

May 2026

PANDEMIC MANAGEMENT PLAN **Govt Medical College Kannur**



KERALA.HEALTH

**Govt. Medical College
Kannur**



**Pandemic Management Plan
2026**

KERALA.HEALTH

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 upto 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 Medical Education. Out of various initiatives such as documentation on Medical College developments giving all the details, preparation of Fact Sheets of DME and MCH giving information regarding the outputs and outcomes, Standard treatment protocol, standardization of the units in the Medical Colleges, one more initiative was taken regarding preparedness for health emergencies such as communicable diseases which could transform into an epidemic/ pandemic. COVID has taught us many lessons. But the moot question is, “What learnings have we taken away from the Pandemic, and its aftermath?” Have we understood those learnings and worked on developing the systems for future scenarios?

And now, I say with immense pride that through Kerala Health, every Medical College has excellent pandemic management plans in place.

This preparation of pandemic management plans started with the thought of “What new systems do we need to develop across the State?” The Director of Medical Education and senior Doctors from Community Medicine and other Departments took up the challenge of preparation of plans. An elaborate process was followed by conducting state level meetings. Dr Aravind was asked to prepare a template for the Medical Colleges Plans. That template was validated in the state meeting and shared to all the Government Medical Colleges in the State. After that step, a workshop was conducted at Ernakulam Medical College involving all the teams from Medical Colleges as well as from Apex Cancer Centres. Post this workshop, all the institutions took a series of meetings at their level and completed this commendable work.

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 8 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.

The Kerala Health program has to keep up with changing times, and so, along with the aforementioned initiatives, we discussed with the Digital University of Kerala

(DuK) to develop Kerala Pandemic Management System. This system envisages end-to-end solution for pandemic management. This will make things easy for the functionaries in the health institutions as well as the field functionaries to update the information. Once the pandemic management plans and Festival management plans are done, the teams will begin developing plans for calamities, other disasters and major accidents.

We are also planning mock drills so as to build the capacities of various teams. This way all the Medical Colleges teams will be well trained to manage any eventuality.

I am confident that all Medical Colleges shall institutionalize updating of plans on a yearly basis, skill building, analysis of any emergency handled and based on the analysis do modifications in the plans. This way it will be a dynamic plan of the Medical College.

For any Health System it is very important to have a system to handle any health emergency, and it is with sense of pride one can say that with the coordinated team work, this huge work was done in exemplary way. It also demonstrates that with shared vision and having 'thinking teams' at state, institution and field level can work on many challenges and deliver results. Therefore, these officers who worked on this project hands-on are mentioned right on the cover page! It is a big achievement for the Kerala Health to lay the foundation of Pandemic Management upon which further developments can be easily done.

I wholeheartedly appreciate the work done by one and all for preparing Pandemic Management Plans.

I am confident that all our Medical Colleges will become centre of excellence and earn recognition for their works. I wish all the success for the future endeavours.

Dr Rajan Khobragade IAS

Additional Chief Secretary
Health & Family Welfare and
AYUSH Department
Govt of Kerala.



Message

The health system of Kerala is defined by a mindset of proactive vigilance, a compassionate attitude toward the most vulnerable, and a historic legacy of resilience in the face of public health crises. Our motto for preparedness is simple: to be prepared and proactive is to safeguard the stability and prosperity of our people. This Pandemic Preparedness Plan is not just a technical manual; it is a shared commitment fuelled by the lessons learned from our past encounters with Nipah and COVID-19. These experiences have taught us that rapid mobilization and early detection are our most effective tools in preventing a public health emergency of international concern.

We have designed this strategy to be agile, moving from routine care to emergency surge levels based on real-time data such as ICU occupancy, staff availability, and disease epidemiology. By utilizing advanced diagnostic tools and regional surveillance cells, we aim to identify threats early, ensuring that life-saving interventions begin the moment a patient reaches our doors. Central to this plan is the safety of our workforce; we are committed to providing the training, equipment, and psychological support necessary to prevent burnout and ensure no healthcare worker faces these challenges alone.

Even in the height of a pandemic, our mission to provide essential care for mothers, children, and emergency cases will not waver. Through seamless coordination with district authorities and the private sector, we are building a networked response that maximizes resources for the benefit of every citizen. I am deeply grateful to the faculty and staff whose expertise shaped this document, and I am confident that by following these protocols, we will continue to lead with competence and compassion.

Dr. K. V. Viswanathan

Director of Medical Education
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Contents

Purpose of the Document	11
Abbreviations	12
1 Introduction & Contextual Analysis	14
2 Governance & Command Structure	16
3 Situational Analysis & Resource Mapping	21
4 Graduated Response Framework (Three-Tier Model)	25
5 Operational Standard Operating Procedures (SOPs)	32
6 Specialized Service Guidelines	33
7 Logistics & Ancillary Services	34
8 Communication, Monitoring & Research	35
9 Recovery and de-escalation	37
10 Index of Standard Operating Procedures (SOPs) & Guidelines	38

Purpose of Document

The Pandemic Preparedness Plan for GMC Kannur establishes a structured rapid response system to detect, contain, and mitigate potential outbreaks at the earliest possible time, preventing escalation to a Public Health Emergency of International Concern (PHEIC) while balancing intensive pandemic care with uninterrupted routine medical services. By utilizing the institution's strategic location and tertiary care infrastructure, the plan aims to provide state-of-the-art treatment for critically ill patients while simultaneously ensuring that essential health services for the general population remain uninterrupted. This framework facilitates seamless intersectoral coordination between the hospital, district administration, and public health authorities to streamline testing, diagnosis, and mortality mitigation. Ultimately, the document serves as an operational roadmap to manage escalating surges through a graduated response model, maintaining high standards of clinical care and rigorous infection control to prevent disease transmission within the hospital premises.

Definitions & Abbreviations

AES	Acute Encephalitis Syndrome
AIIR	Airborne Infection Isolation Room
BMW	Biomedical Waste
ED	Emergency Department
ETO	Ethylene Oxide (Sterilization)
GH	General Hospital
GMC	Government Medical College
HDS	Hospital Development Society
HEPA	High-Efficiency Particulate Air (Filter)
HFNC	High Flow Nasal Cannula
HICC	Hospital Infection Control Committee
HVAC	Heating, Ventilation, and Air Conditioning
ICN	Infection Control Nurse
ICMR	Indian Council of Medical Research
ICU	Intensive Care Unit
IDSP	Integrated Disease Surveillance Programme
IHIP	Integrated Health Information Platform
ILI	Influenza-Like Illness
IPC	Infection Prevention and Control
KMSCL	Kerala Medical Services Corporation
LMO	Liquid Medical Oxygen
LSGD	Local Self-Government Department
NHM	National Health Mission
NIV	Non-Invasive Ventilation
NRBM	Non-Rebreather Mask
OMU	Outbreak Monitoring Unit
PEID / RPEID	(Regional) Prevention of Epidemic and Infectious Diseases Cell
PHEIC	Public Health Emergency of International Concern

PPE	Personal Protective Equipment
PPRC	Pandemic Preparedness & Response Committee
RAT	Rapid Antigen Test
SARI	Severe Acute Respiratory Infection
SOP	Standard Operating Procedure

1. Introduction & Contextual Analysis

1.1 Background & Purpose

Objectives for rapid response within the first week to prevent a PHEIC.

In order to initiate a rapid response immediately to prevent the escalation of cases of public health importance, the following steps are being taken:

- Assessment of current preparedness status
- Identification of infrastructure and HR gaps and initiation of remedial measures
- Development of structured response plan
- Capacity building
- Measures to ensure uninterrupted essential health services to the general population during the pandemic

1.2 Institutional Geography

Government Medical College Kannur, located at Pariyaram, Kannur district, is a major tertiary care hospital in North Malabar. It is situated along the National Highway 66, 47 km from Kannur International airport and 31 km from city Centre. Nearest railway station is Pazhayangadi railway station, 16km from the college.

1.3 District-Specific Risk Profile

Kannur, a 2966sqkm district, is bordered by Kasargod to the north, Wayanad and Kozhikode to the south, Kodagu district of Karnataka to the east across the Western Ghats, Mahe district of Puducherry enclaved to the southwest and Arabian Sea to the West. Kannur district, because of its diverse geography of mix of coastal plains and forested highlands is prone to natural disasters like flood and landslide. Even though Kannur district also has migrant labour influx, vector-borne diseases like malaria are not endemic.

1.4 Scope & Objectives

- Regular surveillance is being done daily in Fever clinic, to identify unusual cases/ case clustering under the leadership of Department of Community Medicine and PEID cell in association with the clinical departments responsible for patient care.
- Reporting system from ED/Wards/ICU to RPEID cell regarding potential case with red flag signs will be streamlined.
- Establish a structured rapid response system in case of pandemic.
- Provide state-of-the-art treatment facility for critically ill patients in a pandemic
- Prevent transmission of the disease within the hospital premises.
- Coordinate with public health authorities in disease diagnosis, testing and patient care.
- Coordinate with district administration and disaster management authority and effectively manage the pandemic situation.

2. Governance & Command Structure

2.1 Pandemic Preparedness & Response Committee (PPRC)

Leadership roles for the Principal and Medical Superintendent.

Table 1: Pandemic Preparedness & Response Committee (PPRC), GMC Kannur

Name	Designation	Role
Dr Sairu Philip	Principal	Chairperson
Dr Sudeep K	Medical Superintendent	Co-chairperson
Dr Manoj D K	Professor and HOD, Respiratory Medicine	Member
Dr Jayasree A K	Professor and HOD, Community Medicine	Member
Dr Kalpana George	Professor and HOD, Microbiology	Member
Dr Muhammed MTP	Professor and HOD, Paediatrics	Member
Dr Ranjith K	Professor and HOD, General Medicine	Member
Dr Bifi Joy	Professor Dermatology	Member
Dr Sarin S M	Associate Professor, General Medicine	Member
Dr Jeena Sam	Professor and HOD, Pathology	Member
Dr Anitha S S	Assistant Professor, Community Medicine	Member
Dr Muhammed Shafeek	Assistant Professor, Respiratory Medicine	Member
Dr Jijesh Alarambil	Assistant Professor, Paediatrics	Member

Dr Manu Mathews	Associate Professor, General Medicine	Member
Dr Bindu M V	Assistant Professor, Community Medicine	Member
Mr Vishnu Parayi	Health Inspector	Member
Smt Lucy P J	Nursing Superintendent	Member

2.2 Multidisciplinary Team

Roles for HODs, HICC, Nursing Superintendent, Biomedical Engineering, Oxygen War Room Management and PRO.

Table 2: Multidisciplinary team for pandemic preparedness, GMC Kannur

Name	Designation	Role
Dr Sairu Philip	Principal	Chairperson
Dr Sudeep K	Medical Superintendent	Convenor
Dr Manoj D K	Professor and HOD, Respiratory Medicine	Member
Dr Jayasree A K	Professor and HOD, Community Medicine	Member
Dr Kalpana George	Professor and HOD, Microbiology (HICC In charge)	Member
Dr Muhammed MTP	Professor and HOD, Paediatrics	Member
Dr Ranjith K	Professor and HOD, General Medicine	Member
Dr Bifi Joy	Professor Dermatology	Member

Dr Sarin S M	Associate Professor, General Medicine	Member
Dr Jeena Sam	Professor and HOD, Pathology	Member
Dr Bindu M V	Assistant Professor, Community Medicine (Hospital Control room in charge)	Member
Dr. Mayamol T R	Assistant Professor, Community Medicine (Biomedical waste management in charge)	Member
Mr. Vijayakumar	Biomedical engineer	Member
Smt. Geetha T P	Pharmacy In charge	Member
Mr Vishnu Parayi	Health Inspector	Member
Smt. Lucy P J	Nursing Superintendent	Member
Mr. Dileep M M	PRO	Member

2.3 Outbreak Monitoring Unit (OMU)

Specialized cell for identifying emerging/re-emerging infections, triaging, and multiplex PCR diagnostic platforms.

Table 3: Outbreak monitoring unit, GMC Kannur

Name	Designation	Role
Dr Sairu Philip	Principal	Chairperson
Dr Sudeep K	Medical Superintendent	Convenor
Dr Manoj D K	Professor and HOD, Respiratory Medicine	Member

Dr Jayasree A K	Professor and HOD, Community Medicine	Member
Dr Kalpana George	Professor and HOD, Microbiology	Member
Dr Muhammed MTP	Professor and HOD, Paediatrics	Member
Dr Ranjith K	Professor and HOD, General Medicine	Member
Dr Bifi Joy	Professor Dermatology	Member
Dr Sarin S M	Associate Professor, General Medicine	Member
Dr Jeena Sam	Professor and HOD, Pathology	Member
Dr Anitha S S	Assistant Professor, Community Medicine	Member
Dr Vimal Rohan	Assistant Professor, Emergency Medicine	Member
Dr Muhammed Shafeek	Assistant Professor, Respiratory Medicine	Member
Dr Jijesh Alarambil	Assistant Professor, Paediatrics	Member
Mr Vishnu Parayi	Health Inspector	Member

2.4 Institutional Medical Board

Oversight for clinical treatment protocols and discharge policies.

Table 4: Institutional Medical Board, GMC Kannur

Name	Designation	Role
Dr Sairu Philip	Principal	Chairperson
Dr Sudeep K	Medical Superintendent	Convenor
Dr Manoj D K	Professor and HOD, Respiratory Medicine	Member
Dr Jayasree A K	Professor and HOD, Community Medicine	Member
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Dr Ranjith K	Professor and HOD, General Medicine	Member
Dr Bifi Joy	Professor Dermatology	Member
Dr Sarin S M	Associate Professor, General Medicine	Member
Dr Jeena Sam	Professor and HOD, Pathology	Member

3. Situational Analysis & Resource Mapping

3.1 Infrastructure Audit

Comparison of existing vs. required IP/OP blocks, negative pressure rooms, and dedicated infectious disease blocks.

Table 5: Existing infrastructure- GMC Kannur

Existing Infrastructure	
Hospital Buildings	Single 8 floor building with Separate OP & IP levels
In-patient Beds	850 total beds Separate isolation ward available with 15 rooms
Oxygen Beds	600 beds
ICUs	Total: 16 ICU, 180 beds Separate isolation ICU with 5 beds and ventilator facility available
Ventilators	67 ventilators
Fever ICU	No separate Fever ICU. Two beds with isolation facility present in Medicine ICU
Operation Theatres	18 Operation theatre

3.2 Human Resource Pool:

Table 6: Human Resource infrastructure- GMC Kannur

Sl No	Category	Sanctioned	Present	Gaps	Mobilization Strategy
1	Faculty (Clinical)	236	207	29	Call back from leave; redeploy from non-critical depts.
2	Residents (SR/ Academic JR/ NAJR)	SR- 47 Total Academic JR=134 Total- 181	SR- 47 Total Academic JR=134 Total- 181	0	Recruit additional temporary doctors through HDS/schemes.
3	Nursing Staff (Permanent)	483	474	9	Shift-based duty (6-8 hr shifts); cancel all leave.
4	Nursing Staff (Contract)	NA	42		Recruitment of emergency temporary nursing staff.
5	Nursing Assistants	136	136	nil	Deploy for high-touch surface cleaning and food delivery.
6	Hospital Attendants (Gr 1 & 2)		34		Training on 1% hypochlorite use and trolley disinfection.
7	Kudumbasree / Cleaning Staff		164		Focus on waste management and environmental cleaning.
8	Ancillary (Lab, Rad, Pharm)		106		Maintain a standby duty roster for 24/7 coverage.
9	Security & Transport Staff		97		Lead "Red Channel" movement and patient data entry.
10	Volunteer / Reserve Pool				Identify retired HCWs and those in non-clinical roles.

Table 7: Human resource audit- GMC Kannur

Category	Existing Strength	Gaps Identified	Mitigation Strategy
Doctors	207	ICU & surge duty exhaustion	Shift-based duty & team rotation
Nursing	516	Severe shortage during surge	Recruitment plan via HDS / NHM
ICU-trained Staff	Limited	Not adequate for full surge	Rapid ICU orientation training
Support Staff	209	Increased sanitation demand	Additional contractual staff

3.3 Equipment & Logistics

Table 8: Equipment & logistics- GMC Kannur

Category	Current Status
ICU Beds	180 beds (16 ICUs functional)
Patient Monitors	200 multipara monitors
Infusion Pumps	80 units
Syringe Pumps	80 units
HFNC Units	10 units
NIV Units	6 units available

Patient Monitors	200 multipara monitors
HFNC	10 machines available
PPE & N95	1000 N95 for emergency purpose at isolation ICU, 800 PPE kit available for emergency purpose
Ambulances	2 working ambulances
Pulse Oximeters	5 standalone units present. All monitors are equipped with oximeters
Ambu Bags	Available according to ICU units and ED

4. Graduated Response Framework (Three-Tier Model)

4.1 Escalation Triggers

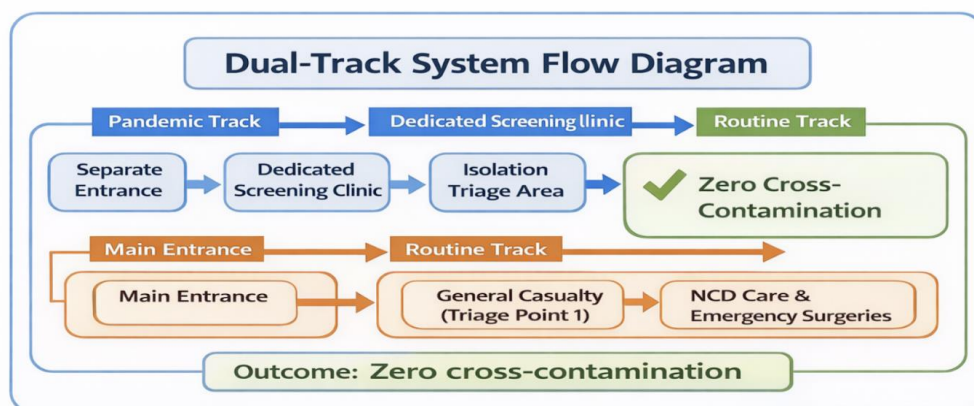
Defined by disease epidemiology (\$R_0\$), ICU occupancy, bed availability, and staff absenteeism.

4.2 Tier 1 – Conventional (Best Case)

Standard facility standards, minor staff adjustments, and full maintenance of elective services.

Operational Goal: Maintain standard of care without dilution of expertise while maximizing routine elective services.

Trigger Points	Institutional Action Points
Cases: No confirmed local cases OR sporadic imported cases without local transmission.	Surveillance: Activate ILI/SARI screening at entry points and mandatory IHIP reporting.
Admission: Baseline hospital and ICU admission levels.	Infrastructure: Identify "Red Channel" entry points and start planning for expansion of oxygen beds and ICUs by 20% .
Staffing: Absenteeism <10%.	Training: Conduct refresher training on IPC, PPE donning/doffing, and simulation mock drills.
Logistics: PPE and drug supply days >30.	Logistics: Assess and enhance centralized/decentralized Liquid Medical Oxygen (LMO) to full reserve capacity.



4.3 Tier 2 – Contingency (Moderate Case)

Containment Activation of surge annexes, prioritizing/pausing electives, and adaptive staffing.

Operational Goal: Adapt space, staff, and supplies to maintain care functionally equivalent to standard care.

Trigger Points	Institutional Action Points
Cases: Confirmed local transmission and rising suspected cases in OP/IP departments.	Hospital Reorganization: Activate surge annexes and create barricaded triage areas.
ICU Occupancy: 70–90%.	Clinical Operations: Regulate non-pandemic care and pause/reduce non-urgent elective surgeries .
District Load: Hospital admissions due to the pandemic reaching 10% of total district admissions.	HR Strategy: Implement shift-based duties (6–8 hours) and deploy float pools or tiered staffing models.
Logistics: PPE supply days 7–29; ventilator/O ₂ constraints beginning.	Logistics: Fill 100% of oxygen reserve capacity and look for potential sources of capacity enhancement.

Hospital Re-organization plan at GMC Kannur

- **Dedicated Pandemic OPD** with separate entrance from the routine one with proper route map and vehicle waiting area.
- Recruitment of more isolation wards by utilizing special pay wards as isolation units- can be expanded to 120 bed strength as a first step.
- 40 ICU beds can be operational to equip the patients in phase II.
- Reduction of elective OP and surgeries. Separate OT to be maintained with negative pressure for handling surgeries for infected patients.
- Redistribution of non-pandemic inpatients to taluk/private hospitals all the while catering to critically ill non pandemic patients.

Networking Hospitals

- Coordination with Taluk and district hospitals of Kannur and Kasaragod district.
- Ambulance networking
- ICU and ventilator resource pooling if needed.

Table 8: Tier 2 management-GMC Kannur

Plan for Phase II surge: (Plan A) - **Conventional**

Area	Total	Oxygen beds	Non Oxygen beds
ICU	40	40	Nil
Ward	120	120	Nil
Total	160	160	Nil

Fig 1: GMC Kannur- Dedicated area for Pandemic OPD

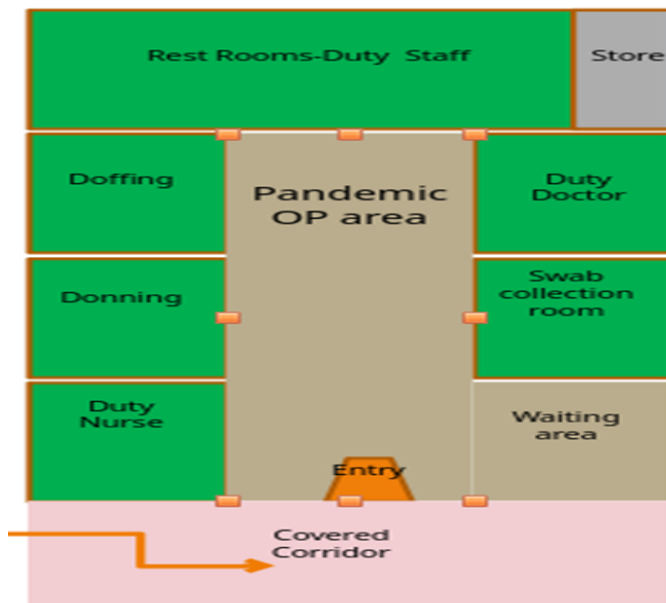
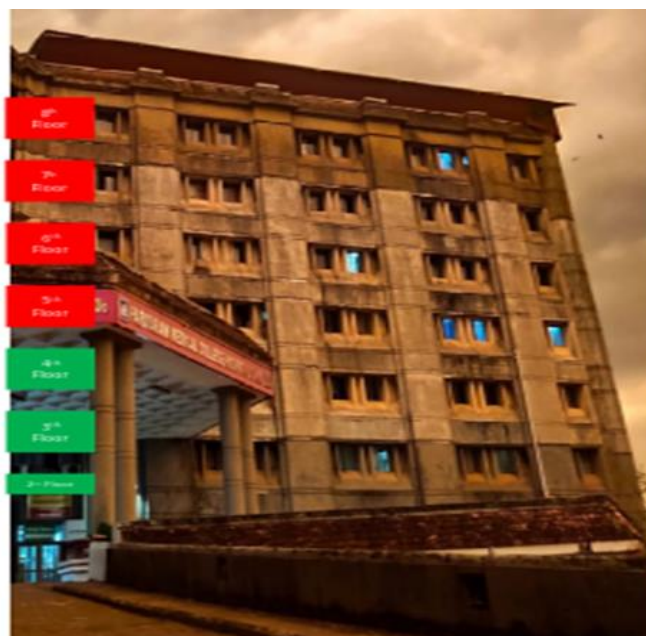


Fig 2: GMC Kannur- Hospital building allotment plan during tier 2



4.4 Tier 3 – Crisis (Worst Case)

Activation of Crisis Standards of Care (CSC), extreme resource scarcity, and use of non-traditional spaces.

Operational Goal: Maximize population benefit under extreme resource scarcity; activation of Crisis Standards of Care (CSC).

Trigger Points	Institutional Action Points
Cases: Surge in confirmed admissions; OP load crosses the threshold level.	OP/IP Reorganization: Stop general OP services; convert waiting or non-patient areas into makeshift wards.
ICU Occupancy: >90% (System Overwhelmed).	Critical Care: Activate earmarked pandemic beds in private institutions for government-referred patients.
District Load: Pandemic admissions reaching 25% of total hospital admissions in the district.	Services: Switch to emergency non-pandemic care only ; discharge all stable/recovering patients.
Staffing: Absenteeism >20%.	HR Strategy: Large-scale recruitment of temporary staff; redeployment of non-clinical/academic staff to clinical work.
Logistics: PPE supply <7 days; spare ventilator capacity <10%.	Networking: Full district ICU pooling and activation of field hospitals/CSLTCs.

The following Tier 3 part-1 plan in GMC Kannur will be activated when 70% of Plan A (Tier 2 surge) is occupied and admission of oxygen requiring patients is more than daily discharge in last 3 consecutive days.

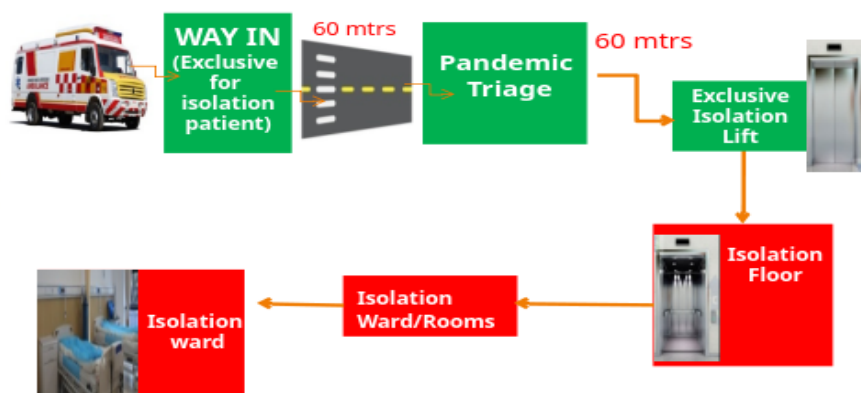
Table 9: Tier 3 part-1 management plan- GMC Kannur

Area	Total	Oxygen beds	Non-Oxygen beds
ICU	100	100	Nil
Ward	260	170	90
Total	360	270	90

- **Dedicated channel for patients transports** between care areas including dedicated lift with separate team for patient transport coordination.
- Proper signages in all care areas.
- Adequate facilities for sanitizer dispensing and hand hygiene maintenance.
- Dedicated trained housekeeping/cleaning staff for all the care areas.

Fig 3: Protocol for shifting patient-GMC Kannur

Protocol for shifting a patient from Ambulance to the Ward



The following Tier 3-part 2 plan will be activated in GMC Kannur when 80% of Plan B (Tier 3 part 1) is occupied with admission more than daily discharge OR State/DDMA declares Health Emergency.

Table 10: Tier 3-part 2 management plan- GMC Kannur

Area	Total	Oxygen beds	Non-Oxygen beds
ICU	140	140	Nil
Ward	440	300	140
Total	580	440	140

Emergency & Essential Service management during crisis

- Trauma, dialysis, antenatal, neonatal services to non pandemic patients continued.
- Separate care areas for non pandemic patients to charted and transport channels cordoned off from pandemic patients.
- Dedicated OT and labor room for non infected patients
- Strict infection control practices and hand hygiene to be maintained in such areas.
- Continuous education regarding infection control practices extended to patients and bystanders along with staff

5. Operational Standard Operating Procedures (SOPs)

5.1 Triage & Red Channel Protocol

Dual-stream triage (Green/Red zones), dedicated transport routes, and lift/trolley disinfection with 1% hypochlorite.

5.2 Patient Care Equipment

SOPs for dedicated instruments, decontamination of heat-stable/sensitive items, and PPE for reprocessing.

5.3 Infection Prevention & Control (IPC)

Manuals for hand hygiene, cough etiquette, donning/doffing training, and staff safety monitoring.

5.4 Environmental & Engineering Controls

HEPA filtration, negative pressure maintenance and 12 Air Changes per Hour (ACH) for AIIRs.

5.5 Makeshift Isolation Enclosures

Guidelines for temporary cubicles/tents with localized negative pressure.

5.6 COVID/Pandemic Operation Theatre

Converting re-circulatory HVAC to 100% once-through systems with independent exhaust blowers.

6. Specialized Service Guidelines

6.1 Dialysis Units

Testing frequency (e.g., every 10 days), surface disinfection, and staff PPE requirements.

6.2 Management of Deceased

Handling protocols (Standard Precautions), plugging orifices, 1% hypochlorite bag disinfection, and family counselling.

6.3 Maternal & Child Health

Specific admission/transfer rules if both mother and child are admitted.

7. Logistics & Ancillary Services

Supply chain resilience is central to preparedness. Hospitals must maintain buffer stocks of essential consumables, drugs, oxygen, and PPE, with automated inventory systems for real-time tracking. In Kerala, the integration of hospital logistics with the Kerala Medical Services Corporation (KMSCL) ensures rapid procurement and equitable distribution during crises. Biomedical equipment maintenance schedules must remain updated, and contingency plans should address disruptions in power, communication, and waste management systems. Setting up modular field hospitals or isolation extensions should be a pre-approved measure for extreme surges.

8. Communication, Monitoring & Research

8.1 Surveillance mechanism

a) Surveillance Systems

- RPEID Cell activation
- Syndromic surveillance (OP, Casualty, ICU)
- Mandatory departmental reporting

b) Priority Alerts

- SARI / ILI
- AES
- Haemorrhagic fevers
- Unknown clusters

c) Data Integration

- Daily reporting to IDSP
- District Surveillance

d) Data collection, compilation, analysis

- State dashboard, central dashboard
- IDSP and IHIP
- ICMR
- The National Animal Disease Referral Expert System (NADRES)
- Comprehensive and timely reporting
- Analysis and interpretation of surveillance data for outbreak detection and informed decision-making for a response.

- Include early warning and community-based surveillance components to ensure wider coverage and comprehensive capture of potential public health events

8.2 Media & Risk Communication

8.2.1 Unified Command and Spokesperson

- **Designated Spokesperson:** To prevent conflicting information, only the Principal (Incident Commander) or a designated Public Relations Officer (PRO) is authorized to issue official statements.
- **Centralized Messaging:** All internal departments, including the RPEID Cell and HODs, must channel data through the spokesperson before public release.
- **Liaison with District:** The spokesperson ensures that institutional updates are synchronized with the District Medical Officer (DMO) and the District Control Room to maintain a "single voice" across the district.

8.2.2 Accurate Status Reporting

- **Daily Bulletins:** The **Control Room** at GMC Kasaragod generates daily reports on screening numbers, samples collected, and the number of unstable patients referred to GH Kasaragod.
- **Factchecking:** The Outbreak Monitoring Unit (OMU) and RPEID Cell verify all clinical and diagnostic data to counter misinformation or rumours within the community

8.3 Control Room Operations

Coordination of patient arrivals, duty roster management, and daily review meetings.

8.4 Research Collaboration

In coordination with the other departments and as per the state guidelines, Clinical trials, outcome analysis, and other research studies will be conducted. The Institutional Research Committee and Ethics committee shall expedite the research related to the pandemic.

9. Recovery & De-escalation

9.1 Discharge & Back Referral

Criteria for shifting mild/moderate cases to Taluk or District hospitals.

9.2 Financial Plan

Establishing a dedicated emergency response fund.

9.3 After-Action Reviews

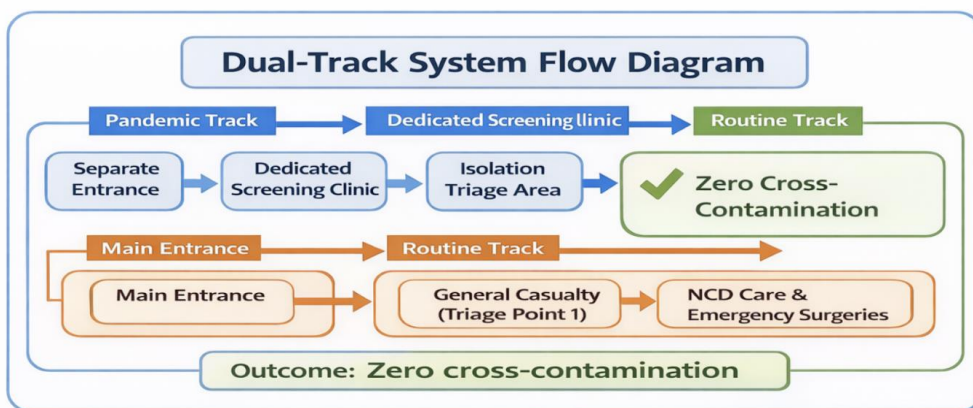
Policy audits and post-pandemic evaluations for iterative improvement.

10. Index of Standard Operating Procedures (SOPs) & Guidelines

This section serves as a repository of all mandatory protocols.

10.1 Clinical & Triage Protocols

- **Dual Stream Triage:** Segregation of ILI/SARI cases from general patients at entry.



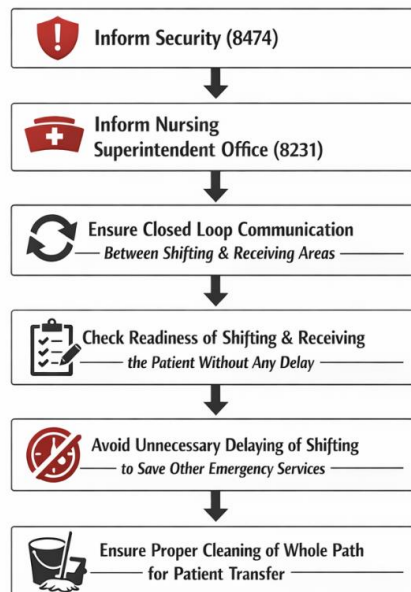
- **Red Channel Protocol**

Operation of red channel guidelines for transporting suspected/positive pandemic cases among different departments of Government Medical College, Kannur

- Inform security officer in charge regarding the opening of red channel as per the order of Medical Officer in charge.
- Inform the same to Nursing Officer in charge and ICN.
- Arrange PPE kit to ambulance driver.
- The staff who are going to receive the patient must wear PPEs and keep ready the trolley
- All items or drugs needed should be communicated over phone and must be ready.
- Accompanying staff must wear PPE if the patient is positive, he/she should wear PPE, otherwise he/she should wear N95.

- For ICU patients on ventilators, at least cover the patient with surgi kit/drape. Ensure the availability of NRBM [Nonrebreather mask] for transport.
- Lift operator must be ready with PPE.
- Lift should be blocked and passengers must be restricted till the staff/patient returns.
- After shifting the patient, lifts/trolley should be cleaned by attenders with 1% hypochlorite solution.
- Shifting area or reviewing area trolleys must be thoroughly washed with 1% hypochlorite
- Ensure the doffing of ambulance driver and cleaning of the ambulance.
- Ensure proper recording of shifting/red channel
- Ensure closed loop communication in each step so that there is no delay in the whole process.

RED CHANNEL FLOW CHART



- o **Patient Admission & ID Banding:** Mandatory ID bands and registration of bystanders/vehicle details.
- o **Testing Strategy:** 10-day testing cycle for routine dialysis patients and use of Rapid Antigen Tests (RAT).

10.2 Infection Prevention & Control (IPC)

- **Donning & Doffing:** Mandatory refresher training for all staff levels, including housekeeping and drivers.
- **Hand Hygiene & Cough Etiquette:** Standardized practices as per the Institutional IPC Manual.
- **Environmental Cleaning:** Two-hourly cleaning of high-touch surfaces (switches, handles) with 1% hypochlorite.
- **Patient Equipment Reprocessing:** Sterilization of heat-sensitive (ETO/Starred) and heat-stable (Autoclave) items.

(Details of above attached as Annexure)

10.3 Engineering & Infrastructure SOPs

- **AIIR Conversion:** Guidelines for blocking return air vents and achieving 12 Air Changes per Hour (ACH). (Attached as Annexures)
- **Operation Theatre (OT) Modification:** Converting to 100% once-through HVAC systems for pandemic surgeries. (Attached as Annexures)
- **Makeshift Enclosures:** Setting up temporary cubicles or tents with localized HEPA filtration. (Attached as Annexures)

10.4 Logistics & Waste Management

- **Biomedical Waste (BMW):** Use of double-layered yellow bags and specific "X Waste" labelling. (Attached as Annexures)
- **Linen & Laundry:** Protocol for leak-proof containers and avoiding double-bagging to reduce waste. (Attached as Annexures)

- **Oxygen War Room:** Real-time oxygen mapping and reserve capacity enhancement.

10.5 Specialized & Support Service Guidelines

- **Dialysis Unit SOP:** Use of dedicated tubings for positive patients and face shield requirements. (**Attached as Annexures**)
- **Management of the Deceased:** Disinfection of body bags with 1% hypochlorite and plugging of orifices.
- **Psychological Support:** Counselling for families and staff to manage burnout and anxiety.
- **Food & Dietary Services:** Coordination with Local Self-Government Departments (LSGD) for timely patient meals.
- **Maternal & Child Health SOP**

Index of Annexures

All the major institutions shall keep the following Annexures with all details ready at their respective institution level. The SoPs shall be updated / modified as per the research and information available regarding the respective pathogens..

1. Triage and Red channel protocol
2. Patient transport protocol during pandemics
3. SOP for Patient care equipment
4. SOP Hand hygiene
5. SOP Cough etiquette
6. Personal safety measures and PPE use
7. SOP for environmental cleaning
8. Environmental and Engineering controls
9. SOP for Makeshift Isolation enclosures
10. SOP for pandemic operation theatre
11. Guidelines for Dialysis units
12. Protocol for handling of deceased
13. Guideline on dead body management in context of COVID 19
14. SOP for Safe Linen Use
15. Biomedical Waste Management [BMW] Protocols in Isolation wards:
16. Medical Board Constitution
17. SOP for transporting a Suspect/ Confirmed case
18. CPCB Guidelines – Biomedical Waste Management
19. Mapping of laboratories
20. Infection Prevention and Control Manual-GMCH

Contact Details

Name of college	Contact Points	Contact Number
GMC Trivandrum	Information counter	4712528225
	General enquiry	4712528083
	Duty PRO	8281529159
GMC Kollam	Control Room	4742575050
GMC Konni	Control Room	4682344888
GMC Alappuzha	Control Room	4772281000
	Duty PRO	8281002947
GMC Kottayam	Control Room	9188528533
GMC Idukki	Casualty	04862232444
	Control Room	4862232555
GMC Ernakulam	Control Room	04842754000 04842751001 8075774769
	Duty PRO-	9778082825
GMC Thrissur	Control Room	04872472002 8075011853
	Duty PRO-	9383400082
GMC Manjeri	Control Room	8078253515
GMC Kozhikode	Control Room	4952350349
	Duty PRO-	9497669040
	IMCH Control room	4952350395
GMC Wayanad	Duty PRO-	8129428785
GMC Kannur	Control Room	04972882200, 8078041358
	General enquiry-	4972882100
	Duty PRO-	04972882390 9048600970
GMC Kasaragod	Control Room	8289908320