarani	Meenachil	January
114	Little Flower Church Palakkad	Meenachil	January
115	Mahadevakshethram Poovarani	Meenachil	January
116	Puthan Sabarimala Kshethram Edamattom	Meenachil	January
117	Meenachil Panchayath Keralolsavam	Meenachil	January
118	Cherpunkal Church Festival	Kozhuvanal	January
119	Anandhashanmuka Kshetram, Edappady	Bharananganam	January
120	Elivali Church	Kadanad	February
121	Devi Temple Thirupuram Festival, Thalayolaparambu	Thalayolaparambu	February
122	Siva Temple Thrikkarayikulam Festival, Thalayolaparambu	Thalayolaparambu	February
123	Salafi Juma Masjid	Thalayolaparambu	February
124	Kallara Pandavar Kulangara Bhagavathi Temple	Kallara	February
125	St Marys Church Puthenpalli, Kallara	Kallara	February
126	Perumthattu Mahadeva Temple	Velloor	February
127	Kunnappally Bhadrakali Kshetram	Mulakkulam	February
128	Modakari Devi Kshetram	Mulakkulam	February
129	Pulikkal Devi Kshetram	Mulakkulam	February
130	Mahadeva temple chotti	Parathodu	February
131	Orthodox church karikulam	Parathodu	February
132	Sree Krishna Swami Temple ,Mundakayam	Mundakayam	February
133	St. Thomas Orthodox Church Paigana	Mundakayam	February
134	John Paul Orthodox Chruch	Mundakayam	February
135	Cheruvally Devi Temple -Punchavayal	Mundakayam	February
136	St.Mary;S Chruch- Koratty	Mundakayam	February
137	Kopara Devi Shethram, Kottaramkada	Koruthodu	February
138	St.Antony's church Vellikulam	Teekoy	February
139	Kumbam Pooyam Maholsavam Mankuzhi Temple	Poonjar Thekkekara	February
140	Mankombum Kavu Kshethram Ulsavam	Poonjar	February
141	Ankalamman Kovil	Erattupetta	February
142	Sree Krishna Temple (Wd:13)	Edamaruku	February
143	Kubhakuda Festival	Panachikkad	February
144	Chiramuttam	Kurichy	February
145	Sndp Temple	Kurichy	February
146	Sivartri	Vijayapuram	February
147	Amayanoor Temple	Ayarkunnam	February

<b>Sl. No.</b>	<b>Name of festival</b>	<b>LSGD/ Municipality</b>	<b>Month detailing the periodicity</b>
148	Palliyambura Mahadeva Kshetram	Ramapuram	February
149	Devi Kshethram Monipally (Mandala Mahotsavam )	Uzhavoor	February
150	Karunechi Devi Temple	Uzhavoor	February
151	Palakkattumala Temple	Marangattupilly	February
152	Cheruvallikavu Kuriyanadu	Marangattupilly	February
153	Thiru Ulsavam Sreebala Subrhamaya Swamikshethram	Kuravilangad	February
154	Thiru Ulsavam Narasimha Swami Kshethram	Kuravilangad	February
155	Thiru Ulsavam Sivasubramanya Swammikshethram Aruvikkal	Kuravilangad	February
156	Kumbha Bharani Meenadom Bhagavathy Temple	Meenadom	February
157	Cheruthrikka Temple Vellooe	Pampady	February
158	Cheruvallikavu Devi Temple	Pampady	February
159	Mutharamman Teple	Elikulam	February
160	Vattakakavu Temple Festival	Elikulam	February
161	Kidangoor Sri.Subrahmanya Swami Temple	Kidangoor	February
162	Veliyapalli Perunal	Kangazha	February
163	Chirakkaadv Mahadeva Temple	Chirakkadavu	February
164	Kadayanikadu Temple	Vellavoor	February
165	Lourd Matha Churth Thazath Vadakara	Vellavoor	February
166	Koodathungal Temple	Vellavoor	February
167	Vazhoor Mahadeva Temple Annual Utsavam	Vazhoor	February
168	Kodungoor Devi Temple, Annual Utsavam	Vazhoor	February
169	St. Joseph'S Church Vazhoor	Vazhoor	February
170	St. Sebastian'S Church Vazhoor	Vazhoor	February
171	Thirunal Aramana,Devalokam	Kottayam Municipality	February
172	Siva Parvathi Temple- Sivarathri	Kottayam Municipality	February
173	Kolettu Temple Panampalam	Arpookkara	February
174	Kudamaloor Church Festival	Aymanam	February
175	Sreekumaramangalam Utsavam	Aymanam	February
176	Kumaranalloor Uranma Vaka Devi Kshetram	Thiruvvarppu	February
177	Sreekumaramangalam Utsavam	Kumarakom	February
178	Ettumanoor Temple Festival	Ettumanoor	February
179	Poomkavu Temple Ulsavam	Vechoor	February
180	Neendisheri Jagathambika Temple Ulsavam	Vechoor	February

<b>Sl. No.</b>	<b>Name of festival</b>	<b>LSGD/ Municipality</b>	<b>Month detailing the periodicity</b>
181	Mambrayel Sree Subramaniawamy Temple Ulsavam	Vechoor	February
182	Kundathil Temple Ulsavam	Vechoor	February
183	St Joesph Church Ulsavam	Vechoor	February
184	Maralithara Kudumbakshethram Ulsavam	Vechoor	February
185	Kumbha Bharani Festival	Thalayazham	February
186	Kumbhabharani-Perumbalikkavu Devi Temple	Udayanapuram	February
187	Sivarathri -Thuruvelikkunnu Sivakshethrm	Udayanapuram	February
188	St.Mary'S Church Vallakam	Udayanapuram	February
189	Chemmanathu Temple-Sivarathri Ulsavam	Tv Puram	February
190	Kalpakasseri Temple-Sivarathri Ulsavam	Tv Puram	February
191	St Sebastian'S Church Kottarappally Perunal	Tv Puram	February
192	Moothedathukavu Temple-Kumbhabharani,Kodiyettulsavam,Vishu Ulsavam	Tv Puram	February
193	Mozhikottu Temple Ulsavam	Tv Puram	February
194	Kalpakassery Temple Festival	Tv Puram	February
195	Vishu	Madappally	February
196	Church Thirunal	Madappally	February
197	Sndp Sakha Vellppally	Paippad	February
198	Sndp Sakha Kochuppally	Paippad	February
199	Lourde Matha Church	Paippad	February
200	Maha Shivarathri	Vakathanam	February
201	Veroor Sree Dharmashastha Temple,Vadakkekara	Vazhappally	February
202	Vazhappally Temple Festival	Changanasserry	February
203	Subramanya Swami Temple Perunnal	Changanasserry	February
204	Sreedharma Sastha Kshethram ,Ullanadu	Bharananganam	February
205	Christhuraj Church ,Kayyoor	Bharananganam	February
206	Sree Mahadeva Temple Anthinad	Karoor	February
207	Secred Heart Church Karoor	Karoor	February
208	Gagultha Holycross Church Mattathippara	Kadanad	February
209	Thrikkayil Subrahmanya Swami Kshethram Pizhaku	Kadanad	February
210	Elambrakkodathu Bhagavathy Kshethram	Kadanad	February

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211	Sacred Heart Church Kochumattom	Meenachil	February
212	St.Thomas Church Poovathod	Meenachil	February
213	Pankapatt Mahadevakshethram Edamattom	Meenachil	February
214	Vakkupalam Sree Subramanya Temple Festival	Kozhuvanal	February
215	Karthyayani Temple Thalayolaparambu	Thalayolaparambu	March
216	Elamkavu Devi Temple Festival, Thalayolaparambu	Thalayolaparambu	March
217	Muhyidheen Jumua Masjid, Thalayolaparambu	Thalayolaparambu	March
218	Padinjattinkara temple	Velloor	March
219	Hanumankunnel church velloor	Velloor	March
220	Akyakavu Devi Temple	Velloor	March
221	Vamanaswami Temple	Velloor	March
222	Edakkunnam temple	Parathodu	March
223	Palapra temple	Parathodu	March
224	Cherumala Temple- Mundakayam	Mundakayam	March
225	Sndp Temple. Neelampara	Mundakayam	March
226	Sree Dharma Shastha Shethram, Aanakallu	Koruthodu	March
227	St Joseph Church Thidanadu	Thidanadu	March
228	Mahadeva Temple Thidanadu	Thidanadu	March
229	Sree Rama Temple Muttom	Thalanadu	March
230	Sree Devi Temple Periyamala	Thalanadu	March
231	Aachukkavu Temple	Teekoy	March
232	Cheruparakkavu	Kurichy	March
233	Thiru Ulsavam Kalikavu Devi Temple	Kuravilangad	March
234	Ponnarikulam	Pampady	March
235	Panamattam Temple	Elikulam	March
236	Anickad Bhagavathy Temple Festival	Elikulam	March
237	Kangazha Siva Temple	Kangazha	March
238	Pathanadu Devi Temple	Kangazha	March
239	St Basil Church Manimala	Vellavoor	March
240	Parampuzha Bhagavathy Temple, Annual Utsavam	Vazhoor	March
241	Puthiyakavu Devi Temple Vazhoor	Vazhoor	March
242	Nedumkunnam Sree Dharma Sastha Temple	Nedumkunnam	March
243	Puthiyakavu Devi Temple Nedumkunnam	Nedumkunnam	March
244	Shiva Temple Nedumkunnam	Nedumkunnam	March
245	Thirunakkara Ulsavam	Kottayam Municipality	March

<b>Sl. No.</b>	<b>Name of festival</b>	<b>LSGD/ Municipality</b>	<b>Month detailing the periodicity</b>
246	Kottaram Subramanya Swamy Temple, Amalagiri	Athirampuzha	March
247	Choorakkavu Bhagathy Temple	Arpookkara	March
248	Neendoorkavu Pooram	Aymanam	March
249	Chengalathu Kavay	Thiruvvarppu	March
250	Kiliroorkunnu Temple	Thiruvvarppu	March
251	Subrahmani Temple Edayazham Ulsavam	Vechoor	March
252	Valavakottu Madam	Vechoor	March
253	Jumamasjid	Vechoor	March
254	Outcost Gurumandhiram Ulsavam	Vechoor	March
255	Jumamasjid	Vechoor	March
256	Pizhayil Durga Devi Temple Ulsavam	Vechoor	March
257	Attuvela	Maravanthuruthu	March
258	Aattuvela	Udayanapuram	March
259	Thottaramuttam Devi Temple - Mmenabharani	Udayanapuram	March
260	Thrinayamkudam Temple Festival	Tv Puram	March
261	Puthenkavu Devi Temple	Paippad	March
262	Manathoor Kurisupalli	Kadanad	March
263	Parekkavu Bhagavathy Kshethram Aimkombu	Kadanad	March
264	Ponamala Devikshethram Edamattom	Meenachil	March
265	Mevida Kurakkatkav Festival	Kozhuvanal	March
266	St Thomas Church Kallra	Kallara	April
267	Keezhoor devi Kshetram	Mulakkulam	April
268	Mulakkulam Lakshmana Swami Kshetram	Mulakkulam	April
269	Neelampara Chruuch	Mundakayam	April
270	Kuruvela Muthu Swami Kovil	Thalanadu	April
271	Sree Devi Temple Vellani	Thalanadu	April
272	Aruvithura Thirunal	Erattupetta	April
273	Nadakkal Temple Ulsavam	Erattupetta	April
274	Elamkavu Temple	Kurichy	April
275	Sree Krishna Temple	Kurichy	April
276	Narivelichurch	Ayarkunnam	April
277	Vattakavu Vana Durga Temple Festival	Meenadom	April
278	St. George Church Festival	Elikulam	April
279	Vishu	Elikulam	April
280	Thalikotta Temple (Ulsavam)	Kottayam Municipality	April
281	Thirumala Sree Venkadachalpathi ( Ulsavam)	Kottayam Municipality	April
282	Kuttikkattu Temple -Pathamudaya Maholsavam	Kottayam Municipality	April

<b>Sl. No.</b>	<b>Name of festival</b>	<b>LSGD/ Municipality</b>	<b>Month detailing the periodicity</b>
283	Ponkunnathukavu Devi Temple-Pathamudayam	Kottayam Municipality	April
284	St.Thomas Church Pakkil	Kottayam Municipality	April
285	Thiruvarpusree Krishna Swami Temple	Thiruvarkadu	April
286	Valiyaveetil	Thiruvarkadu	April
287	St Geogre ,Catholicate, Knanaya Perunnal	Vechoor	April
288	Cheruparambu Temple Pathamudhayam	Tv Puram	April
289	St George Malkkara Church	Paippad	April
290	St . George Catholic Church,Cheerachira	Vazhappally	April
291	St.Thomas Church Aimcombu	Kadanad	April
292	Gurumandiram Kollappalli	Kadanad	April
293	Vayyakkara Devi Kshethram Poovarani	Meenachil	April
294	Chamundeswari Kshethram Paika	Meenachil	April
295	Kunnel Devi Kshethram Kizhapparayar	Meenachil	April
296	Matha Amrithananthamayi Kshethram Vilangupara	Meenachil	April
297	ERUMELY SASTHA TEMPLE UTSAVAM	Erumely	April
298	Vallyara Devi Temple Ulsavam	Vechoor	April
299	Sasthakulam Devi Temple Ulsavam	Vechoor	April
300	Sndp Temple Punchavayal	Mundakayam	May
301	12 Appostholic Church Chemmalamattam	Thidanadu	May
302	St.Joseph Church	Teekoy	May
303	Ponpally Perunnal	Vijayapuram	May
304	Puthuppally Church	Puthupally	May
305	Alathootuthara Temple Ulsavam	Vechoor	May
306	St Joesph Church Perunnal	Vechoor	May
307	Mattom Gurumandhiaram Ulsavam	Vechoor	May
308	St.Thomas Church Josepuram - Perunnal	Tv Puram	June
309	Manimala Pekkavu	Manimala	July
310	Alapra Melekavala Temple	Manimala	July
311	Vennimala Temple	Puthupally	July
312	Nalambala Dharsanam	Ramapuram	July
313	Sree Dharma Sastha Temple-Samkrathi	Kottayam Municipality	July
314	Nagambadam Sreemahadeva Kshethra Festival	Kottayam Municipality	July
315	12Th Apostles Church Mannanam	Athirampuzha	July

<b>Sl. No.</b>	<b>Name of festival</b>	<b>LSGD/ Municipality</b>	<b>Month detailing the periodicity</b>
316	St.Alphonsa Shrine & Pilgrim Centre, Bharananganam	Bharananganam	July
317	Peruva Orthodox Church	Mulakkulam	August
318	Sree Narayana Guru Jayanthi	Vijayapuram	August
319	Sree Narayana Guru Samadhi	Vijayapuram	August
320	Onam Celebrations	Elikulam	August
321	Vedagiri Sridharma Shastha Temple	Athirampuzha	August
322	Sreekrishna Temple Kummanam	Thiruvvarppu	August
323	Marth Mariam Foranachurchthuruthy	Vazhappally	August
324	Bhagavathi Temple Mankombu	Moonilavu	September
325	Navarathri Festival	Panachikkad	September
326	Sreekrishna Jayanthi	Vijayapuram	September
327	St. Mary'S Church Perunal (Anickad)	Elikulam	September
328	Manarcad Church Feast and Arpookara/Ariparambu Temple Festiv	Manarcad	September
329	Thevaru Nadu	Paippad	September
330	St Lukes Csi Church	Moonilavu	October
331	Madurameenakshi Temple Ulsavam	Poonjar	October
332	St Thomas Church	Paippad	October
333	St.Johns Bhaptisum Church	Njeezhoor	November
334	Csi Church Pallikunnel	Njeezhoor	November
335	SABRIMAL A PILGRIMAGE	Erumely	November
336	Madrassa edakkunnam	Parathodu	November
337	Mount Carmel	Pampady	November
338	Sthree Bhakthanandanar Shiv Temple Illimattom South Pampady	Pampady	November
339	Sndp Chennampally	Pampady	November
340	Elamgulam Dharma Astha Teple ( Edathavalam)	Elikulam	November
341	Mandala Kalam (Sabarimala Season)	Elikulam	November
342	Kumaranalloor Devi Temple Festival	Kottayam Municipality	November
343	Sree Subrahmanya Swami Temple Arpookara	Arpookkara	November
344	Marthas Muni Church	Thiruvvarppu	November
345	Sabarimala Mandala Kala Edathavalam	Ettumanoor	November
346	Vaikathashtami	Vaikom Municipality	November
347	Udayanapuram Karthika Temple	Vaikom Municipality	November
348	St. Augustine'S Forane Church, Pravithanam	Bharananganam	November
349	St.Xavier'S Church Neeloor	Kadanad	November
350	St.Johns The Bapist Church Kurumannu	Kadanad	November
351	St.Gregorios Church Kizhapparayar	Meenachil	November

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352	Sree Krishna Temple Thalayolaparambu Festival	Thalayolaparambu	December
353	St. George Church Vadayar, Perunaal, Thalayolaparambu	Thalayolaparambu	December
354	St.Thomas Church , Kaduthuruthy	Kaduthuruthy	December
355	CSI Church Irumbayam	Velloor	December
356	Vadukunnappuzha Temple	Mulakkulam	December
357	Infant Jesus Church	Njeezhoor	December
358	St marys church podimatam	Parathodu	December
359	St joseph church velichiyani	Parathodu	December
360	Parelampalam.Temple	Mundakayam	December
361	St Marys Moonilavu	Moonilavu	December
362	St Thomas Csi Church	Moonilavu	December
363	Sreekrishna Temple Ulsavam	Poonjar	December
364	Sreedharmashasthakshesthram Ulsavam	Poonjar	December
365	Ramapuram Church	Ramapuram	December
366	Ozhakattu Devi Temple, Ezhacherry	Ramapuram	December
367	Kavinpuram Temple	Ramapuram	December
368	St. Stephans Church Uzhavoor	Uzhavoor	December
369	Devi Kshethram Monipally (Utsavam)	Uzhavoor	December
370	Secret Heart Knanaya Catholic Church Monippally	Uzhavoor	December
371	St. Pious Church Piousmount	Uzhavoor	December
372	Narasimhaswami Temple Palakkattumala	Marangattupilly	December
373	Thiru Ulsavam Sreekrishna Swamikshethram Chalapally	Kuravilangad	December
374	Pampady Mahadeva Temple	Meenadom	December
375	Csi Church	Meenadom	December
376	Ayyankoickal Sreedharma Sastha Temple	Pampady	December
377	St.Simon Church	Pampady	December
378	Sree Shubhananda Asramam Poothakuzhy	Pampady	December
379	Csi Church Pallikunnu	Pampady	December
380	Elikulam Teple	Elikulam	December
381	St. Thomas Church Vazhoor	Vazhoor	December
382	St. Mary'S Church Nedumkunnam	Nedumkunnam	December
383	Nethaloor Temple Fest	Karukachal	December
384	St. Marys Church, Karamood	Kottayam Municipality	December
385	St Thomas Church, Nalpathimala	Athirampuzha	December
386	St Xavier'S Church Villoonni	Arpookkara	December

<b>Sl. No.</b>	<b>Name of festival</b>	<b>LSGD/ Municipality</b>	<b>Month detailing the periodicity</b>
387	St George Orthodox Church Manalelpalli	Arpookkara	December
388	St Mary'S Kuttichira Perunnal	Vechoor	December
389	Thiyil Kudumba Temple Ulsavam	Vechoor	December
390	Cherakulangara Karthiyani Devi Temple Ulsavam	Vechoor	December
391	Achinakom Sharavanabhava Ulsavam	Vechoor	December
392	Madakattu Temple Ulsavam	Vechoor	December
393	Skanthapuram Subramanya Swami Ulsavam	Vechoor	December
394	Anithara Omkareswaram Temple Uisavam	Udayanapuram	December
395	Deepam At Thrikodithanam Mahakshethram	Thrikodithanam	December
396	Kavil Bhagavathy Temple Chirrappe	Changanasserry	December
397	Chandana Kudam	Changanssery	December
398	St. Marys Church Maryland	Kadanad	December
399	St.Joseph Church Paika	Meenachil	December
400	Vilakkumadom Sree Bhagavathy Kshethram	Meenachil	December
401	Kadappattoor Mahadeva Temple – Shabarimala Edathavalam	Mutholy	December
402	Pala Jubilee	Pala	December
403	Sndp Gurumandiram Ulsavam	Vechoor	December

## **List of electricity stations and transmission lines**

1. Edappon 220 kV substation. (Transformers-7 Nos)
2. Chengannur 110 kV Substation. (Transformers-3 Nos)
3. Mavelikkara 110 kV Substation. (Transformers-5 Nos)
4. Kayamkulam 110 kV Substation. (Transformers-3 Nos)
5. Nangiarkulangara 66 kV Substation. (Transformers-3 Nos)
6. Karuvatta 66 Kv substation. (Transformers-2 Nos)
7. Mannar 33 kV substation. (Transformers-2 Nos)
8. Kattanam 33 kV Substation. (Transformers-2 Nos)
9. Vallikunnam 33 kV Substation. (Transformers-1 Nos)
10. Punnapra 110 kV Substation. (Upgradation in progress) (Transformers-6 Nos)
11. Edathwa 110 kV Substation. (Transformers-3 Nos)
12. Thakazhy 33 kV Substation. (Transformers-2 Nos)
13. Kottayam 66 kV Substation. (Transformers-3 Nos)
14. Kuttanad 66 kV Substation. (Transformers-2 Nos)
15. Pathirappally 66 kV Substation. (Transformers-2 Nos)
16. S L Puram 110 kV Substation. (Transformers-2Nos)
17. Cherthala 66 kV Substation. (Transformers-3 Nos)
18. Thykkattussery 110 kV Substation. (Transformers-3 Nos)
19. Kuthiyathodu 33 kV Substation. (Transformers-3 Nos)
20. Aroor 110 kV Substation. (Transformers-5 No

## **ANNEXURE 5 : GOVERNMENT ALLOPATHY HOSPITAL DETAILS**

SL. NO	HEALTH FACILITY	TYPE OF FACILITY (MCH/GH/CHC/FHC/SC etc.)	TOTAL BEDS	FUNCTIONAL BEDS	LSGD	HEALTH BLOCK	CD BLOCK
1	FHC Panachikkad	FHC	0	0	Panachikkad	Panachikkad	Ayarkunnam
2	FHC Puthupally	FHC	0	0	Puthupally	Panachikkad	Ayarkunnam
3	FHC Thottakkad	FHC	71	42	Puthupally	Panachikkad	Ayarkunnam
4	CHC Thalapady	CHC	10	0	Panachikkad	Panachikkad	Ayarkunnam
5	CHC Ayarkunnam	BFHC	24	24	Ayarkunnam	Kumarakom	Ayarkunnam
6	FHC Parampuzha	FHC	24	0	Vijayapuram	Kumarakom	Ayarkunnam
7	ESI Vadavathoor	ESI	60		Vijayapuram	Kumarakom	Ayarkunnam
8	ESI Dispensary Vadavathoor	ESI	0	0	Vijayapuram	Kumarakom	Ayarkunnam
9	CHC Sachivothamapuram	CHC	54	10	Kurichy	Karukachal	Ayarkunnam
10	CHC Edamaruku	BFHC	0	0	Melukavu	Edamaruku	Edamaruku
11	FHC Gvr Poonjar	FHC	32	6	Poonjar	Edamaruku	Edamaruku
12	PHC Thidanadu	FHC	0	0	Thidanadu	Edamaruku	Edamaruku
13	FHC Thalanadu	FHC	0	0	Thalanadu	Edamaruku	Edamaruku
14	FHC Teekoy	FHC	0	0	Teekoy	Edamaruku	Edamaruku
15	FHC Poonjar	FHC	0	0	Poonjar Thekkekar	Edamaruku	Edamaruku
16	PHC Thalappalam	FHC	0	0	Thalappalam	Edamaruku	Edamaruku
17	FHC Moonnilavu	FHC	0	0	Moonnilavu	Edamaruku	Edamaruku
18	CHC Edayirikkapuzha	BFHC	28	18	Kangazha	Edayirikkapuzha	Vazhoor
19	GH Kanjirappally	GH	142	162	Chirakkadu	Edayirikkapuzha	Vazhoor
20	FHC Vellavoor	FHC	0	0	Vellavoor	Edayirikkapuzha	Vazhoor
21	FHC Vazhoor	FHC	0	0	Vazhoor	Edayirikkapuzha	Vazhoor

22	PHC Nedumkunn am	FHC	0	0	Nedumkun nam	Edayirikka puzha	Vazhoor
23	FHC Karukachal	BFHC	30	0	Karukachal	Edayirikka puzha	Vazhoor
24	Bfhc Edayazham	BFHC	24	10	Vechoor	Edayazham	Edayazham
25	FHC Thalayazha m	FHC	0	0	Thalayazha m	Edayazham	Edayazham
26	FHC Maravanthu ruth	FHC	0	0	Maravanth uruthu	Edayazham	Edayazham
27	FHC Udayanapu ram	FHC	0	0	Udayanapu ram	Edayazham	Edayazham
28	FHC Brahmaman galam	FHC	18	0	Chempu	Edayazham	Edayazham
29	PHC Tv Puram	FHC	0	0	Tv Puram	Edayazham	Edayazham
30	CHC Erumely	BFHC	30	30	Erumely	Erumely	Erumely
31	FHC Manimala	FHC	0	0	Manimala	Erumely	Erumely
32	PHC Karikkattoor	FHC	0	0	Manimala	Erumely	Erumely
33	FHC Vizhikathod u	FHC	0	0	Kanjirapall y	Erumely	Erumely
34	PHC Kalaketty	FHC	0	0	Kanjirapall y	Erumely	Erumely
35	FHC Parathodu	FHC	0	0	Parathodu	Erumely	Erumely
36	FHC Mundakaya m	FHC	60	20	Mundakay am	Erumely	Erumely
37	FHC Parathanam	FHC	0	0	Koottickal	Erumely	Erumely
38	FHC Koottickal	FHC	38		Koottickal	Erumely	Erumely
39	FHC Koruthodu	FHC	0	0	Koruthodu	Erumely	Erumely
40	Family Health Centre Madappally	FHC	4	4	Madappall y	Karukachal	Madappall y
41	FHC Paippad	FHC	2		Paippad	Karukachal	Madappall y
42	FHC Thrikkodith anam	FHC	0	0	Thrikkodit hanam	Karukachal	Madappall y
43	CHC Vakathanam	CHC	24	12	Vakathana m	Karukachal	Madappall y

44	PHC Vazhapally	FHC	0	0	Vazhappally	Karukachal	Madappally
45	FHC Meenadom	FHC	0	0	Meenadom	Mundankunnu	Pampady
46	Thqh Pampady	THQH	150	75	Pampady	Mundankunnu	Pampady
47	FHC Mundankunnu	FHC	3	3	Akalakunnam	Mundankunnu	Pampady
48	FHC Kooroppada	FHC	2		Kooroppada	Mundankunnu	Pampady
49	Pallickathodu FHC	FHC	0	0	Pallickathodu	Paika	Pampady
50	CHC Paika	BFHC	36	20	Elikulam	Paika	Pampady
51	FHC Manarcadu	FHC	0	0	Manarcadu	Kumarakam	Pampady
52	CHC Koodalloor	CHC	32	21	Kidangoor	Kodalloor	Pampady
53	FHC Kadaplattam	FHC	56	22	Kadaplattom	Koodallor	Uzhavoor
54	FHC Marangattupilly	FHC	26		Marangattupilly	Kodalloor	Uzhavoor
55	FHC Kanakkary	FHC	0	0	Kanakkari	Koodallor	Uzhavoor
56	FHC Kuruppanthara	FHC	0	0	Kuruppanthara	Koodallor	Uzhavoor
57	Thaluk Hospital Kuravilngad	THQH	31		Kuravilngadu	Koodallor	Uzhavoor
58	FHC Ramapuram	BFHC	49	49	Ramapuram	Ramapuram	Uzhavoor
59	FHC Veliyanoor	FHC	0	0	Veliyanoor	Ramapuram	Uzhavoor
60	Krnmsh Uzhavoor	SPECIALTY HOSPITAL	150	98	Uzhavoor	Ramapuram	Uzhavoor
61	CHC Thalayolaparambu	BFHC	30	20	Thalayolaparambu	Thalayolaparambu	Thalayolaparambu
62	CHC Arunootimangalam	FHC	23	23	Mulakulam	Arunootimangalam	Thalayolaparambu
63	FHC Kaduthuruthy	FHC	0	0	Kaduthuruthy	Thalayolaparambu	Thalayolaparambu
64	FHC Kallara	FHC	0	0	Kallara	Thalayolaparambu	Thalayolaparambu
65	FHC Velloor	FHC	0	0	Velloor	Arunootimangalam	Thalayolaparambu
66	FHC Peruva	FHC	0	0	Mulakulam	Arunootimangalam	Thalayolaparambu
67	FHC	FHC	0	0	Njeezhoor	Arunootimangalam	Thalayolaparambu

	Kattampak					angalam	arambu
68	CHC Ullandu	BFHC	24	5	Ullanadu	Ullanadu	Ullanadu
69	PHC Karoor	FHC	0	0	Karoor	Ullanadu	Ullanadu
70	FHC Kadanad	FHC	0	0	Kadanad	Ullanadu	Ullanadu
71	FHC Mutholy	FHC	0	0	Mutholy	Ullanadu	Ullanadu
72	FHC Meenachil	FHC	0	0	Meenachil	Ullanadu	Ullanadu
73	PHC Kozhuvanal	FHC	0	0	Kozhuvanal	Ullanadu	Ullanadu
74	MCH Kottayam	MCH	2178	2178	Arpookkara	Athirampuzha	Kumarakom
75	ICHKottayam	ICH	170	23	Kumarakom	Athirampuzha	Kumarakom
76	FHC Aymanam	FHC	0	0	Aymanam	Athirampuzha	Kumarakom
77	FHC Onamthuruth	FHC	0	0	Neendoor	Athirampuzha	Kumarakom
78	FHC Athirampuzha	FHC	42	31	Athirampuzha	Athirampuzha	Kumarakom
79	FHC Thiruvarpur	FHC	0	0	Thiruvarpur	Kumarakom	Kumarakom
80	CHC Kumarakom	BFHC	50	35	Kumarakom	Kumarakom	Kumarakom
81	GH Changanaserry	GH	225	175	Changanaserry	Karukachal	Changanaserry
82	UPHC Perunna	UPHC	0	0	Changanaserry	Karukachal	Changanaserry
83	THQH Vaikom	THQH	272	162	Vaikom	Edayazham	Vaikom
84	FHC Erattupetta	FHC	24	24	Erattupetta	Edamaruku	Erattupetta
85	KMFHC Ettumanoor	FHC	0	0	Ettumanoor	Ettumanoor	Ettumanoor
86	GH Kottayam	GH	374	249	Kottayam	Kumarakom	Kottayam
87	UPHC Velloor	UPHC	0	0	Kottayam	Kumarakom	Kottayam
88	UPHC Perumbaikad	UPHC	0	0	Kottayam	Kumarakom	Kottayam
89	FHC Nattakom	FHC	0	0	Kottayam	Kumarakom	Kottayam
90	Govt Hospital Pala	GH	341	370	Pala	Ullanad	Pala

## ANNEXURE 6: PRIVATE ALLOPATHY HOSPITAL DETAILS

SL. NO	HEALTH FACILITY	TOTAL BEDS	FUNCTIONAL BEDS	LSGD	HEALTH BLOCK	CD BLOCK
1	Parat Hospital	50		Puthupally	Panachikkad	Ayarkunnam
2	Chithira Hospital	30		Ayarkunnam	Kumarakom	Ayarkunnam
3	Chrishthuraj	0	0	Ayarkunnam	Kumarakom	Ayarkunnam
4	Mandiram Hospital, Manganm	200	148	Vijayapuram	Kumarakom	Ayarkunnam
5	Carithas Family Hospital, Kalathipady	15		Vijayapuram	Kumarakom	Ayarkunnam
6	Jk Hospital, Vadavathoor	30		Vijayapuram	Kumarakom	Ayarkunnam
7	Welfast Hospital, Vadavathoor	25		Vijayapuram	Kumarakom	Ayarkunnam
8	Bliss Infertility Centre, Vadavathoor	16		Vijayapuram	Kumarakom	Ayarkunnam
9	Marsleeva Assumption Medicity	3		Melukavu	Edamaruku	Edamaruku
10	Aravinda Hospital	45		Chirakkadavu	Edayirikkapuzha	Edayirikkapuzha
11	Mgdm Kangazha	100		Kangazha	Edayirikkapuzha	Edayirikkapuzha
12	Mercy Hospital	25		Karukachal	Edayirikkapuzha	Edayirikkapuzha
13	Royal Hospital	15		Vazhoor	Edayirikkapuzha	Edayirikkapuzha

14	Nss Hospital	20		Karukachal	Edayirikkapuzha	Edayirikkapuzha
15	St.Xaviers Hospital, Kothavara	25		Thalayazham	Edayazham	Edayazham
16	Indo American Hospital	205		Maravanthurthu	Edayazham	Edayazham
17	St.George Hospital	5		Tv Puram	Edayazham	Edayazham
84	Sunrise Hospital	99		Erattupetta	Edamaruku	Edamaruku
85	Pmc Hospital	78		Erattupetta	Edamaruku	Edamaruku
19	Assisi Hospital	100		Erumely	Erumely	Erumely
20	St.Thomas	0	0	Manimala	Erumely	Erumely
21	Mithra	0	0	Manimala	Erumely	Erumely
22	Kadamapuzha Hospital	10		Kanjirapally	Erumely	Erumely
23	Marymatha Hospital	20		Kanjirapally	Erumely	Erumely
24	St Joseph Eye Hospital	5		Kanjirapally	Erumely	Erumely
25	Rani Hospital	30		Kanjirapally	Erumely	Erumely
26	Mam Hospital	5		Kanjirapally	Erumely	Erumely
27	Mary Queen Mission Hospital	190		Prathodu	Erumely	Erumely
28	Holy Cross Koovappally	30		Prathodu	Erumely	Erumely
29	High Range Hospital	100	75	Prathodu	Erumely	Erumely
30	Peoples Hospital Mundaka Yam	0	0	Mundakayam	Erumely	Erumely
31	Santhwanam Medical Centre & Laboratory	2		Koruthodu	Erumely	Erumely
32	Karunabhavan Medical Centre, Pallipady	2		Koruthodu	Erumely	Erumely
33	Medical Mission Thengana	9		Madappally	Karukachal	Madappally
34	Kmc Family Clinic	0		Madappally	Karukachal	Madappally
35	St. Rita'S Hospital	100		Paippad	Karukachal	Madappally
36	Arpitha Nursing Home	2		Paippad	Karukachal	Madappally
37	St.Thomas Hospital	300	300	Vazhappally	Karukachal	Madappally

38	Cnk Hospital	40		Vazhappally	Karukachal	Madappally
39	St.Jude Hospital	7		Vazhappally	Karukachal	Madappally
40	Cicilamma Memorial Good Samaritan Hospital Koprakalam	10		Elikulam	Paika	Pampady
41	Llm Hospital Kidangoor	245		Kidangoor	Kodalloor	Pampady
42	St.George Hospital,Vayala	8		Kuravilangadu	Koodalloor	Ramapuram
43	St.Vincent Hospital Kuravilangad	20	20	Kuravilangadu	Koodalloor	Ramapuram
44	Chaithanya Trust Hospital	30		Kuravilangadu	Koodalloor	Ramapuram
45	Mum Hospital Monippally	99	99	Uzhavoor	Ramapuram	Ramapuram
46	CardioL Hospital	70		Uzhavoor	Ramapuram	Ramapuram
47	Sh Hospital & Sh Ayurveda Hospital Chakkampuzha	14		Ramapuram	Ramapuram	Ramapuram
48	Divine Hospital, Kuruppanthara	15		Manjoor	Thalayolaparambu	Ramapuram
49	St. George Hospital, Manvettom	10		Manjoor	Thalayolaparambu	Ramapuram
50	St. Xaviers Hospital,Kuruppanthara	17		Manjoor	Thalayolaparambu	Ramapuram
51	Mercy Hospital	300		Thalayolaparambu	Thalayolaparambu	Thalayolaparambu
52	Hgm Hospital Muttuchira Kaduthuruthy	115		Kaduthuruthy	Thalayolaparambu	Thalayolaparambu
53	Kaduthuruthy Co- Operative Hospital	50		Kaduthuruthy	Thalayolaparambu	Thalayolaparambu
54	Bindhu Nursing Home, Kallara	0	0	Kallara	Thalayolaparambu	Thalayolaparambu
55	Wellnesspoint Hospital	15		Mulakulam	Arunootimangalam	Thalayolaparambu
56	Immaculate Heart Of Mary	100		Ullanad	Ullanadu	Ullanadu
57	Mkm Hospital PravithaOM	100		Karoor	Ullanadu	Ullanadu

58	Puthiyedom	14		Meenachil	Ullanadu	Ullanadu
59	Mar Sleeva Medicity Palai	650	660	Kozhuvanal	Ullanadu	Ullanadu
60	Kims Health	92	74	Aymanam	Athirampuzha	Kumarakom
61	Caritas Hdp Hospital	40		Neendoor	Athirampuzha	Kumarakom
62	Mitera Hospital Thellakom	75	75	Athirampuzha	Athirampuzha	Kumarakom
63	Sh Wellness Clinic	16		Kumarakom	Kumarakom	Kumarakom
64	Sanjeevini Hospital	10		Changanassery	Karukachal	Changanassery
65	Udayagiri Hospital	50		Changanassery	Karukachal	Changanassery
66	Suresh Nursing Home	10		Changanassery	Karukachal	Changanassery
67	Nss Medical Mision Hospital Perunna	120	40	Changanassery	Karukachal	Changanassery
68	Bcf Indo American Hospital West Gate	49	39	Vaikom	Edayazham	Vaikom
69	Sunrise Hospital	99		Erattupetta	Edamaruku	Erattupetta
70	Pmc Hospital	78		Erattupetta	Edamaruku	Erattupetta
71	Catitas Hospital	655	655	Ettumanoor	Ettumanoor	Ettumanoor
72	Caritas Matha Hospital	209	152	Ettumanoor	Ettumanoor	Ettumanoor
73	Vimala Hospital	0	0	Ettumanoor	Ettumanoor	Ettumanoor
74	Bjm Hospital	15		Kottayam	Athirampuzha	Kottayam
75	Cmc Hospital	15		Kottayam	Athirampuzha	Kottayam
76	Bharat Hosptial Kottayam	199	199	Kottayam	Kumarakom	Kottayam
77	Sh Medical Centre Kottayam	250	225	Kottayam	Kumarakom	Kottayam
78	Bhavana Hospital Kottayam	3		Kottayam	Kumarakom	Kottayam
79	Dr. Agarwals Eye Hospital Kottayam	0	0	Kottayam	Kumarakom	Kottayam
80	Caritas Hospital Karappuzha	0	0	Kottayam	Kumarakom	Kottayam
81	Chingavanam Medical Center	20		Kottayam	Panachikkad	Kottayam

82	Susrusha Varisserry	10		Kottayam	Athirampuzha	Kottayam
83	Marian Hospital	100	100	Pala	Ullanad	Pala
84	Base hospital manarcadu	10		MANARCADU	KUMARAKOM	pampady
85	Mercy Hospital	40		AKALAKUNO M	MUNDANKUN NU	pampady
86	ST:Marys hospital manarcadu	100		MANARCADU	KUMARAKOM	pampady

## ANNEXURE 7 : GOVERNMENT HOMEIO DISPENSARIES AND CONTACT DETAILS

	<b>Institution</b>	<b>Designation</b>	<b>Name</b>
1	Kottayam	Hospital Superintendent	Dr. Souda E A.
		Medical Officer	Dr Meghna Sekhar
		Resident Medical Officer	Dr Shyna S.S
2	Kurichy	Hospital Superintendent	Dr Prabhath A
		Chief Medical Officer	Dr. Seeta Philip
		Medical Officer	Dr. Uma Devi
		Medical Officer	Dr. Gayathri R
		Resident Medical Officer	Dr. Maya S Rajappan
3	Pala	Hospital Superintendent	Dr. Sajan Cherian
		Medical Officer	Dr. Karthika Vijayakumar
		Resident Medical Officer	Dr. Neena Roshni Figarado
4	Aimanam (M)	Chief Medical Officer	Dr Diana Mol P.V.
5	Changanachery (HWC)	Medical Officer	Dr. Mini M.R
6	Cherpunkal	Medical Officer	Dr. Aswathi Chandran
7	Chirakkadavu (HWC)	Chief Medical Officer	Dr. Chandy E Daniel
8	Elacadu	Medical Officer	Dr Athira Mohan
9	Elikulam	Medical Officer	Dr. Tinu Mathew
10	Erattupetta	Medical Officer	Dr Reshmi MS

11	Erumeli	Medical Officer	
12	Ettumanoor	Medical Officer	Dr. Joby J
13	Ezhachery	Medical Officer	Dr. Laskmy V
14	Kadaplamattom	Medical Officer	Dr. Ann Rose tom
15	Kaduthuruthy	Medical Officer	Dr. Lintu Merin Shaji
16	Kaduvakkulam	Medical Officer	Dr. Silpakala.P.N
17	Kallara	Medical Officer	Dr. Nisha Mohan
18	Kanakkari (HWC)	Medical Officer	Dr. Abhiraj S.
19	Kanjirapally	Medical Officer	Dr. Appu Gopalkrishnanan
20	Karimpani (HWC)	Medical Officer	Dr Shahana H
21	Kidangoor	Medical Officer	Dr. Nilina P.R.
22	Koottumel (HWC)	Medical Officer	Dr. Smitha P.R.
23	Kudakkachira (HWC)	Medical Officer	Dr. Jincy Kuriakose
24	Kumarakam (M)-(HWC)	Medical Officer	Dr. Vasudha S.
25	Lakkattoor (HWC)	Medical Officer	Dr. Jayamole J
26	Madapally (HWC)	Medical Officer	Dr. Anchu Mariam Charly
27	Manarcad (M)-(HWC)	Chief Medical Officer	Dr. Smitha M Peethambaran
28	Manjoor (HWC)	Chief Medical Officer	Dr. Mereen Varghese
29	Mannanam (M)-(HWC)	Medical Officer	Dr. Joseph K.M.
30	Meenachil (M)	Medical Officer	Dr. Hafsa Muhammed
31	Meenadam	Medical Officer	Dr. Bindhu E.R.
32	Melukavu	Medical Officer	Dr Ena Issac
33	Monippally	Medical Officer	Dr. Dani Ferdinend
34	Moonnilavu (HWC)	Medical Officer	Dr. Nimmy George
35	Mulakkulam (M)	Medical Officer	Dr. Umanath Pai G
36	Mundakayam	Medical Officer	
37	Mutholy (HWC)	Medical Officer	Dr. Treesa Mary Tom
38	Myladikkara	Medical Officer	Dr. Anaswara T.R.
39	Neendoor (M)-(HWC)	Medical Officer	Dr. Chamini Chandran
40	Paipad	Medical Officer	Dr Nebu P Mathew
41	Pampady (M)	Chief Medical Officer	Dr. Anu Joseph K
42	Parathode	Medical Officer	Dr. Joicy John
43	Poonjar	Medical Officer	Dr Tissa K Joy
44	Poonjar-Thekkekkara	Medical Officer	Dr. Saju Sam
45	Pravithanam (M)	Medical Officer	Dr. Hema. K. Kartha

46	Punnathara (M)	Medical Officer	Dr. Bindu Theresa P J
47	Puthupally	Chief Medical Officer	Dr Arun Raj K
48	Teekoy	Medical Officer	Dr Aswathy VR
49	Thalayazham (HWC)	Medical Officer	Dr Mayadevi K
50	Thalayolapparambu (M)	Chief Medical Officer	Dr. Hema G Nair
51	Thiruvarp	Chief Medical Officer	Dr. Geetha Mathew
52	Thrikkodithanam (M)	Medical Officer	Dr. Shanthi Mariyam Thomas
53	Udayanapuram (HWC)	Medical Officer	Dr. Bindhu B Panicker
54	Vaikkam	Medical Officer	Dr. Renjini C.
55	Vakathanam (HWC)	Medical Officer	Dr Jaya V.S.
56	Veliyannur (HWC)	Medical Officer	Dr. Sreelekha D.
57	Vijayapuram	Medical Officer	Dr. Amrutha C.D.
58	DMO Office	Project Co-ordinator	Dr. Lino Elizabeth Joy

## ANNEXURE 8 : PRIVATE HOMEO HOSPITAL DETAILS

SL.NO	HEALTH FACILITY	LSGD	HEALTH BLOCK	CD BLOCK
1	Homoeo Dispensary Kollad	Panachikkad	Panachikkad	Ayarkunnam
2	Homoeo Pariyaram	Puthupally	Panachikkad	Ayarkunnam
3	Homoeo Payyappadi	Puthupally	Panachikkad	Ayarkunnam
4	Ajo Homeo Clinic	Thidanad	Edamaruku	Edamaruku
5	Homeo Clinic(Private)	Vechoor	Edayazham	Edayazham
6	Homeo Clinic	Vechoor	Edayazham	Edayazham
7	K & K Homeopathic Speciality Clinic, Kanjirappally	Kanjirappally	Erumely	Erumely
8	Dr Jacob'S Homoeo Clinic, Podimattom	Parathodu	Erumely	Erumely
9	Similia Homeopathy, Mundakayam	Mundakayam	Erumely	Erumely
10	Champankulam Homoeopathic Clinic, Mundakayam	Mundakayam	Erumely	Erumely
11	Kannammali Hospital	Vazhappally	Karukachal	Madappally
12	Sreddha Home Healthcare	Pallickathodu	Paika	Pampady
13	Dr. Deepthi'S Homeo Care	Pallickathodu	Paika	Pampady
14	Shm Homeo Clinic	Mulakulam	Arunootimangalam	Thalayolaparambu
15	Kripa Homoeo Clinic	Mulakulam	Arunootimangalam	Thalayolaparambu
16	Dr. K M Memorial Homoeopathic Clinic	Mulakulam	Arunootimangalam	Thalayolaparambu

## ANNEXURE 9: GOVERNMENT AYURVEDA HOSPITALS

Institutions	Bed Capacity
DAH Kottayam	50
GAH Kothala	30
GAH Veliyanoor	30
GAH Vaikom	20
GAH Meenadom	20
GAH Pala	20
GAH Changanacherry	10
GAH Kidangoor	10
GAH Nattakom	10
GAH Teekoy	10
GAH Muzhoor	10

## ANNEXURE 10 GOVERNMENT AYURVEDA DISPENSARIES IN KOTTAYAM DISTRICT

Institutions	Name of The Doctor
GAD Ayarkunnam	Dr. Jiyo.P.N
GAD Bharananganam	Dr Dona Abraham Mattam
GAD Brahmamangalam	Dr vidya v s
GAD Chirakadavu	Dr Anjali V
GAD Elampally	Dr. Anu George
GAD Elikkulam	Dr. Aneesh. V Sarma
GAD Erumely	Dr. UnniKrishnan P
GAD Ettumanoor	Dr. Sreedevi K G
GAD Kadaplamattom	Dr. Antony Jose
GAD Kaduthuruthy	Dr.Lili Jacob
GAD Kanakkari	Dr .Binoj K Jose
GAD Kangazha	Dr. Sreejith S
GAD Karoor	Dr. Shiny M bhasker
GAD Kosady	Dr .Sudeesh Kumar
GAD Kozhuvanal	Dr Aswathy Krishnan
GAD Kumarakom	DR .Darsana

GAD Kumaranaloor	Dr. Sisy Michael
GAD Kuravilangad	Dr .Aryasree
GAD Kuttickal	Dr Chandini R
GAD Madappally	Dr Vinitha Ravi
GAD Mamunda	Dr.Jithu C Soman
GAD Manarcadu	Dr.Dawn Ebrahim
GAD Manjoor	Dr. Shaini M Bhaskar
GAD Maravanthuruthu	Dr.Manu R Mangalath
GADMarangattupally	Dr. Thushara Mathukutty
GAD Mattathipara	Dr. Anu Viswam
GAD Meenachil	Dr Arun Kumar V p
GAD Mundakkayam	Dr. Padmanabhan E.G
GAD Nedumkunnam	Dr Sreelakshmi I
GAD Neendoor	Dr. Nikhila Sajeevan
GAD Njeezhoor	Dr. Saritha T K
GAD Panachikkadu	Dr. Sreelatha C V
GAD Parathode	Dr. Lissy K.T
GAD Payippad	Dr.Sheena peter
GAD Poonjar	Dr.Silpa V Kumar
GAD Poonjar Thekkekkara	Dr Soumya T A
GAD Puthuppally	Dr.Anjali S
GAD Ramapuram	Dr. Seenia P.K
GAD T.V.Puram	Dr. Rajahams Sasi
GAD Thalanadu	Dr Asiya MM
GAD Thalappalam	Dr. Jewel Jose
GAD Thalayazham	Dr. Jayapreethy Grace Bella
GAD Thidanadu	Dr Benazir K I

GAD Thiruvarpu	Dr.LAKSHMI
GAD Uzhavoor	Dr. Preethy G Nair
GAD Vakathanam	Dr. Nitha M.S
GAD Vazhappally	Dr.Jaya bhaskar
GAD Vazhoor	Dr-Dani V Das
GAD Vellavoor	Dr. Archana S
GAD Velloor	Dr. Shaji paul
GAD Velloor	Dr.Prasanth.G
GAD Vijayapuram	Dr Arathy Gopinath

## Annexure 11 Ayush Phc Details

Institutions	Name of The Doctor
Ayush PHC Athirampuzba	Dr. Sreedevi M
Ayush PHC Arupookkara	Dr. Smitha G Panickar
Ayush PHC Aymanam	Dr. Sasisankar M.S
Ayush PHC Erattupetta	Dr. Surekha Kurian
Ayush PHC Kallara	Dr. Ramakrishnan D
Ayush PHC Kanjirappally	Dr. Ambily Krishna
Ayush PHC Koottickal	DR Minnu s
Ayush PHC Kurichi	Dr. Midhun J Kalloor
Ayush PHC Manimala	Dr. Salini M N
Ayush PHC Mevlukavu	Dr. Amesh K.S
Ayush PHC Moonilavu	Dr. Kashmeera A
Ayush PHC Mulakkulam	Dr. Sumam Babu
Ayush PHC Mutholy	Dr. Chinnu R Chandran
Ayush PHC Thalayolaparmbur	Dr. Tintu Joseph
Ayush PHC Thrikodithanam	Dr. Lakshmi Mohan
Ayush PHC Vechoor	Dr. P Neleena
Ayush PHC Udayanapuram	Dr. Lakshmi T.S

**ANNEXURE 10 : PRIVATE AYURVEDHA HOSPITALS**

SL.NO	HEALTH FACILITY	TOTAL BEDS	LSGD	HEALTH BLOCK	CD BLOCK
1	Ayurveda Dispensary Velluthuruthy	0	Panachikkad	Panachikkad	Ayarkunnam
2	Ayurveda Pariyaram	0	Puthupally	Panachikkad	Ayarkunnam
3	Ayurvedam	0	Puthupally	Panachikkad	Ayarkunnam
4	Rishi Ayurveda Poonjar	14	Poonjar Thekkekara	Edamaruku	Edamaruku
5	Ayurvedha Clinic	0	Vechoor	Edayazham	Edayazham
6	Ayush	0	Manimala	Erumely	Erumely
7	Swami Nirmalanthagiri, Memmorial, Sreevilasam Ayurvedam Erikadu	0	Kanjirapally	Erumely	Erumely
8	Dr Care , Erumely	0	Erumely	Erumely	Erumely
9	Madukkakuzhy Ayurveda, Parathodu	0	Parathodu	Erumely	Erumely
10	Madukkakuzhy Ayurveda, Erumely	0	Erumely	Erumely	Erumely
11	Kalapuraackal Ayurveda Hospital	0	Mundakayam	Erumely	Erumely
12	Jayashankar Ayurveda Hospital	0	Vazhappally	Karukachal	Madappally
13	Pallickal Vaidyan'S Arya Vaidyasala	0	Pallickathodu	Paika	Pampady
14	Santhigiri Ayurvedha Hospital	15	Uzhavoor	Ramapuram	Uzhavoor
15	Pulickal Ayurveda Hospital Peruva	5	Mulakulam	Arunootimangalam	Thalayolaparambu
16	Sreeekrisho Ayurveda Hospital	10	Kadanad	Ullanadu	Ullanadu
17	Trinity Ayurved A Hospital	10	Arpookkara	Athirampuzha	Kumarakom
18	Karuna Aurveda Hospital	0	Pala	Ullanad	Pala

## ANNEXURE 11: PLACES & CONTACT DETAILS OF VETERINARY INSTITUTIONS

	<b>Name of Institution</b>
1	District Animal Husbandry Office
2	Dist.Veterinary Centre Kottayam
3	Rinderpest Vigilance Unit, Kottayam
4	Mobile Vety.Hospital, Kottayam
5	ADCP.Kottayam
6	Calf Feed Subsidy Programme, Kottayam
7	Regional Artificial Insemination Centre, Vaikom
8	Regional Artificial Insemination Centre, Kanjirapally
9	Livestock Management Training CentreThalayolaparambu
10	Mobile Farm Aid Unit, Erumely

### VETERINARY POLYCLINICS

<b>Sl.No</b>	<b>Name of Institution</b>
1	Veterinary Polyclinic, Pala
2	Veterinary Polyclinic, Kanjirapally
3	Veterinary Polyclinic, Pariyaram
4	Veterinary Polyclinic.Changanacherry

### VETERINARY HOSPITALS

<b>Sl.No</b>	<b>Name of Institution</b>
1	Veterinary Hospital,Areeparambu
2	Veterinary Hospital,Chengalam
3	Veterinary Hospital,Erattupetta
4	Veterinary Hospital,Erumely
5	Veterinary Hospital,Ettumanoor
6	Veterinary Hospital,Kanakkary
7	Veterinary Hospital,Kattikunnu
8	Veterinary Hospital,Kidangoor
9	Veterinary Hospital,Kozha
10	Veterinary Hospital,Marangattupally
11	Veterinary Hospital,Mooleplackal
12	Veterinary Hospital,Nedumkunnam
13	Veterinary Hospital,Pampady

14	Veterinary Hospital,Ramapuram
15	Veterinary Hospital,Thalayazham
16	Veterinary Hospital,Thalayolaparambu
17	Veterinary Hospital,Vaikom
18	Veterinary Hospital,Vakathanam
19	Veterinary Hospital,Vazhoor

### **VETERINARY DISPENSARIES**

<b>Sl.No</b>	<b>Name of Institution</b>
1	Veterinary Dispensary, Anickadu
2	Veterinary Dispensary,Arpookkara
3	Veterinary Dispensary,Athirampuzha
4	Veterinary Dispensary,Ayarkunnam
5	Veterinary Dispensary,Champakara
6	Veterinary Dispensary,Chengalam(S)
7	Veterinary Dispensary,Chennad
8	Veterinary Dispensary,Kadanadu
9	Veterinary Dispensary,Kaduthuruthy
10	Veterinary Dispensary,Kallara
11	Veterinary Dispensary,Kanam
12	Veterinary Dispensary,Kooraly
13	Veterinary Dispensary,Kooroppa
14	Veterinary Dispensary,Kozhuvanal
15	Veterinary Dispensary,Koruthodu
16	Veterinary Dispensary,Kulathurprayar
17	Veterinary Dispensary, Kumarakom
18	Veterinary Dispensary, Kumaranalloor
19	Veterinary Dispensary, Kurichithanam
20	Veterinary Dispensary, Kurichy
21	Veterinary Dispensary, Madapally
22	Veterinary Dispensary, Marangoly
23	Veterinary Dispensary, Maravanthuruthu
24	Veterinary Dispensary, Mattakkara
25	Veterinary Dispensary, Meenadom
26	Veterinary Dispensary, Melampara
27	Veterinary Dispensary, Melukavu
28	Veterinary Dispensary, Memmury
29	Veterinary Dispensary, Moonnilavu
30	Veterinary Dispensary, Mulakulam
31	Veterinary Dispensary, Mundakayam

<b>Sl.No</b>	<b>Name of Institution</b>
32	Veterinary Dispensary, Mutholy
33	Veterinary Dispensary, Nattakom
34	Veterinary Dispensary, Neendoor
35	Veterinary Dispensary, Olessa
36	Veterinary Dispensary, Paika
37	Veterinary Dispensary, Paippadu
38	Veterinary Dispensary, Panachickad
39	Veterinary Dispensary, Parathanam
40	Veterinary Dispensary, Parathodu
41	Veterinary Dispensary, Ponthenpuzha
42	Veterinary Dispensary, Poonjar
43	Veterinary Dispensary, Puthuvely
44	Veterinary Dispensary, TV.Puram
45	Veterinary Dispensary, Teekoy
46	Veterinary Dispensary, Thalanad
47	Veterinary Dispensary, Thekkethukavala
48	Veterinary Dispensary, Thidanadu
49	Veterinary Dispensary, Thodanal
50	Veterinary Dispensary, Thottapally
51	Veterinary Dispensary, Thrikodithanam
52	Veterinary Dispensary, Thuruthy
53	Veterinary Dispensary, Udayanapuram
54	Veterinary Dispensary, Ullanad
55	Veterinary Dispensary, Uzhavoor
56	Veterinary Dispensary, Valavoor
57	Veterinary Dispensary, Vayala
58	Veterinary Dispensary, Vechoor
59	Veterinary Dispensary, Velloor
60	Veterinary Dispensary, Vijayapuram

## **FARMS**

<b>Sl.No</b>	<b>Name of Institution</b>
1	Regional Poultry Farm, Manarcad
2	Pig Breeding Farm, Kappad

## ANNEXURE 12: DETAILS OF GOVERNMENT LABS IN KOTTAYAM

Sl. No.	Name of Laboratory	Address	24×7 Services (Yes/No)	NABL / Govt Approved (Yes/No)	LSGD	CD block	Municipality
1	CHC Edamaruku	Edamaruk	No	No	Edamaruk	Edamaruk u	
2	FHC Moonilavu	Moornilav	No	No	Moornilav u	Edamaruk u	
3	FHC Poonjar	Poonjar	No	No	Poonjar	Edamaruk u	
4	PHC Teekoy	Teekoy	No	No	Teekoy	Edamaruk u	
5	PHC Thalanadu	Thalanadu	No	No	Thalanadu	Edamaruk u	
6	PHC Thalappalam	Thalappalam	No	No	Thalppalam	Edamaruk u	
7	HMC Clinical Lab	FHC Thalanad	No	No	Thalandu	Edamaruk u	
8	FHC Gvr Lab	Poonjar	No	No	Poonjar	Edamaruk u	
9	PHC Thidanadu	PHC Thidanadu	No	No	Thidanadu	Edamaruk u	
10	FHC Erattupetta	Aruvithura	No	No	Erattupetta	Edamaruk u	

1	BFHC 1 Edayazham	Vaikom – Vechoor Road, Edayazham, Thalayazham, Kerala 686144, India	No	No	Vechoor	Edayazham	
1	FHC 2 Thalayazham	Manjuraj.P,	No	No	Thalayazham	Edayazham	
1	FHC 3 Maravanthruthu	MTH	No	No	Maravanthurthu	Edayazham	
1	FHC 4 Udayanapuram	Nanadam	No	No	Udayanapuram	Edayazham	
1	FHC 5 Brahmamangalam	Brahmamangalam	No	No	Brahmamangalam	Edayazham	
1	PHC TV Puram	Parekattu	No	No	TV Puram	Edayazham	
1	THQH Vaikom	Vaikom	No	No	Vaikom	Edayazham	
1	CHC Erumely	Erumely	No	No	Erumely	Erumely	
1	FHC 9 Vizhikathodu	Fhc Vizhikathodu, Near Rvgvhss	No	No	Erumely	Erumely	
2	FHC Parathodu	Edakkunnam	No	No	Erumely	Erumely	
2	FHC 1 Mundakayam	Mundakayam	No	No	Erumely	Erumely	
2	FHC Koottickal	Koottickal	No	No	Erumely	Erumely	
2	FHC Manimala	Manimala	No	No	Erumely	Erumely	
2	FHC 4 Vizhikkithodu	Vizhikkathodu	No	No	Kanjirappally	Erumely	
2	FHC 5 Mundakkayam	Mundakayam	No	No	Mundakkayam	Erumely	
2	PHC 6 Parathanam	Parathanam	No	No	Koottickal	Erumely	
2	Fhc 7 Athirampuzha	Athirampuzha	No	No	Athirampuzha	Kumarakom	

28	Mch Kottayam	Athirampuzha	Yes	No	Athirampuzha	Kumarakom	
29	Ich Kottayam	Athirampuzha	Yes	No	Athirampuzha	Kumarakom	
30	Acr Lab	Opasite Gmch Casuality	Yes	No	Arpookkara	Kumarakom	
31	Dch Lab	Medical Collage Kottayam	No	No	Arpookkara	Kumarakom	
32	Hind Lab	Nnear Medical Collage	Yes	No	Arpookkara	Kumarakom	
33	Fhc Aymanam	Pulikuttusherry P.O	No	No	Aymanam	Kumarakom	
34	Fhc Onamthuruth	Onamthuruth	No	No	Neendoor	Kumarakom	
35	Chc Kumarakom	Kumarakom P O	No	No	Kumarakom	Kumarakom	
36	Fhc Thiruvvarpu	Fhc Thiruvvarppu	No	No	Thiruvvarppu	Kumarakom	
37	Hub Lab CHC Ullanad	Ullanad	No	No	Bharananganam	Lalam	
38	FHC Kadanad	Kadanad	No	No	Kadanadu	Lalam	
39	FHC Mutholy	Mutholy	No	No	Mutholy	Lalam	
40	PHC Kozhuvanal	Kozhuvanal	No	No	Kozhuvanal	Lalam	
41	FHC Meenachil	Meenachil	No	No	Meenachil	Lalam	
42	FHC Madappally	FHC Madappally	No	No	Madappally	Madappally	
43	CHC Vakathanam	Vakathanam	No	No	Vakathanam	Madappally	
44	GH Changanassery	General Hospital Changanassery	Yes	No	Changanassery Municipality	Madappally	
45	PHC Vazhappally	Vazhappally	No	No	Vazhappally	Madappally	

46	FHC Thrikkodithanam	Thrikkodithanam	No	No	Thrikkodithanam	Madappally	
47	FHC Paippad	Paippad	No	No	Paippad	Madappally	
48	FHC Thottakad	Thottakkad	No	No	Puthuppally	Pallom	
49	ESI Vadavathoor	Vadavathoor	No	No	Vijayapuram	Pallom	
50	PHC Puthuppally	Puthuppally	No	No	Puthuppally	Pallom	
51	CHCAyarkunnam	CHC Ayarkunnam	No	No	Ayarkunnam	Pallom	
52	Hmc Lab Sachivothamapuram	CHC Sachivothamapuram	No	No	Kurichy	Pallom	
53	FHC Parampuzha	Prampuzha	No	No	Vijayapuram	Pallom	
54	Thqh Pampady	Near Phc Mundankunnu , Manalunkal P O	No	No	Pampady	Pampady	
55	Pallickathodu Fhc Lab	Golden Jubilee Bldg, Oravackal-Koorali Rd	No	No	Pallikathodu	Pampady	
56	CHC Paika	Kanjamala Avanes, Opp.Govt Hospital, Paika, Poovarni P O	No	No	Elikkulam	Pampady	
57	FHC Manarcadu	Manarcadu	No	No	Manarcadu	Pampady	
58	CHC Koodalloor	Koodalloor	No	No	Kidangoor	Pampady	
59	FHC Kooropada	Kooroppada	No	No	Kooroppada	Pampady	
60	FHC Meenadam	Meenadom	No	No	Meenadom	Pampady	
61	CHC Thalayolaparambu HUB Lab	CHCThalayolaparambu	No	No	Thalayolaparambu	Thalayolaparambu	

62	CHC Arunoottimangalam	Arunoottimangalam	No	No	Mulakkulam	Thalayolapparambu	
63	PHC Peruva	Peruva Po.	No	No	Mulakkulam	Thalayolapparambu	
64	FHC Kattampak	Kattampack	No	No	Njeezhoor	Thalayolapparambu	
65	FHC Velloor	Velloor	No	No	Velloor	Thalayolapparambu	
66	PHC Kaduthuruthy	Kaduthuruthy	No	No	Kaduthurthy	Thalayolapparambu	
67	FHC Kallara	Kallara	No	No	Kallara	Thalayolapparambu	
68	FHC Kadaplamattom	Kadaplamattom	No	No	Kadaplamattom	Uzhavoor	
69	KRNMSH Uzhavoor	Uzhavoor	Yes	No	Uzhavoor	Uzhavoor	
70	Taluk Hospital Lab	Taluk Hospital Kuravilangad	No	No	Kuravilangadu	Uzhavoor	
71	FHC Kanakkary	Kanakkary	No	No	Kanakkary	Uzhavoor	
72	FHC Marangattupilly	Marangattupilly	No	No	Maragattupally	Uzhavoor	
73	FHC Veliyannoor	Veliyannoor	No	No	Veliyannoor	Uzhavoor	
74	FHC Ramapuram	Ramapuram	No	No	Ramapuram	Uzhavoor	
75	FHC Kuruppanthara	Manjoor PO, Kuruppanthara	No	No	Manjoor	Uzhavoor	
76	GH Kanjirappally	Kanjir Appall Y P.O	Yes	No	Chirakkadavu	Vazhoor	
77	FHC Vazhoor	Vazhoor P O	No	No	Vazhoor	Vazhoor	
78	FHC Karukachal	Karukachal	No	No	Karukachal	Vazhoor	
79	CHC Edayirikkapuzha	Edayarikkappuzha	No	No	Kangazha	Vazhoor	

80	PHC Nedumkunnam	Nedumkunnam	No	No	Nedumkunnam	Vazhoor	
81	FHC Vellavoor	Vellavoor	No	No	Vellavoor	Vazhoor	
82	GH Pala	GH Pala	Yes	No			Pala
83	GH Kottayam	GH Kottayam	Yes	No			Kottayam
84	FHC Nattakom	Nattakom	No	No			Kottayam
85	UPHC Veloor	Veloor	No	No			Kottayam
86	UPHC Perumbaikadu	Perumbaikadu PO Sankranthy	No	No			Kottayam
87	FHC Ettumanoor	Erttumanoor	No	No			Ettumanoor
88	UPHC Perunna	Perunna	No	No			Changanassery
89	RGCB Pala	Near Govt.Hospital Jn.	No	No			Pala

## ANNEXURE 13 : DETAILS OF PRIVATE LABS IN KOTTAYAM

S l. N o.	Name of Laboratory	Address	24×7 Serv ices (Yes /No)	NAB L/ Govt Appr oved (Yes/ No)	LSGD	CD block	Munic ipality
1	Next Care Clinical Laboratories, Paruthumpara	Paruthumpara	No	Yes	Panachik kad	Pallom	
2	Acare Diagnostic Centre	Paruthumpara	No	No	Panachik kad	Pallom	
3	Medihealth Laboratories ,Poovanthuruthu	Poovanthuruthu	No	Yes	Panachik kad	Pallom	
4	Gloria Diagnostic Centre Kollad	Kollad	No	Yes	Panachik kad	Pallom	
5	Gloria Diagnostic Centre ,Paruthumpara	Paruthumpara	No	Yes	Panachik kad	Pallom	
6	P G Purushan Vaidyar Ayurvedasthaan, Paruthumpara	Kuzhimattom	No	No	Panachik kad	Pallom	
7	Ardram Medical Centre,Paruthu mpara	Paruthumpara	No	No	Panachik kad	Pallom	
8	Parat	Puthuppally	Yes	Yes	Puthupp ally	Pallom	

9	Essential Diagnostic Centre	Puthuppally	No	No	Puthuppally	Pallom	
10	Microlab	Puthuppally	No	No	Puthuppally	Pallom	
11	Patho Care	Puthuppally	No	No	Puthuppally	Pallom	
12	DDRC	Puthuppally	No	No	Puthuppally	Pallom	
13	DDRC Illimoola Junction	DDRC Ayarkunnam, Illimoola Jn	No	No	Ayarkunnam	Pallom	
14	Accura Diagnostic Oravackal	Oravackal	No	No	Ayarkunnam	Pallom	
15	Divine Clinical Lab	Oravackal	No	No	Ayarkunnam	Pallom	
16	Mediline Lab	Ayarkunnam	No	No	Ayarkunnam	Pallom	
17	Life Line	Oravackal	No	No	Ayarkunnam	Pallom	
18	Medicure Dignosis	Thiruvanchoor	No	No	Ayarkunnam	Pallom	
19	Arnav	Oravackal	No	No	Ayarkunnam	Pallom	
20	DDRC	Vadavthoor	Yes	Yes	Vijayapuram	Pallom	
21	Sree Vinayaka Clinical Lab	Kalathipady	No	Yes	Vijayapuram	Pallom	
22	Ethan Lab	Kalathipady	No	Yes	Vijayapuram	Pallom	
23	Sr Lab & Dignostic Centre	Kosamattom	No	Yes	Vijayapuram	Pallom	
24	Carewell Laboratories	Moscow	No	Yes	Vijayapuram	Pallom	
25	Modern Clinic Lab	Mandiramkavala Kurichi	No	Yes	Kurichy	Pallom	
26	Well Fast	Mandiramkavala Kurichi	No	Yes	Kurichy	Pallom	
27	Multi Chek	Out Post Kurichi	No	Yes	Kurichy	Pallom	

28	Jeejo Clinic	Mandiramkavala Kurichi	No	Yes	Kurichy	Pallom	
29	Mangalm	Mandiramkavala Kurichi	No	Yes	Kurichy	Pallom	
30	Neethi Lab Private	Neethi Lab Thalanadu	No	No	Thalandu	Edamaruku	
31	Arun Lab	Panachipara Poonjar	No	No	Poonjar	Edamaruku	
32	New Modern Diagnostic	Parackal Building Moonnilavu	No	Yes	Moonilavu	Edamaruku	
33	Orbislives	Panackapalam, Thalappalam	No	Yes	Thalappalam	Edamaruku	
34	Neethi Medicas	Amal	No	No	Poonjar Thekkekkara	Edamaruku	
35	Kallattu Medical	Melbin	No	No	Poonjar Thekkekkara	Edamaruku	
36	Muttathil Drug House	Surendran	No	No	Poonjar Thekkekkara	Edamaruku	
37	Jana Oushi	Poonjar	No	No	Poonjar Thekkekkara	Edamaruku	
38	Sevana Lab	Sevana Clinic	No	No	Teekoy	Edamaruku	
39	Amala Laboratory	Thidnadu	No	Yes	Thidanadu	Edamaruku	
40	CSC Neethi	Thidanadu	No	Yes	Thidanadu	Edamaruku	
41	Health Care Diagnostic Centre Edamaruku	Muringal Building Edamaruku N P O	No	Yes	Edamaruku	Edamaruku	
42	VDCL Laboraratory	Melukavumattom P O Melukavu	No	Yes	Edamaruku	Edamaruku	
43	PMC	Thekkekkara	Yes	No	Erattupetta	Edamaruku	
44	Sunrise	Vadakkekara	Yes	No	Erattupetta	Edamaruku	
45	Kisco	Aruvithura	No	No	Erattupetta	Edamaruku	

46	DDRC	Thekkekkara	No	No	Erattupetta	Edamaruku	
47	VDCL	Central Jn.	No	No	Erattupetta	Edamaruku	
48	Thanal	Mes Jn.	No	No	Erattupetta	Edamaruku	
49	Neethi	Thekkekkara	No	No	Erattupetta	Edamaruku	
50	Micro Lab	Mukkoottuthara	No	Yes	Erumely	Erumely	
51	Life Care Diagnostics	Mukkoottuthara	No	Yes	Erumely	Erumely	
52	Binumedi Lab	Erumely	No	Yes	Erumely	Erumely	
53	Life Care Diagnostics	Kanamala	No	Yes	Erumely	Erumely	
54	Refa Medical Lab	Mukkoottuthara	No	Yes	Erumely	Erumely	
55	Jeevan Care	Mukkoottuthara	No	Yes	Erumely	Erumely	
56	Binumedi Lab	Mukootuthara	No	Yes	Erumely	Erumely	
57	Ideal Lab	Erumely	No	Yes	Erumely	Erumely	
58	Escob	Erumely	No	Yes	Erumely	Erumely	
59	Alphonsa Lab	Mukootuthara	No	Yes	Erumely	Erumely	
60	Modern Lab	Chenappady	No	Yes	Erumely	Erumely	
61	Life Gre Lab	Chenappady	No	Yes	Erumely	Erumely	
62	Microlab Manimala	Microlab	No	Yes	Erumely	Erumely	
63	St Thomas Health Care	St,Thomas	No	Yes	Erumely	Erumely	
64	Modernlab Manimala	Modern Lab Manimala	No	Yes	Erumely	Erumely	
65	DDRC Manimala	Ddrc Manimala	No	Yes	Erumely	Erumely	
66	Mithra Lab Manimala	Mithra Lab Manimala	No	Yes	Erumely	Erumely	
67	Modern Lab	C/O Renju P. S Vizhikathodu	No	No	Erumely	Erumely	
68	Amritha Lab	Omanammal	No	No	Erumely	Erumely	
69	Care N Care Diagnostic Center, Koovappaly	Vishnu C Viswanath	No	No	Erumely	Erumely	

70	Ideal Lab Kanjirappally	Kunnumbhagam	No	No	Erumely	Erumely	
71	Amala Clinic	Kalaketty	No	No	Erumely	Erumely	
72	Alshifa Lab	1Stmile	No	No	Erumely	Erumely	
73	Mam Lab	Kanjirappally	No	No	Erumely	Erumely	
74	Karunya Lan	Kanjirappally	No	No	Erumely	Erumely	
75	Mqmh	26 Mile	Yes	Yes	Erumely	Erumely	
76	High Range	Parathodu	No	No	Erumely	Erumely	
77	Holy Cross	Koovappally	No	No	Erumely	Erumely	
78	Modern Lab	Edakkunnam	No	No	Erumely	Erumely	
79	Life Care	Edakkunnam	No	No	Erumely	Erumely	
80	Binumedi Lab	Parathodu	No	No	Erumely	Erumely	
81	Medilife	Parathodu	No	No	Erumely	Erumely	
82	Modern Lab	Parathodu	No	No	Erumely	Erumely	
83	Anna Lab	Pallipadi	No	No	Erumely	Erumely	
84	We Care	Koovappally	No	No	Erumely	Erumely	
85	AGM Lab	Chittadi	No	No	Erumely	Erumely	
86	Ideal Lab	Parathodu	No	No	Erumely	Erumely	
87	Mary S Clinical Laboratory	Parathanam	No	No	Erumely	Erumely	
88	Aswathy Clinical Lab	Yendayar	No	No	Erumely	Erumely	
89	Devine Lab	Yendayar	No	No	Erumely	Erumely	
90	Amala Lab	Kootickal	No	No	Erumely	Erumely	
91	Ansu Lab	Kootickal	No	No	Erumely	Erumely	
92	Santhwanam Medical Centre & Laboratory	Santhwanam Medical Centre & Laboratory, Madukka	Yes	Yes	Erumely	Erumely	
93	Karunabhavan Medical Centre	Karunabhavan Medical Centre, Pallipady	Yes	Yes	Erumely	Erumely	
94	Ans Clinical Laboratory	Ans Clinical Laboratory, Koruthodu	No	No	Erumely	Erumely	
95	SB Laboratory	Sb Laboratory, Madukka	No	No	Erumely	Erumely	

96	DDRC Agilus Pathlabs Ltd.	Thalayolaparambu	No	No	Thalayola parambu	Thalayola parambu	
97	Life Line Clinical Laboratory	Thalayolaparambu	No	No	Thalayola parambu	Thalayola parambu	
98	Neethi Arogya, Vadayar	Thalayolaparambu	No	No	Thalayola parambu	Thalayola parambu	
99	DDC Pvt.Ltd, Thalayolaparambu	Thalayolaparambu	No	No	Thalayola parambu	Thalayola parambu	
100	Darsana Clinical Laboratory	Thalayolaparambu	No	No	Thalayola parambu	Thalayola parambu	
101	Fast Diagnostic Centre	Thalayolaparambu	No	No	Thalayola parambu	Thalayola parambu	
102	TCS Neethi Lab	Traders complex, Kaduthuruthy PO	No	Yes	Kaduthuruthy	Thalayola parambu	
103	Welfast Medilab Kaduthuruthy	Kadapooran complex	No	Yes	Kaduthuruthy	Thalayola parambu	
104	DDRC Kaduthuruthy	Marymatha shopping complex Kaduthuruthy	No	Yes	Kaduthuruthy	Thalayola parambu	
105	Aster labs muttuchira	Kadapooran building	No	Yes	Kaduthuruthy	Thalayola parambu	
106	Microlabs	Central junction muttuchira	No	Yes	Kaduthuruthy	Thalayola parambu	
107	VCARE Laboratory	Puthenp Alli, Kallara Po	No	Yes	Kallara	Thalayola parambu	
108	Jayamatha Clinical Laboratory	SNDP Building Kallara	No	Yes	Kallara	Thalayola parambu	
109	Amritha Clinical Laboratory	Kallara South	No	Yes	Kallara	Thalayola parambu	
110	St Marys Laboratory	Kallara	No	Yes	Kallara	Thalayola parambu	
111	Sr Labotatories	Kallara	No	Yes	Kallara	Thalayola parambu	
112	Max Clinical Lab	Vadakara	No	No	Velloor	Thalayola parambu	

113	Ammas Clinical Lab	Velloor	No	No	Velloor	Thalayola parambu	
114	V Care Diagnostic Lab	Velloor	No	No	Velloor	Thalayola parambu	
115	Aruna Lab	Varikkamkundu	No	No	Velloor	Thalayola parambu	
116	Medcare	Arunoottimangalam	No	Yes	Mulakkulam	Thalayola parambu	
117	Medilife	Arunoottimangalam	No	Yes	Mulakkulam	Thalayola parambu	
118	Welness Point	Moorkattipadi, Peruva	No	Yes	Mulakkulam	Thalayola parambu	
119	Matha Winpath	Peruva PO	No	Yes	Mulakkulam	Thalayola parambu	
120	Polylab Clinical Laboratory	Peruva PO	No	Yes	Mulakkulam	Thalayola parambu	
121	Perumali Lab	Peruva PO	No	Yes	Mulakkulam	Thalayola parambu	
122	Micro Lab	Peruva PO	No	No	Njeezhoor	Thalayola parambu	
123	Neethi Lab	Neethi Lab Kuravilangad	No	No	Kuravilangadu	Uzhavoor	
124	DDRC Agilus	Ddrc Agilus Kuravilangad	Yes	No	Kuravilangadu	Uzhavoor	
125	Aashirvad Clinical Lab	3Aashirvad Clinical Lab Kuravilangad	No	Yes	Kuravilangadu	Uzhavoor	
126	Aster Clinical Lab	Aster Clinical Lab, Kuravilangad	No	Yes	Kuravilangadu	Uzhavoor	
127	St.Jude Kanakkary	Kanakkary	No	No	Kanakkary	Uzhavoor	
128	Aster Lab	Vempally	No	No	Kanakkary	Uzhavoor	
129	St.Marys	Vedagiri	No	No	Kakakkari	Uzhavoor	
130	DDC Kanakkary	Kanakkary	No	No	Kakakkari	Uzhavoor	
131	Palm Shade	Kanakkary	No	No	Kakakkari	Uzhavoor	
132	St.Marys Lab	Kadaplamattam	No	No	Kadaplamattom	Uzhavoor	

133	Medicare Lab	Kadaplamattam	No	No	Kadaplamattom	Uzhavoor	
134	Medicare Lab	Vayala	No	No	Kadaplamattom	Uzhavoor	
135	Pathodoc Lab	Vayala	No	No	Kadaplamattom	Uzhavoor	
136	St.Marys Laboratory	Marangattupilly	No	No	Maragattupally	Uzhavoor	
137	Medicare	Marangattupilly	No	Yes	Maragattupally	Uzhavoor	
138	Smile Medical Laboratory	Olickal Building, Kurianadu	No	Yes	Maragattupally	Uzhavoor	
139	SS Clinical Laboratory	Areekkara	No	No	Veliyannoor	Uzhavoor	
140	Polylab	Puthuvely	Yes	Yes	Veliyannoor	Uzhavoor	
141	Grace Care Mother Lab	Veliyannoor	No	No	Veliyannoor	Uzhavoor	
142	Evershine Diagnostics	Ramapuram	No	Yes	Ramapuram	Uzhavoor	
143	St.Marys Laboratory	Ramapuram	No	Yes	Ramapuram	Uzhavoor	
144	DDRC Agilus Diagnostics	Ramapuram	No	Yes	Ramapuram	Uzhavoor	
145	Asin Diagnostics	Ramapuram	No	Yes	Ramapuram	Uzhavoor	
146	Neethi Medical Laboratory	Ramapuram	No	Yes	Ramapuram	Uzhavoor	
147	Poly Lab	Ramapuram	No	Yes	Ramapuram	Uzhavoor	
148	Kisco Cenmark Diagnostic Centre	Ramapuram	No	Yes	Ramapuram	Uzhavoor	
149	DDRC	Pallikunnel Buildings Uzhavoor	No	No	Uzhavoor	Uzhavoor	
150	Patho DOC	Opp. Krmsh Uzhavoor	No	No	Uzhavoor	Uzhavoor	

151	Care Well Dignostices	Vijay Complex M C Road Monippally	No	No	Uzhavoor	Uzhavoor	
152	Smile Clinics And Lab	Monippally	No	No	Uzhavoor	Uzhavoor	
153	Pulse Laboratory	Opposite KRNMS Uzhavoor	No	No	Uzhavoor	Uzhavoor	
154	Grace Care St Marys Laboratory And Ecg	Ellenkiyil Building Uzhavoor	No	No	Uzhavoor	Uzhavoor	
155	Doctors Diagnostic & Consultation Centre(DDCC) Kothanalloor	Doctors Diagnostic & Consultation Centre(Ddc C) Kothanalloor	No	No	Manjoor	Uzhavoor	
156	DDRC Clinical Laboratory, Manjoor	DDRC Clinical Laboratory, Manjoor	No	Yes	Manjoor	Uzhavoor	
157	Medmix Multi Clinical Laboratory,Manjoor	Medmix Multi Clinical Laboratory ,Manjoor	No	No	Manjoor	Uzhavoor	
158	Micro Labs, Kuruppanthara	Micro Labs, Kuruppanthara	No	No	Kuruppu mthara	Uzhavoor	
159	X'Pal Clinical Laboratory, Kuruppanthara	X'Pal Clinical Laboratory, Kuruppanthara	No	No	Kuruppu mthara	Uzhavoor	
160	Mother Theresa Clinical Laboratory, Kuruppanthara	Mother Theresa Clinical Laboratory, Kuruppanthara	No	No	Kuruppu mthara	Uzhavoor	
161	Santhitheeram Medical Laboratory,Kuruppanthara	Santhitheer Am Medical Laboratory, Kuruppanth Ara	No	No	Kuruppu mthara	Uzhavoor	
162	Madona Diagnostic Centre, Kuruppanthara	Madona Diagnostic Centre, Kuruppanthara	No	No	Kuruppu mthara	Uzhavoor	

163	Madona Diagnostic Centre, Chamakkala	Madona Diagnostic Centre, Chamakkal A	No	No	Kuruppmthara	Uzhavoor	
164	Twins Clinical Laboratory	Jessymol Thomas, Bhararanganam	No	Yes	Bharanganam	Lalam	
165	Smart Mediplus Laboratory	Bharanganam	No	No	Bharanganam	Lalam	
166	Health Care Diagnostic Centre	Pravithanam	No	No	Bharanganam	Lalam	
167	Medicare Laboratory	Medicare Laboratory Valavoor	No	Yes	Karoor	Lalam	
168	K.A.P.K Neethi Laboratory	K A P K Neethi Laboratory Kudakkachira	No	Yes	Karoor	Lalam	
169	MD Lab	Aimcomb	No	Yes	Kadanadu	Lalam	
170	Bovision Medical Laboratory	Kurumannu	No	Yes	Kadanadu	Lalam	
171	Meditrust Laboratory	Poovakulam Buildings, Near Ksfe Kozhuvanal 686573 Meditrustlaboratory@Gmail.Com	No	No	Kozhuvanal	Lalam	
172	Meditrust Laboratory	Poovakulam Buildings, Near Ksfe Kozhuvanal 686573 Meditrustlaboratory@Gmail.Com	No	No	Kozhuvanal	Lalam	
173	Meditrust Laboratory	Lakshmi Building, Paika	No	No	Meenachil	Lalam	
174	Speciality Diagnostic Centre	St.Xaviers Complex, Paika	No	No	Meenachil	Lalam	
175	DDRC Agilus Diagnostics	Poovarany, Paika	No	No	Meenachil	Lalam	
176	Vypana Clinic	Mutholy	No	Yes	Mutholy	Lalam	

177	KISCO Diagnostic	Near Government Hospital,Pala	No	No			Pala
178	Municipal Lab	Municipal Complex	No	No			Pala
179	Patho Care	7Th Mile Velloor	No	Yes	Meenadom	Pampady	
180	Biovision	Kallepurakkal	No	Yes	Meenadom	Pampady	
181	Spectra Diagnostic	Dr.Sajathmuhammed	No	Yes	Pampady	Pampady	
182	Neethi Lab	Jinto Mathew	No	Yes	Pampady	Pampady	
183	Scanron	Dr Sajimon	Yes	Yes	Pampady	Pampady	
184	DDRC	Pampady	Yes	Yes	Pampady	Pampady	
185	Dianova	Pampady	No	Yes	Pampady	Pampady	
186	Micro Lab	Mundankunnu , Manalunkal P O	Yes	Yes	Pampady	Pampady	
187	Modern Computerised Laboratory	Co- Operative Bank Building , Chengaam East P O	No	Yes	Akalamkunnu	Pampady	
188	V- Care Medi Lab	Manal Jn , Mattakkara	No	Yes	Akalamkunnu	Pampady	
189	Modern Computerised Laboratory	Manoorpally Jn , Mattakkara	No	Yes	Akalamkunnu	Pampady	
190	Nayana Memorial Advanced Medical Laboratory	Lakkattoor	No	Yes	Akalamkunnu	Pampady	
191	Mini Memorial Lab	Lakkattoor	No	Yes	Akalamkunnu	Pampady	
192	Sree Krishna Laboratory	Kooroppada	No	No	Kooroppada	Pampady	
193	Anugraha Lab	Kooroppada	No	No	Kooroppada	Pampady	
194	Anugraha Lab	Vattukalam	No	No	Kooroppada	Pampady	

195	Neethi Lab	Kooroppada	No	No	Kooroppada	Pampady	
196	Mr.Care Clinical Lab	Fhc Pallickathodu, Kottayam	No	No	Kooroppada	Pampady	
197	Deepthy Diagnosis Centre	Building 2/370, Pallickathodu	No	No	Kooroppada	Pampady	
198	Ddrc Agilus Pathlabs	Pallickathodu Junction	No	Yes	Pallikathodu	Pampady	
199	Arfscb Biomedical Lab	Near Federal Bank, Pallickathodu	No	Yes	Pallikathodu	Pampady	
200	V Care Medi Lab	Mundankunnu, Pallickathodu	No	Yes	Pallikathodu	Pampady	
201	Krupa Clinical Lab	Chc Paika Poovarni Po Paika	No	Yes	Pallikathodu	Pampady	
202	Modern Laboratory	Kanjamala Avanes, Opp.Govt Hospital, Paika Poovarni P O	No	Yes	Pallikathodu	Pampady	
203	Speciality Diagnostic Centre	Koprakalam, Narianani P O	No	No	Elikkulam	Pampady	
204	Amala Doctors Laboratory	Koorali	No	No	Elikkulam	Pampady	
205	Cicilamma John Memorial Good Samaritan Hospital	Kanjamala Avanes, Opp.Govt Hospital, Paika, Poovarni P O	No	No	Elikkulam	Pampady	
206	Lourd Matha Ayurvedic Clinic&Lab	Koorali P O	No	No	Elikkulam	Pampady	
207	Amala Laboratory	Manarcadu	No	No	Elikkulam	Pampady	
208	Amala Doctors Laboratory	Manarcadu	No	No	Elikkulam	Pampady	

209	St. Marrys	Manarcadu	Yes	Yes	Manarcadu	Pampady	
210	Base	Manarcadu	No	Yes	Manarcadu	Pampady	
211	Cardiff	Manarcadu	No	Yes	Manarcadu	Pampady	
212	DDRC	Ddrc Agillus Kidangoor	Yes	Yes	Manarcadu	Pampady	
213	M Doctor Lab	Med Service Diagnostic Centre Koodalloor	No	Yes	Manarcadu	Pampady	
214	Ddrc Agillus Kidangoor	We Care Medical Lab Cherpunkal	No	Yes	Kidangoor	Pampady	
215	Med Service Diagnostic Centre Koodalloor	Bharath Medical Centre Cherpunkal	No	Yes	Kidangoor	Pampady	
216	We Care Medical Lab Cherpunkal	Neethi Medical Lab Kidangoor	No	Yes	Kidangoor	Pampady	
217	Bharath Medical Centre Cherpunkal	Cherpunkal	No	Yes	Kidangoor	Pampady	
218	Neethi Medical Lab Kidangoor	Kidangoor	No	Yes	Kidangoor	Pampady	
219	High Tech Lab	Munda Thana M	No	Yes	Kangazha	Vazhoor	
220	Medicare Lab	Pathana Du	No	No	Kangazha	Vazhoor	
221	Micro Lab	Pathana Du	No	Yes	Kangazha	Vazhoor	
222	Care For Life	Vadikke Dathu Bulding, Kangazha	No	No	Kangazha	Vazhoor	
223	Travancore Life Lab	Kanam	No	No	Kangazha	Vazhoor	
224	We Care Lab	Edayirik KapuCHA	No	Yes	Kangazha	Vazhoor	
225	New Life Lab	Edayirik KapuCHA	No	Yes	Kangazha	Vazhoor	

22 6	Scanron Diagnostic S	Manim Ala	No	Yes	Vellavoor	Vazhoor	
22 7	Life Care Diagnostic Centre	Kovoor Building Manimala	No	Yes	Vellavoor	Vazhoor	
22 8	Neethi Medical Lab (Gloria Medical Lab)	Pulickalkavala P O, Vazhoor	No	No	Vazhoor	Vazhoor	
22 9	Amala Laboratories	Pulickalkavala P O, Vazhoor	No	No	Vazhoor	Vazhoor	
23 0	Binu Med Lab	Chamampathal P O	No	No	Vazhoor	Vazhoor	
23 1	Ddrc Agilus Diagnostics	Kodungoor, Vazhoor P O	No	No	Vazhoor	Vazhoor	
23 2	Micro Lab	Kodungoor, Vazhoor P O	No	Yes	Vazhoor	Vazhoor	
23 3	Pooja Clinical Laboratory	Kodungoor, Vazhoor P O	No	No	Vazhoor	Vazhoor	
23 4	Medicare Clinical Lab	Medicareblab Nedumkunna M	No	Yes	Nedumkunnam	Vazhoor	
23 5	EDC Lab	Ede Lab Karukachal	No	No	Karukachal	Vazhoor	
23 6	Neethi Medical Lab	Neethi Medical Lab Nedumkunnam	No	No	Nedumkunnam	Vazhoor	
23 7	DDRC	DDRC Karukachal	No	No	Karukachal	Vazhoor	
23 8	Grace Diagnostic Centre	Grace Diagnostic Centre Nedumkunnam	No	No	Nedumkunnam	Vazhoor	
23 9	Micro Lab	Near Police Station, Karukachal	No	No	Karukachal	Vazhoor	
24 0	Micro Lab	Near Chc Karukachal, Karukachal	No	No	Karukachal	Vazhoor	
24 1	DDRC	Near Mercy Nursing Home, Karukachal, Kottayam, Kerala	No	Yes	Karukachal	Vazhoor	

24 2	Scanron	Aiswarya Building , Near Treasury Karukachal.	No	Yes	Karukacha l	Vazhoor	
24 3	DDRC	DDRC Kanjikuzhy Kottayam	No	Yes			Kottaya m
24 4	Kosamattom Health Care And Speciality Centre	Kosamattom	No	Yes			Kottaya m
24 5	Bharat Hospital Kottayam	Bharat Hospital Kottayam	Yes	Yes			Kottaya m
24 6	Sh Medical Centre Kottayam	Sh Medical Centre Kottayam	Yes	Yes			Kottaya m
24 7	Bhavana Hospital Kottayam	Bhavana Hospital Kottayam	No	No			Kottaya m
24 8	Medi Xpress Hospital Thiruvathikal Kottayam	Medic Xpress Hospital Thiruvathikal Kottayam	No	No			Kottaya m
24 9	Dianova Laboratories	St-Mary'S Building, Medical College	No	No			Kottaya m
25 0	DDRC Agilus	DDRC Agilus Gandhinagar Po Kottayam	No	No			Kottaya m
25 1	Susrusha Hospital Pvt Varisseri 8157007262	Susrusha Hospital Varisseri	No	No			Kottaya m
25 2	Mediscans	Mediscans Chemmanampady	No	No			Kottaya m
25 3	Neethi Lab	Neethi Lab Kollamkizhakkethi l Arcade	No	Yes			Kottaya m
25 4	SH Laboratory	Mudiyoorcara Gandhinagar	No	No			Kottaya m
25 5	DDRC Sankranthy	Othalatuhumoottil Building Sankranthy	No	No			Kottaya m

256	CMC Hospital	Perumbaikadu P O Sankranthy	No	No			Kottayam
257	E&I Lab	Municipal Building Kumaranalloor	No	Yes			Kottayam
258	Microlab Scan & Diagnostics	Chingavanam	No	Yes			Kottayam
259	Micro Lab Private Manipuzha	Manipuzha	No	Yes			Kottayam
260	Nissan'S Healthcare Lab	Chettikunnu	No	No			Kottayam
261	Perfect Clinical Lab	Chingavanam	No	No			Kottayam
262	Amma Lab	Pakkil	No	No			Kottayam
263	Life Care Lab	Moolavattom	No	No			Kottayam
264	Star Care Medi Lab	Chirayil Vees Arcade, Pakkil	No	No			Kottayam
265	Metropolis	Nattakom	No	No			Kottayam
266	DDRC Agilus	DDRC Agilus Gandhinagar Po Kottayam	Yes	No			Kottayam
267	Medicure Diagnostis Centre	Kunnel Building Thuthooty In, Kumaranalloor. Kottayam	Yes	No			Kottayam
268	Maithri Clinic	Muckachir Atower,Perumpuzha	No	No	Athirampuzha	Kumarakom	
269	Aster Labs	Opposite Sulabha Market,Thellakom	No	No	Athirampuzha	Kumarakom	
270	All Care Diagnostic Centre	Maliyekal Building,Mannanam P O	No	No	Athirampuzha	Kumarakom	
271	University Health Centre	Near M G University, Pd Hill,Athirampuzha	No	No	Athirampuzha	Kumarakom	

27 2	Panmed Health Care	Peed Plaza,Opp Mg University	No	No	Athirampuzha	Kumarakom	
27 3	Star Laboratory	Kunnel Building,Near Fhc Athirampuzha	No	No	Athirampuzha	Kumarakom	
27 4	Asin Labs	Opp.Fhc Athirampuzha,Mc Road	No	No	Athirampuzha	Kumarakom	
27 5	Mitera Hospital	State High 1,Thellakom Kottayam	No	No	Athirampuzha	Kumarakom	
27 6	Dianova Laboratories	St Maries Building,M Medical College	Yes	No	Athirampuzha	Kumarakom	
27 7	Dianova Laboratories	Ianova Laboratarie S,Nearmch	Yes	No	Athirampuzha	Kumarakom	
27 8	Ddrc Agilus	Kakkanattu Building, Opposite St. Mary'S Ghs, Church Junction, Athirampuzha, Kottayam, Kerala 686562	No	No	Athirampuzha	Kumarakom	
27 9	Sankar Diagnostics	Kasturba Junction,Arpookara	No	No	Arpookkara	Kumarakom	
28 0	Mahitha Clinics And Lab	Thonnamkuzhy ,Arpokara	No	No	Arpookkara	Kumarakom	
28 1	Ddrc Agilus Diagnostics	Opposite Gmch	Yes	No	Arpookkara	Kumarakom	
28 2	Marian Clinical Laboratory	Karipooth Attu,Arpoo Kara	No	No	Arpookkara	Kumarakom	
28 3	Aster Lab	Mariyathurthu P.O	No	Yes	Aymanam	Kumarakom	
28 4	Mariyan Clinical Labortary	Mariyathuruthu P.O	No	No	Aymanam	Kumarakom	
28 5	V Care Diagonostics	Mariyathuruth P.O	No	No	Aymanam	Kumarakom	

286	Ddrc Lab	Aymanam P.O	No	No	Aymanam	Kumarakom	
287	Kims Hospital	Ththootty Jn, Kudamalloor P O	Yes	Yes	Aymanam	Kumarakom	
288	Amritha Advanced Clinical Lab	Arackkal Building, Pravattom	No	No	Neendoor	Kumarakom	
289	Central Laborateries	Illathhuparambil Building ,Pravattom	No	No	Neendoor	Kumarakom	
290	Ddc 1 Labs And Ecg	Kuruvachan Building, Parepalli	No	No	Neendoor	Kumarakom	
291	Happy Diaganostic Center	Toms Arcade, Kaipuzha	No	No	Neendoor	Kumarakom	
292	V Care Diagnostic	Dhuva Arcade ,Shasthngal	No	No	Neendoor	Kumarakom	
293	Modern Laboratory	Kumarakom P O	No	Yes	Kumarakom	Kumarakom	
294	Sn Clinical Laboratory	Kumarakom P O	No	Yes	Kumarakom	Kumarakom	
295	Matha Lab	Kumarakom P O	No	Yes	Kumarakom	Kumarakom	
296	Quality Lab	Kumarakom P O	No	Yes	Kumarakom	Kumarakom	
297	Karikkathara Lab	Kumarakom P O	No	Yes	Kumarakom	Kumarakom	
298	Hi – Tec Lab	Divya Kalathukadavu Chengalam	No	Yes	Thiruvarpu	Kumarakom	
299	Sankaramangalam	Sunilkumar	No	Yes	Thiruvarpu	Kumarakom	
300	Micron	Fathima Darul Afgar Kummanam	No	Yes	Thiruvarpu	Kumarakom	
301	Medilife Care	Anu Mol K S Thaiparambil Veloor	No	Yes	Thiruvarpu	Kumarakom	
302	Bio Vision	Monisha Kochupalathara	No	Yes	Thiruvarpu	Kumarakom	
303	Mediline Laboratories	Near Ksrct Stand, Mc Road	No	Yes			Ettumanoor

304	Ddrc	Near Vimala Hospital, Mc Road	No	Yes			Ettumanoor
305	Neethi Medical Lab	Mc Road	No	Yes			Ettumanoor
306	Ddrc Agilus	Pala Road	No	Yes			Ettumanoor
307	Jenaseva	Opposite Ioc Petrol Pump, Edayazham, Vaikom, Kottayam – 686141, Kerala	No	Yes	Vechoor	Edayazham	
308	KMS Lab	Thalayazham, Vaikom – Vechoor Road, Edayazham, Kottayam – 686144, Kerala	No	Yes	Vechoor	Edayazham	
309	Roshini Lab	-	No	Yes	Vechoor	Edayazham	
310	Lab		No	Yes	Vechoor	Edayazham	
311	Amg Medical Lab	Beena Prasanth	No	Yes	Thalayazham	Edayazham	
312	D&D Clinical Lab, Thalayazham	Ambika	No	No	Thalayazham	Edayazham	
313	DDC Pathlab	Jisha Peter	No	No	Thalayazham	Edayazham	
314	Alpha Clinical Laboratory		No	No	Thalayazham	Edayazham	
315	Aswin Lab	MTH	No	No	Maravanthurthu	Edayazham	
316	Aswin Lab	MTH	No	No	Maravanthurthu	Edayazham	
317	Ponnamma	MTH	No	No	Maravanthurthu	Edayazham	
318	Indo American	Udayanapuram	No	No	Maravanthurthu	Edayazham	
319	Faith'S Lab	Brahmamangalam	No	No	Udayanapuram	Edayazham	

320	Central Laboratories	Brahmamangalam	No	No	Brahmamangalam	Edayazham	
321	DDC Path Lab	Brahmamangalam	No	No	Brahmamangalam	Edayazham	
322	Rohini Lab	Brahmamangalam	No	No	Brahmamangalam	Edayazham	
323	St.Alphonsa Lab	TV Puram	No	No	Brahmamangalam	Edayazham	
324	St.George Hospital	TV Puram	No	No	TV Puram	Edayazham	
325	Bioline Clinical Lab		No	No	TV Puram	Edayazham	
326	Micro Lab	Binu K Thomas	No	Yes	Madappally	Madappally	
327	DRoyal Clinical Lab	Aneeshmon	No	No	Madappally	Madappally	
328	Medical Mission Hospital	Dr.Muhammad Shebeer	No	No	Madappally	Madappally	
329	Divine Diagnostic	Binumol Alex	No	No	Madappally	Madappally	
330	R R Lab	Sreekumar	No	No	Madappally	Madappally	
331	DDRC Aginus Path Lab LTD	Divya John	No	No	Madappally	Madappally	
332	LifeCare Clinical	Arun Babu	No	No	Madappally	Madappally	
333	Anjali Clinical Lab	Sunimol Johnson	No	No	Madappally	Madappally	
334	Dia Lab	Shiny Mathew Near Arpitha Hospital	No	No	Paippad	Madappally	
335	Steller Lab	Kochuppally	No	No	Paippad	Madappally	
336	Marian Diagnostic Centre	Nalukody	No	No	Paippad	Madappally	
337	Aster Labs	Kottamuri ,Tkdm	No	Yes	Thrikkodithanam	Madappally	
338	Joyal	Kunnumpuram Tkdm	No	Yes	Thrikkodithanam	Madappally	

339	Medicare Clinical Laboratory	Kottamuri ,Tkdm	No	Yes	Thrikkodit hanam	Madappally	
340	Modern Lab	Kottamuri ,Tkdm	No	Yes	Thrikkodit hanam	Madappally	
341	Royal	Kunnumpuram Tkdm	No	Yes	Thrikkodit hanam	Madappally	
342	SH Clinical Laboratory	Kottamuri ,Tkdm	No	Yes	Thrikkodit hanam	Madappally	
343	WeCare	Mukkattupadi,	No	Yes	Thrikkodit hanam	Madappally	
344	Medivision Diagnostic centre	Vakathanam	No	Yes	Vakathanam	Madappally	
345	Microlab	Vakathanam	No	Yes	Vakathanam	Madappally	
346	Care & Cure Diagnostic	Vakathanam	No	Yes	Vakathanam	Madappally	
347	Ushas Laboratory	Vakathanam	No	Yes	Vakathanam	Madappally	
348	DDRC Agilus Diagnostics	Vakathanam	No	No	Vakathanam	Madappally	
349	Unicare Lab	Vakathanam	No	No	Vakathanam	Madappally	
350	MGM Clinical Lab	Vakathanam	No	Yes	Vakathanam	Madappally	
351	St. Joseph's Clinical Laboratory	Vakathanam	No	No	Vakathanam	Madappally	
352	Amar Medi Lab	Thottakkadu	No	No	Vakathanam	Madappally	
353	Biomission Lab Madukkummoodu	Madukkummoodu	No	No	Vazhappally	Madappally	
354	DDRC Kurissummoodu	Kurissummoodu	No	Yes	Vazhappally	Madappally	
355	Christeena Lab Vakkachanpadi	Vakkachanpadi Kurissummoodu	No	No	Vazhappally	Madappally	

356	Amala Diagnostic Centre	Main Road, Changanacherry	No	No			Changanasserry
357	DDRC	Changanasserry	No	No			Changanasserry
358	Modern Clinical Lab	Near Government Hospital, Changanacherry	No	No			Changanasserry
359	Beena Clinical Lab	Moolayil Building, Near Governmet Hospital, Hospital Road, Changanacherry	No	No			Changanasserry
360	St. Antony's Clinical Lab	Near Government Hospital, Changanacherry	No	No			Changanasserry
361	Baby's Clinical Laboratory	Stadium Rd, Changanassery	No	No			Changanasserry
362	Devine Clinical Lab	Near Government Hospital, Changanacherry	No	No			Changanasserry
363	Microlab	Trade Centre, M C Road, near Municipal Park, Ruby Nagar, Changanassery	No	No			Changanasserry

## ANNEXURE 14: DETAILS OF CREMATORIUMS & MORTUARY

FACILITY NAME	FACILITY TYPE	WARD	LSGD	CD BLOCK	HEALTH BLOCK	NO: OF MORTUARIES	MUNICIPALITY
Grama Panchayath Crematorium	Crematorium (Gas)	Ward 5 Cherikal	TV Puram	Edayazham	Edayazham	0	
Pattarya Samagam Crematorium	Crematorium (Gas)	Ward 2 KS Mangalam	Maravanthuruthu	Edayazham	Edayazham	0	
Holy Ghost Mission Hospital, Muttuchira, Kaduthuruthy	Mortuary	Ward 6	Kaduthuruthy	Thalayolaparambu	Thalayolaparambu	2	
Church of God on India, Kerala Regian Church, Karikode	Crematorium	17	Mulakulam	Thalayolaparambu	Thalayolaparambu	0	
SNDP Smasanam	Crematorium (Wooden log)	Ward-2	Aymanam	Kumarakom	Athirampuzha	0	
Santhitheram	Crematorium (Wooden log)	Ward 11	Neendoor	Kumarakom	Athirampuzha	0	
SNDP 276 Thumbekalam	Crematorium (Wooden log)	ward 15	Thiruvarppu	Kumarakom	Kumarakom	0	
SNDP 33	Crematorium (Wooden log)	ward17	Thiruvarppu	Kumarakom	Kumarakom	0	

<b>FACILITY NAME</b>	<b>FACILITY TYPE</b>	<b>WARD</b>	<b>LSGD</b>	<b>CD BLOCK</b>	<b>HEALTH BLOCK</b>	<b>NO: OF MOBILE MORTUARIES</b>	<b>MUNICIPALITY</b>
SNDP Vadakku	Crematorium (Wooden log)	ward1	Thiruvarpur	Kumarakom	Kumarakom	0	
Municipality Crematorium	Crematorium (Gas)	ward30			Ettumanoor	0	Ettumanoor
Caritas Hospital	Mortuary	ward27			Ettumanoor	0	Ettumanoor
Municipality Crematorium Muttambalam	Crematorium (gas)	ward17			Kumarakom	0	Kottayam
GH Hospital	Mortuary	ward13			Kumarakom	0	Kottayam
St. Thomas Hospital Chethipuzha	Mortury	w-16	vazhappally	Madappally	Karukachal	0	
St.jude mission Hospital	Mortury	1	vazhappally	Madappally	Karukachal	0	
Public Ground for Scheduled Castes	Crematorium	16	Paippad	Madappally	Karukachal	0	
Thakadiyil	Crematorium	9	Madappally	Madappally	Karukachal	0	
Edappally Colony	Crematorium	11	Madappally	Madappally	Karukachal	0	
Muthalappara	Crematorium	10	Madappally	Madappally	Karukachal	0	
Punnamehira	Crematorium	2	Madappally	Madappally	Karukachal	0	

<b>FACILITY NAME</b>	<b>FACILITY TYPE</b>	<b>WARD</b>	<b>LSGD</b>	<b>CD BLOCK</b>	<b>HEALTH BLOCK</b>	<b>NO: OF MOBILE MORTUARIES</b>	<b>MUNICIPALITY</b>
Mannila	Crematorium	3	Madappally	Madappally	Karukachal	0	
Mammood	Crematorium	9	Madappally	Madappally	Karukachal	0	
SNDP Crematorium	Crematorium	19	Thrikkodithanam	Madappally	Karukachal	0	
Kadamanchira SC Crematorium	Crematorium	1	Thrikkodithanam	Madappally	Karukachal	0	
Puthenchantha	Crematorium	18	Vakathanam	Madappally	Karukachal	0	
Ezhuvanthanam	Crematorium	9	Vakathanam	Madappally	Karukachal	0	
GH Changanassery	Mortury	30	Changanassery Municipality	Madappally	Karukachal	0	
Grama Panchayath Crematorium	Crematorium	8	VIJAYAPURAM	Ayarkunnam	Kumarakom	0	
Karipal Caritas	Mortury	15	VIJAYAPURAM	Ayarkunnam	Kumarakom	0	
Mandiram	Mortury	8	VIJAYAPURAM	Ayarkunnam	Kumarakom	0	
SNDP Crematorium	Crematorium	12	PUTHUPALLY	Ayarkunnam	Panachikkad	0	
Grama panchayath crematorium	Crematorium	1	Vellavoor	Vazhoor	Edayirikkapuzha	0	

<b>FACILITY NAME</b>	<b>FACILITY TYPE</b>	<b>WARD</b>	<b>LSGD</b>	<b>CD BLOCK</b>	<b>HEALTH BLOCK</b>	<b>NO: OF MOBILE MORTUARIES</b>	<b>MUNICIPALITY</b>
Grama panchayath crematorium	Crematorium	4	chirakkada vu	Vazhoor	Edayirikka puzha	0	
GH Kanjirapilly	Mortuary						
Mary Queens Hospital	Mortuary	14	Parathodu	Erumely	Erumely	1	
Devayanam	Crematorium	5	Mundakayam	Erumely	Erumely	0	
Panchayath Crematorium	Crematorium	3	Parathodu	Erumely	Erumely	0	
Sunrises Hospital	Mortuary	2		Erattupetta	Edamaruku	2	Erattupetta
MUM Hospital Monipally	Mortuary	Ward 13 Uzhavoor	Uzhavoor	Ramapuram	Uzhavoor	0	
Meenachil Panchayath (Mukalepedika)	Crematorium	8	Meenachil	Lalam	Ullanadu		
KMMMGH PALA	Mortuary	20	Pala Municipality	Lalam	Ullanadu	8	Pala
IHM Hospital	Mortuary	8	Bharananganam	Lalam	Ullanadu	3	
Marian	Mortuary	23	Pala Municipality	Lalam	Ullanadu	8	

FACILITY NAME	FACILITY TYPE	WARD	LSGD	CD BLOCK	HEALTH BLOCK	NO: OF MOBILE MORTUARIES	MUNICIPALITY
PALA Municipality	Crematorium		Pala Municipality	Lalam	Ullanadu		Pala
Mar Sleeva Medicity	Mortuary	1	Kozhuvana l	Lalam	Ullanadu	10	

**Contact points:**

District	DMO Office	Collectorate Control Room	DISHA
Kottayam	0481 2562778 0481 2562923	<b>Disaster Management</b> Cell: \ (1077\ ) (Toll-Free) or \ (9446562236\ ) (Mobile)	1056