

COVID 19-District Emergency Response Medical Action Plan

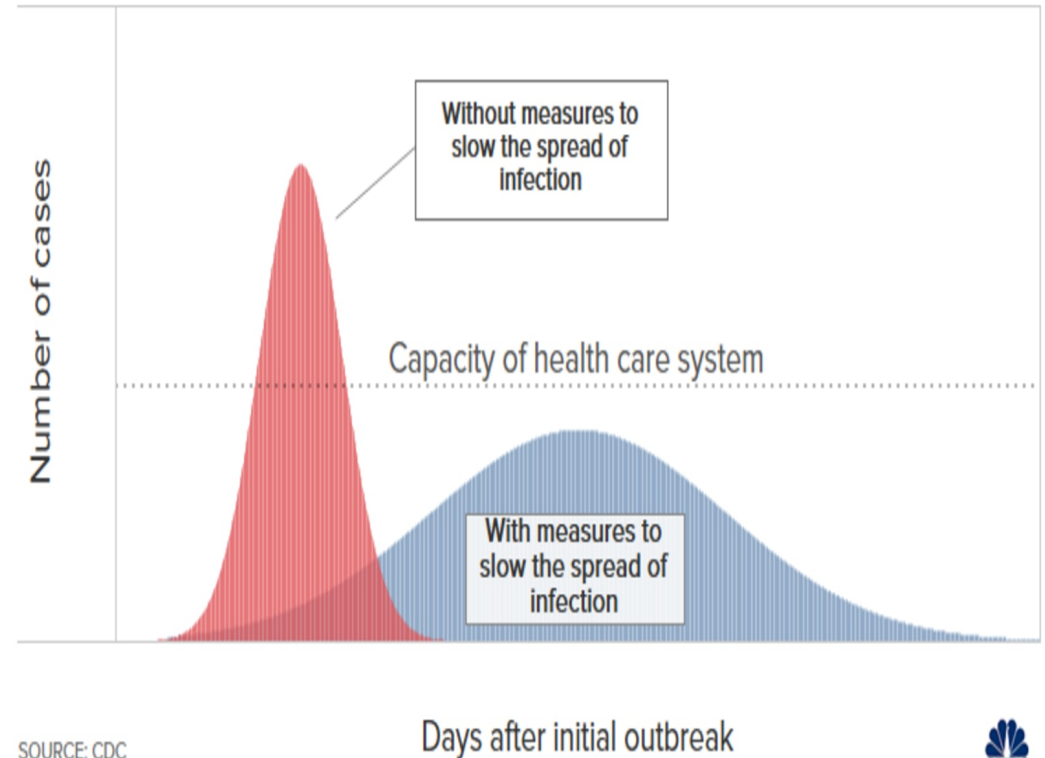
**District Administration
Ernakulam**



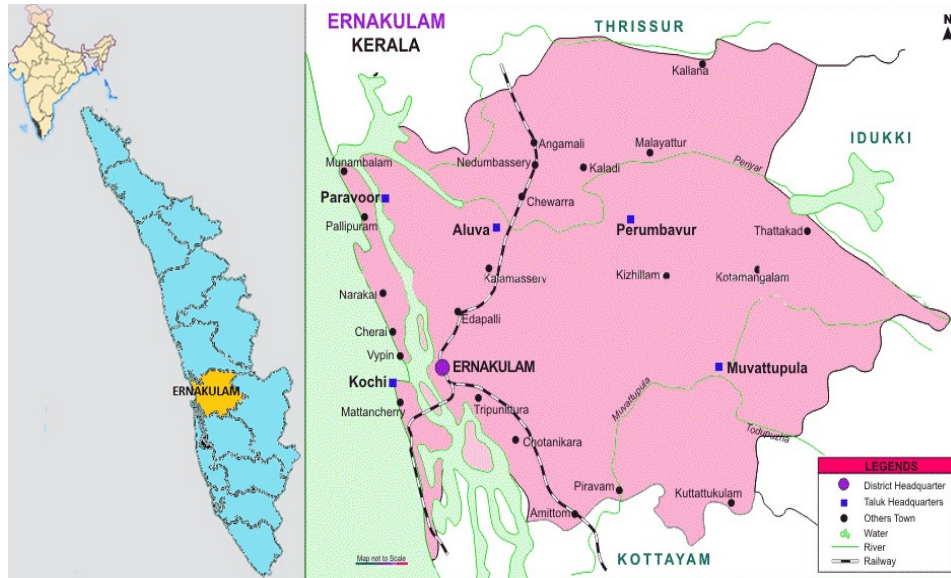
Hope for the Best, Prepare for the Worst: Planning for Disaster

Goal is to slow down the spread of COVID and get prepared to protect medical system by avoiding an overload of patients, so as to reduce mortality during COVID outbreaks.

Flattening the curve



District Profile



Area: 24,07 Sq Km



Population: 32,82,388



Literacy Rate: 95.89%



Subdivision: 2



Taluk: 7



Villages: 124



Corporation : 1



Municipality: 13



District Panchayath: 1



Block: 14



Panchayats: 84



SP Offices: 2

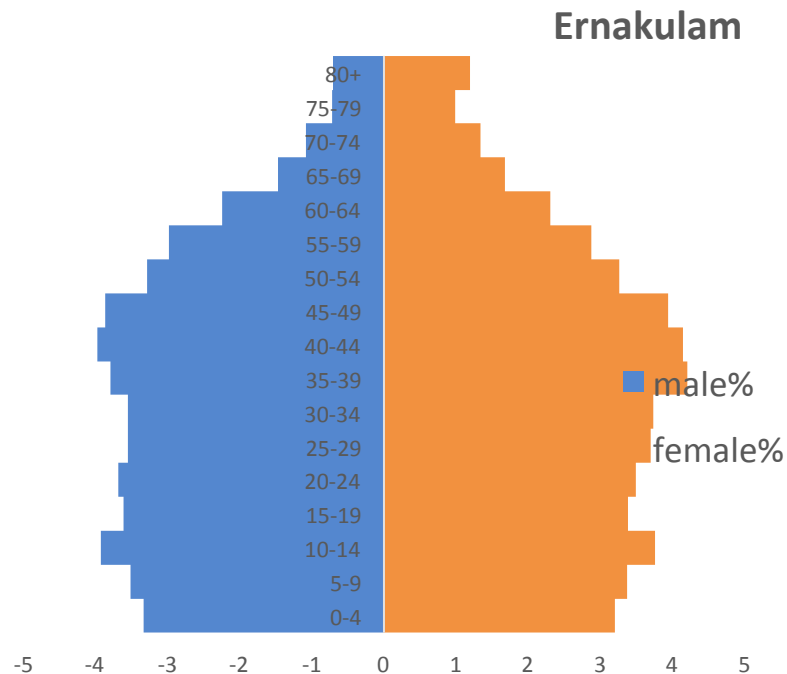


Police station: 30



Language: Malayalam

Major Vulnerabilities



Population Pyramid

Age as a Vulnerability

- High proportion of elderly - number of People above 65 years is 371557.

Institutions with Vulnerable Individuals

- 5269 elderly home inmates in 229 old age homes

Geographical Vulnerability

- 231 slums in Kochi city- 12,949 households, 60678 population
- High population density of 2770/sq mile.
- Vypin Islands – islands with highest population density
- Guest Worker's Habitations

Vulnerability due to Chronic Diseases

High Proportion of Individuals with Chronic Diseases

Health Infrastructure

Type of Institutions (Public Sector)	Numbers
Medical College	1
General Hospital	2
Women & Child Hospital	1
Taluk Hospital	11
Community Health Centre	22
PHC/FHC	76
FW Sub Centre	410
Urban PHC	15

HR (Public Sector)	Number
Doctors (Total)	518 (425 Regular+93 Contractual)
Anaesthetists	11
Physician/ Pulmonologists	22
Nurses	834 (653 Regular +181 Contractual)

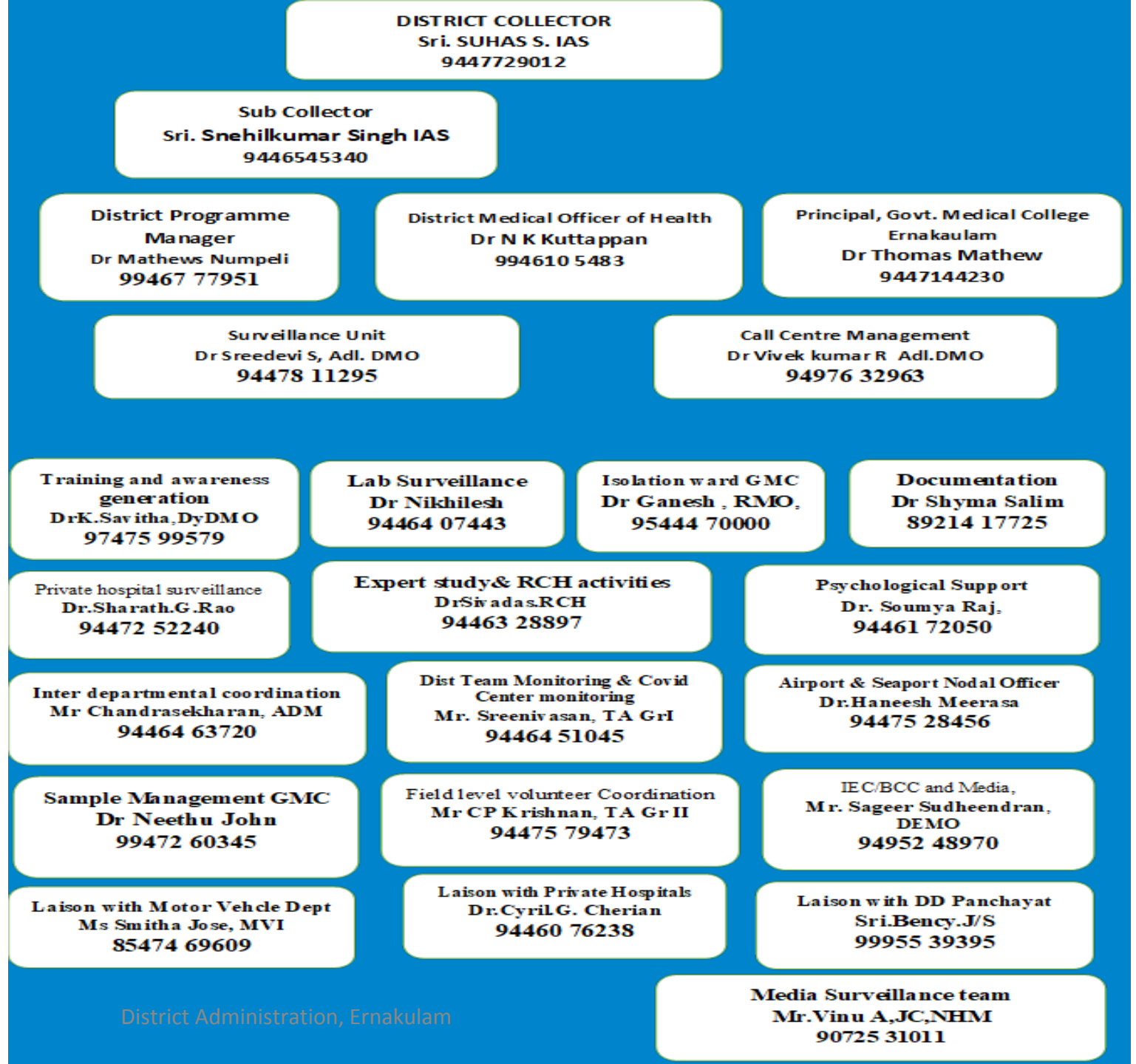
	Total Beds	Adult ICU Beds	Adult Ventilators
Public Sector	2310	112	24
Private Sector	6596	1066	259
Total	9906	1178	283

There are 98 other Hospitals (Private/ESI) with IP Facilities.

Apart from this, there are 3 Mobile Medical Units, 27 Ayurveda Hospital/Dispensary, 41 Homeo Dispensary and 1 Sidha dispensary.

District Emergency Operations

- Surveillance (Asymptomatic Travellers, Contact Tracing, Contact Follow up, Private Hospitals)
- Control Room & Call Centre
- Capacity Building
- HR
- Infrastructure
- Material Management
- Laboratory Surveillance & Sample
- Private Sector Co-ordination
- ACSM
- Media Surveillance
- Transportation
- Addressing Non-Medical Needs
- Psychological Support
- Interdepartmental Coordination,
- Guest logistics & Expert Study
- Volunteer Co-ordination,
- Documentation
- Airport/ Sea Port



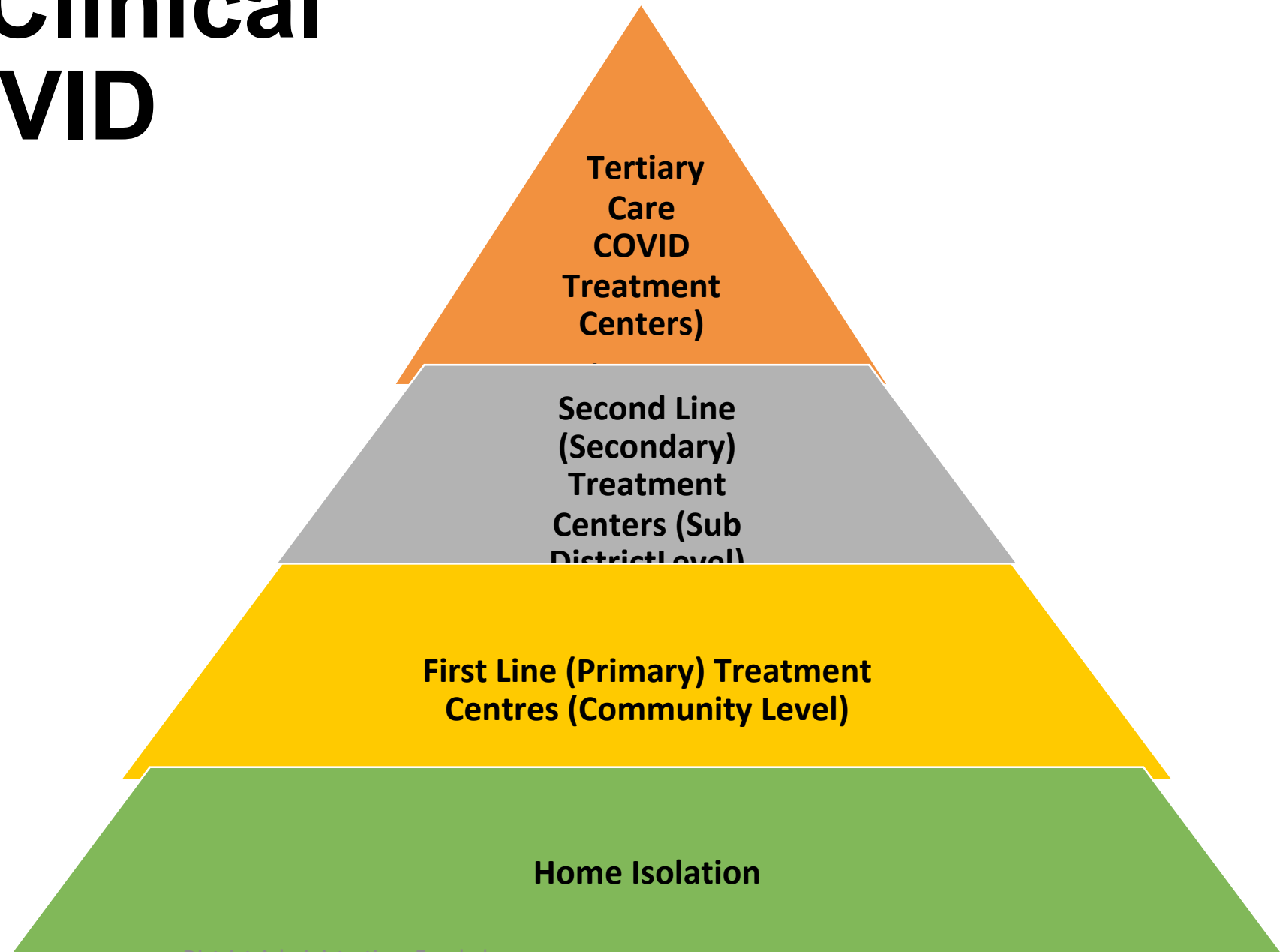
Principles

- 1. Separate Clinical Systems for COVID management so that routine care is intact**
- 2. Emphasis on Decentralised Systems**

Additional Systems to tackle COVID

1. Pyramid of Clinical Care for COVID management
2. Support Systems at Village Panchayat Level
3. Strengthen Infection Prevention & Control at all health care facilities
4. Community Surveillance System
5. Short Stay Homes (CCC) for quarantine
6. Corona Literacy Mission
7. Transportation Network
8. Laboratory Surveillance System
9. Material Management
10. Real time Management Information System

Pyramid of Clinical Care for COVID Treatment



a. Strengthen Tertiary Care for managing critically ill patients



GMC Ernakulam: has been converted to a 500 bedded hospital for managing COVID. CSR of Rs 1 Cr has been mobilised for strengthening ICUs at GMC Ernakulam.

Designated Private Tertiary Care Centers	NORMAL ROOMS	ICU	VENTILATORS
AMRITA INSTITUTE OF MEDICAL SCIENCES	95	8	60
ASTERMEDCITY	329	121	25
ERNAKULAM MEDICAL CENTRE	120	17	10
LAKESHORE HOSPITAL	158	80	24
LOURDES HOSPITAL	250	50	12
MOSC MEDICAL COLLEGE	300	148	18
RENAI MEDICITY	268	20	20
RAJAGIRI HOSPITAL	343	115	40
SNIMS	30	15	15
TOTAL	1893	574	224

Designated Private Tertiary Care Centres



Revamped a shut down hospital (PVS): New COVID treatment centre with 14 Ventilators, 70 ICU beds and 70 single rooms.

b. Second Line (Secondary) Treatment Hospitals for managing COVID

- All Taluk Hospitals (COVID & Non COVID Blocks)
- Designated Private Hospitals (COVID & Non COVID Blocks)

Extra Precautions as there will be a mix of COVID & non-COVID patients managed here.

SOP, Protocols for Second Line Treatment Hospitals prepared.

Clinical Team & Administrators Trained.

Decentralised Systems for Managing Crisis (1/2)

- The Emergency Field Response Plan of Ernakulam district has taken an assumption that above 5 % of the people in the district may fall ill.
- The load of patients who need care for corona treatment is anticipated to be much higher than the overall healthcare capacity of the district.
- In such a context, the more centralised the management of the crisis, the more it will constrain the healthcare system and workers, from working efficiently to respond quickly to provide timely medical aid to patients.
- A practical solution is to **create systems at a Village Panchayat** and Ward Level for the healthcare system to be able to respond to the crisis.

Decentralised Systems for Managing Crisis (2/2)

- 70% of the patients are either asymptomatic (no symptoms) or have mild symptoms (dry cough/runny nose/diarrhoea).
- Such patients require minimal medical care and can be managed either at Home or at the primary (first line) treatment centre setup at the Village Panchayat Level
- **Strong Support Systems** are required to instil strong confidence in people to sit at home with mild symptoms.

2. Support Systems & Treatment Facility at Village Panchayat Level

A. Tele Health Help Line

**B. First Line Treatment Centre (Primary) at
the Ward Level**

C. Field Response Homecare Team

A. Tele Health Help Line (1/2)

Tele Health Help Line at every Panchayat (24*7)

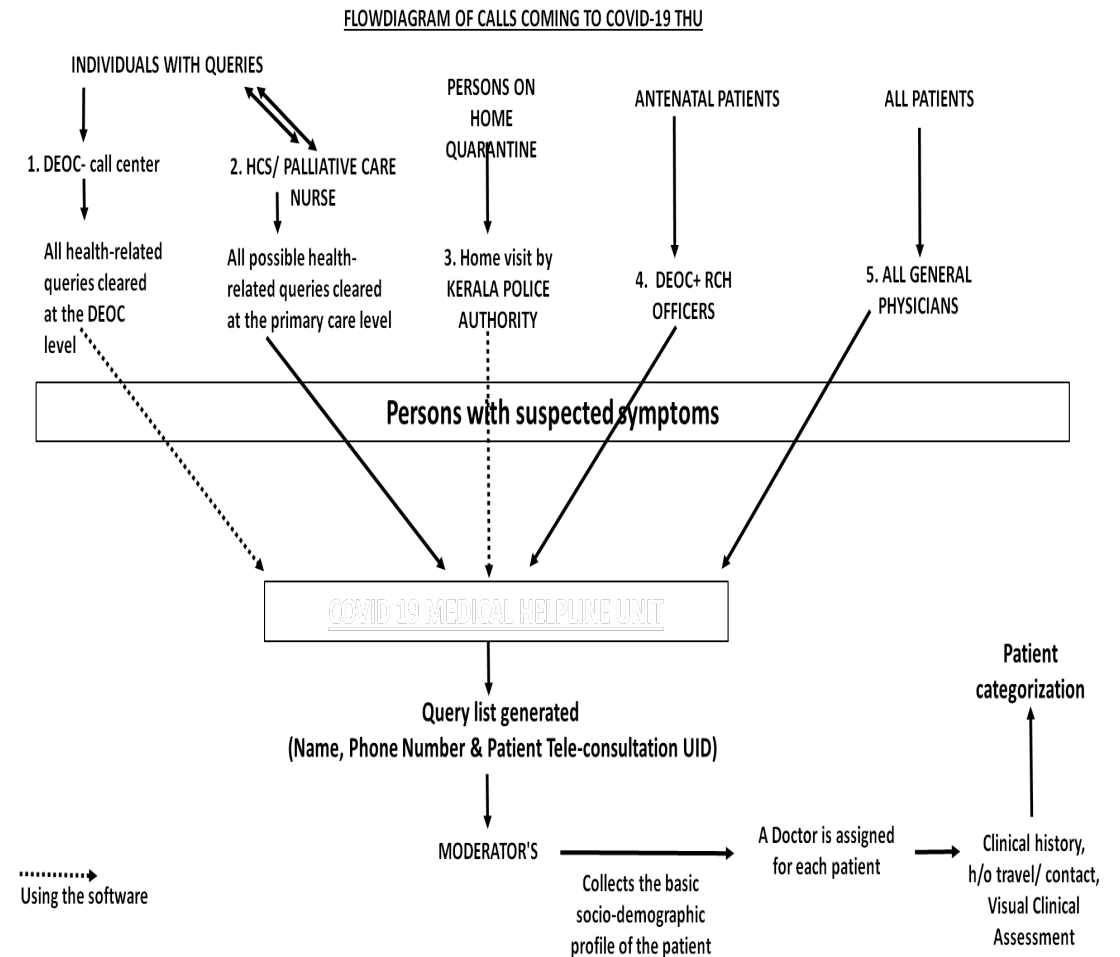
- A pool of doctors/ Nurses [Including Retired/Private/Interns] has been formed at every panchayat, based on place of residence of doctors/nurses
- Doctors on roll to forms a 24-hour tele-health system to be locally managed based at every PHC.
- People in a panchayat should be able to call into a system and then the call system automatically directs calls to doctors within that panchayat.
- **Medicine delivery systems** [UBER Eats Model using Volunteers] is being set up at a panchayat level which is connected to the tele health help line system.

A. Tele Health Help Line (2/2)

District Level Tele Health Help Line (24*7)

- Objectives
 - To establish the culture of tele health by capacity building at ground
 - To help the doctors/nurses at Panchayats in clinical/protocol queries
 - To co-ordinate & Monitor transfers among various treatment centres

Citizens cannot call this centre directly.
SOP Prepared & System Established.



B. First Line (Primary) Treatment Centres

- In every ward, there is a community hall/Auditorium.
- 25 bed Primary Treatment Centre could be set up in every ward.
- 80 items that are needed to set up a centre have been listed.
- Every panchayat needs to have an ambulance and a testing facility.
- Testing to classify symptomatic persons as COVID positive or not need to be done.
- Patients who can't be managed at Panchayat level will be moved to Taluk Level.



C. Field Response Homecare Team

- Concept of Field Clinical Team for Home care has been conceived.
- Nurse/Doctor in Double Chambered Autorickshaws
- Accompanying team to collect and dispose PPEs/ transport samples
- Protocols prepared.

Routine Care & Non COVID Emergencies

- **On Quarantine patients:** **Antenatal care:** Kinder Hospital (Private) & GMC Kalamasherry, **Ortho:** India Gandhi Hospital, **Psychiatry:** Muvattupuzha GH, **Emergencies:** GMC Kalama sherry, Amrita (Private), Aster (Private), Rajagiri (Private)
- **In Advanced Plan:** Since a parallel system will be created to manage Corona, PHCs/CHCs are exempted from the clinical management of COVID. They could handle routine primary care.
- For other medical emergencies at secondary and tertiary care level- GH Ernakulam, W & C Mattanchery, THQ Angamali and three private hospital per Taluk have been identified. Two apex private hospitals will also handle medical emergency.

3. Strengthen IPC at all hospitals

It is likely that hospitals may go into shut down if we are not focusing on strict basic infection control measures.

All healthcare facility to ensure

1. Triage, early recognition, and source control at entry
2. Applying standard precautions for all patients
3. Implementing empiric additional precautions for suspected cases of COVID-19 infection

4. Community Surveillance System

Tier	Members	Coordinator	Responsibilities
Ward Core Team (1843 ward core team constituted)	ASHA, AWW, Kudumbasree ADS, 2 Volunteer, Ward Member, JHI/ JPHN	ASHA	<ul style="list-style-type: none"> • Ensure Home Isolation • Look for Symptoms Daily -Inform MO if anybody is symptomatic • Assess Medical Needs- Co-ordinate with MO to address • Assess Non-Medical Needs- Co-ordinate with LSG to address • Assess Psychological Support- Link to Psychological Counselling services
LSG level Core Team	Medical Officer, LSG President, LSG Health Standing Committee Chair, LSG Secretary, Village Officer, Health Inspector	Health Inspector	<ul style="list-style-type: none"> • Daily Monitor & Review activities of Ward Core Team • Address any needs arising from ward core team
D i s t r i c t Surveillance Unit	DSO & Team Team to collect symptom data Team to do random checks	DSO	<ul style="list-style-type: none"> • Monitor and Support LSG level Surveillance system • Collect & compile data • Ensure all symptomatic are followed up regularly

5. Short Stay Homes (CCC)

- For ensuring quarantine of evacuation passengers & those with NO facility for home quarantine.
- Hostels/ Hotels- Single Room with Isolation facilities
- 2000 Rooms identified Now.
- These facilities could be converted to First Line (Primary) Treatment Centres when need arises.

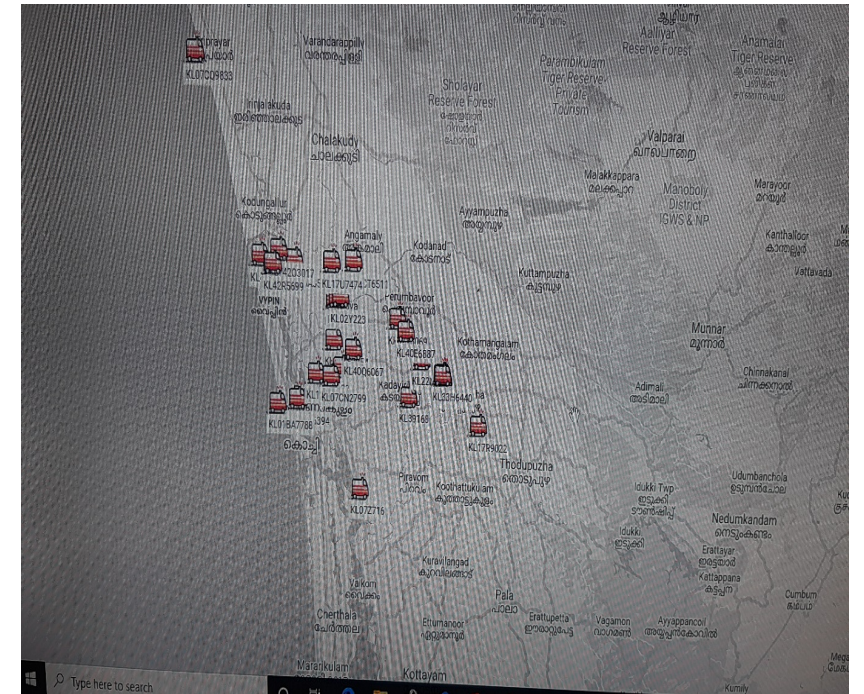


6. Corona Literacy Mission

- **Empowering every Health Care Workers** to know about system and protocols – e MODULES- Clinical Module, Surveillance Module, IPC Modules. Video Modules for Community Health Workers.
- **Empowering every citizens** to know what they need to do – House to House, Social Media, Mass Media, Application, e Modules.

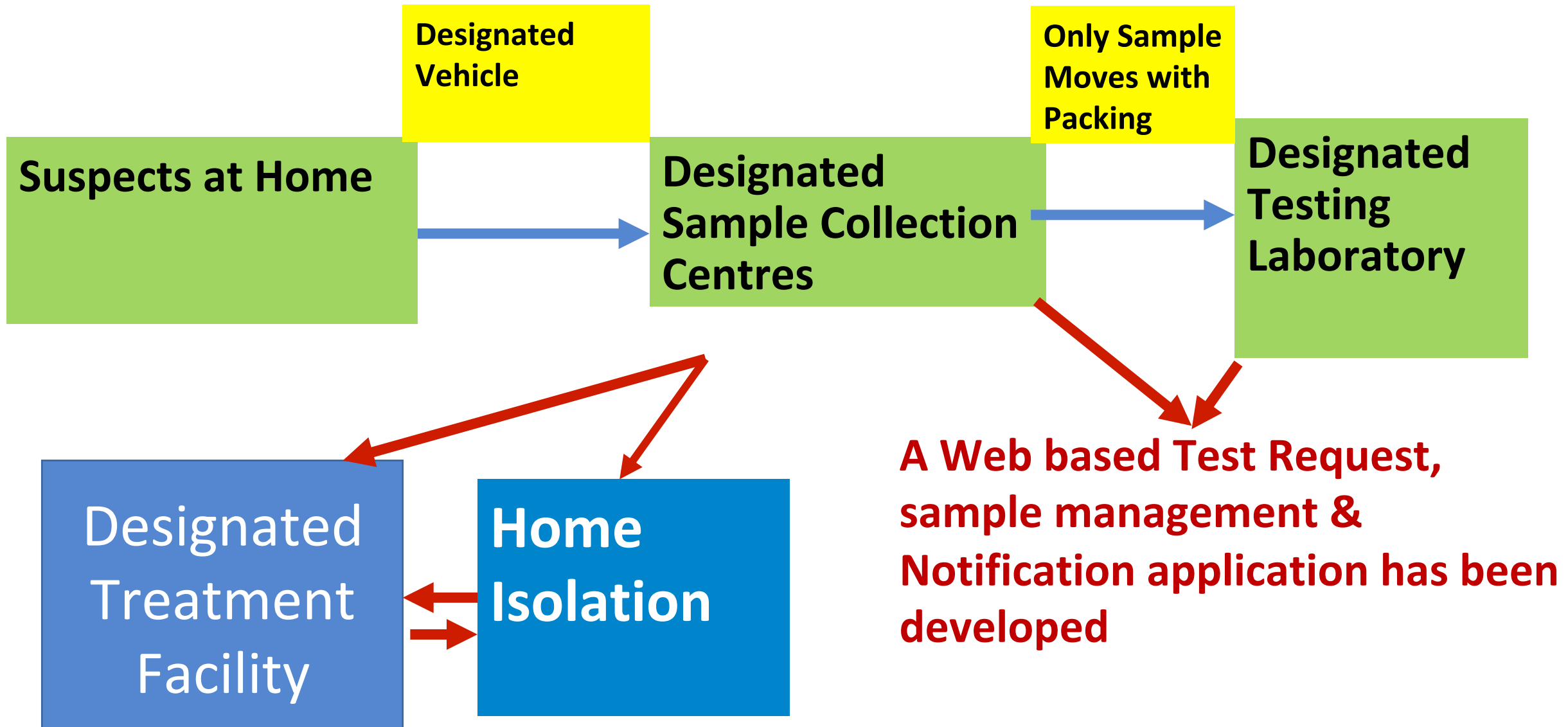
7. Transportation System

- 654 Ambulances in district, 36 Critical Care Ambulances
- 2 Ambulances to be made available at every Panchayat 24*7
- 2 Critical Care Ambulances at every Second Line Treatment Centre 24*7
- For Co-ordinating this, **UBER/OLA model Ambulance network** has been created.
- Disinfection of vehicles station will be set up at each Panchayat/ Taluk/ Treatment Centers.



Real Time GPS locations of Ambulances

8. Laboratory Surveillance & Patient Flow



Three Types of Facilities for COVID management

- **Designated Sample Collection Centre**
- **Designated Testing Laboratory**
- **Designated Treatment Facility [Home, First Line, Second Line, CTC]**

(A facility can play multiple role)



**Sample
Collection
Centre**



**CIF Form and
Test Request in
Kerala COVID
Management
WEB Application
from Sample
Collection Centre**



**Sample
Despatched with
TEST ID obtained
from Kerala
COVID WEB
Application**



**Accept
Sample,
Process and
Report Result
in Kerala
COVID WEB
Application**



**Public Health
Authority
Initiating Public
Health Actions
based on real
time reports
Kerala COVID
WEB
Application**

REAL TIME DATA FLOW- Specimen Management & Notification

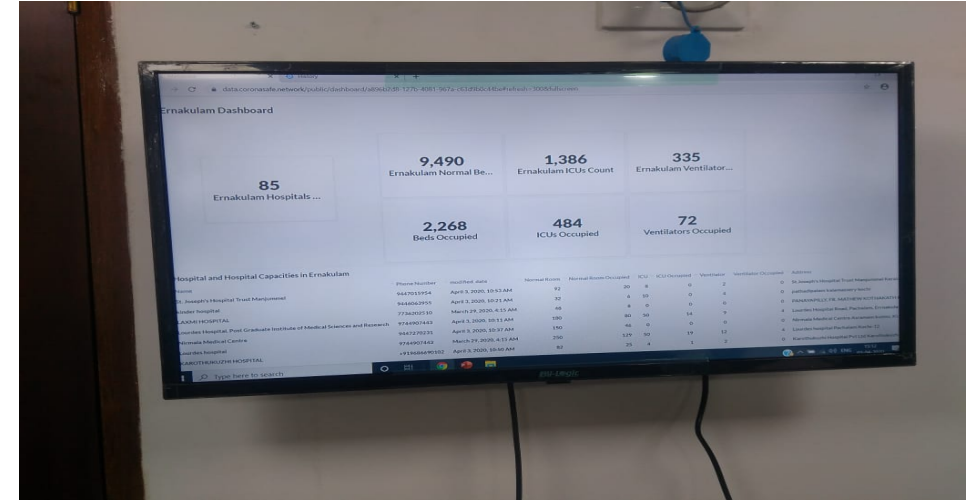
9. Material Management

- Shortage of PPE anticipated
- Customised Local Manufacturing Promoted
- Optimal Use Promoted



10. Real Time Management Information System

- Real Time information of beds/ ventilator/ ICU availability
- Ambulance geo positions and availability (UBER/OLA Model)
- Medicine and Material Transport through volunteers (UBER Eats Model)
- Suspects, Sample Management & Real Time Notification (NIKSHAY Model)
- Material Management (DVDMS Model)





Great way to fight a war –
be prepared to defend
yourself for winning.

Chris Kyle

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