

**PROPOSAL FOR STRENGTHENING CRITICAL CARE SUPPORT**

**GOVERNMENT MEDICAL COLLEGE**

**THRISSUR**

## INTRODUCTION

Government medical college Thrissur is the epicentre of Covid 19 care in the Mid Kerala and has so far managed a majority of the patients in the three Midkerala Districts

<b>Cumulative</b> number of positive patients <b>admitted</b> till date	538
<b>Cumulative</b> number of positive patients <b>discharged</b> till date	415(1awaiting)
<b>Cumulative number of positive patients died till date</b>	<b>4</b>
<b>Cumilative Total patients in Intensive care</b>	<b>22</b>
Number of positive patients <b>presently admitted (5+6)</b>	119
<b>4a</b> - No.of patients transferred in, if any (from another institution/district)	0
<b>4b</b> - No.of patients transferred out, if any (to another institution/district)	0
<b>4c</b> - No. of re admissions, if any	0
Total number of positive patients presently admitted in <b>isolation ward</b>	117
Total number of positive patients presently admitted in <b>ICU</b>	2
Total number of positive patients presently on <b>ventilators in ICU</b>	0
Total number of positive patients - with productive cough	6
Number of presently admitted patients - swab turned <b>negative within last 24 hours</b>	17
Number of COVID patients - <b>discharged within last 24 hours</b>	5 (1 awaiting)
Number of <b>deaths</b> due to COVID - within last 24 hours	1

## Strengthening Covid 19 Care in MCH Thrissur

There are 24 designated beds at covid intense areas at Government medical college with possible 8 beds in the acute care area.

### Manpower recruitment

**Acute Care Area** : 8 beds are managed in 3 shifts By 2 JR3 in each shift from Anaesthesia and General medicine covered by PG ANESTHESIA and PULMONOLOGY PD The charge of the ICU is by ANAESTHESIA HOD

### MULTIDISCIPLINARY INTENSIVE CARE

8 beds are managed in 3 shifts By 2 JR3 in each shift In 3 SHIFTS 2 JR3 IN EACH SHIFT ANAESTHESIA MO/MEDICINE MO CHARGE: ANAESTHESIA HOD

### STATUS REPORT TILL 27.07.2020

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So far we have catered 538 Patients at medical college Thrissur and of which 22 (4.08%) Covid 19 Patients were admitted and worsened to Category C. Out of the 22 Patients admitted 3 patients ( 0.5%) succumbed despite all measures. Out of the 22 Critical admissions we unfortunately lost 3 that accounted for 13.64% which is less than national standards. Average age group of the lost patients were 72.2 years . One patient lost was below 50 years but had a BMI of 36.2 which is also a significant factor relating to mortality .

## **PROPOSAL CRITICAL CARE STRENGTHENING AT MEDICAL COLLEGE THRISSUR**

As per the deliberation with the Honourable health minister, it is decided to have an intensive/ critical care supportive group to oversee and guide in management of critically ill covid 19 patients.

The Control team consists of:

1. Dr. Rajalakshmi R- intensivist
2. Dr. Shamsad -HOD of department of anesthesia
3. Dr. Jayachandran -HOD medicine
4. Dr. Purushothaman -HOD pediatrics
5. Dr Thomas George -HOD pulmonary medicine

### **B. CRISIS CRASH TEAM: TEAM 7**

A crisis crash team is set up with 7 is constituted with one member of expert critical care team available 24 hrs in the hospital in crash control room with tele monitors and will be able to reach the crash patient in 4 Minutes . The team 7 member will be half donned in the PPE and will reach the area of crash.

The room will be provided with Central Monitor , CCTV monitor , measures for staff support and air flow. And alarm system .The Acute care area monitors will be tele connected to the above room.

The team will be lead by Dr. Rajalakshmi MD, DM intensive care .

The team will

1. Monitor minute to minute care of each ICU patients in covid 19 area
2. Intervene on site whenever is needed
3. Discuss and laisse with experts in same field
4. Formulate and asses the skill competence of junior residents and medical officer posted on basic intervention skills
5. Plan regular training session for Ventilatory care by the support team
6. They will discuss the case management daily and as and when required.

A support group with critical care specialist of Daya hospital Fazil

Abobakar and Dr. Dileep Raman intensive critical care specialist

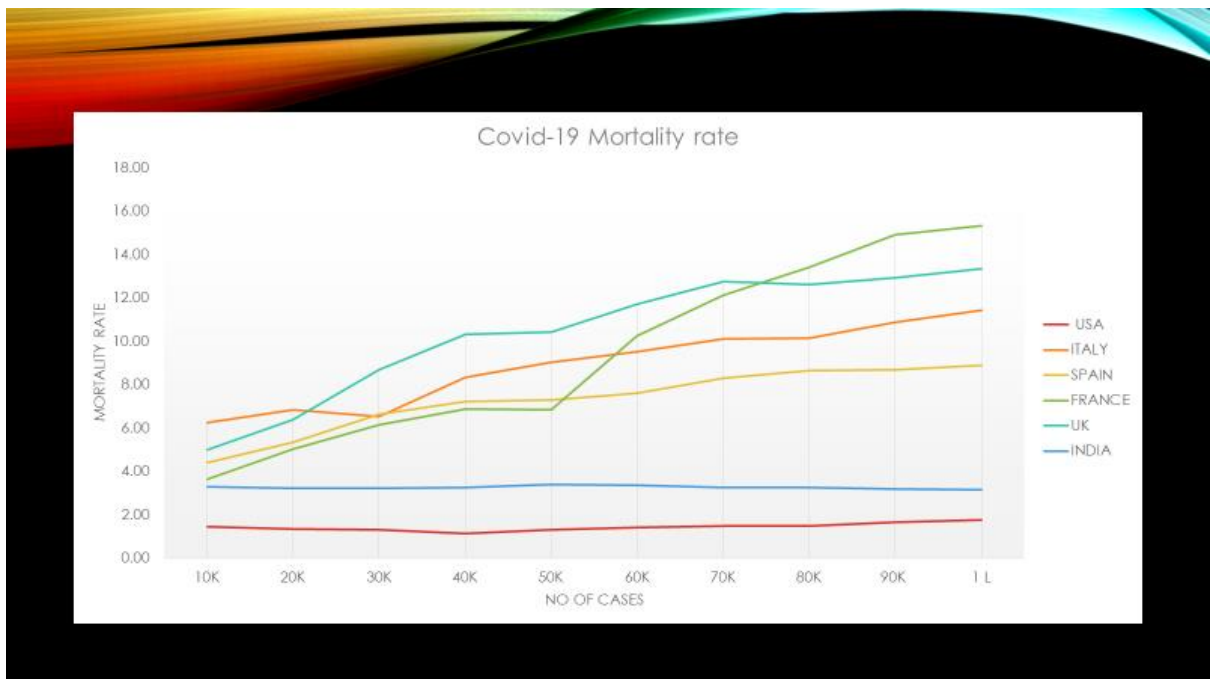
Bangalore.

7. Daily report to be submitted to chairman medical board.

## THRISSUR MCH MODEL OF TELE INTENSIVE CARE SUPPORT

### CONCEPT

- 66% to 91% of COVID-19 patients who required mechanical ventilation died
- ICNARC (UK) data - 57% patients have died and 43% have been discharged alive from critical care .
- This is quite alarming when compared to patients with viral pneumonia (non-COVID-19) during 2017-19 where 78% patients were discharged home and only 22 % died
- **Mortality rate increases as the number of cases increases**
- ARDS is the most common cause of death in COVID 19 patients
- In order to decrease mortality we need **Experienced Intensivist and trained Nurses** taking care of patients with ARDS
- As Doctors cannot be trained in Critical Care overnight we need to pool the available Intensivists and triage patients
- This is where TELE ICU



## **TELECONSULTATION MODEL**

- Delivery of Critical Care Services located at an offsite Command Center
- Command Center has ICU Super specialist doctors connected 24/7 to ICU
- Real time Audio, Video, EMR and technology platforms are used to deliver expert care
- Most of the Medical Colleges will be well equipped to treat ARDS patients
- But all District and General hospitals may not have sufficient Intensivists to treat ARDS patients

## **INFRASTRUCTURE REQUIREMENT**

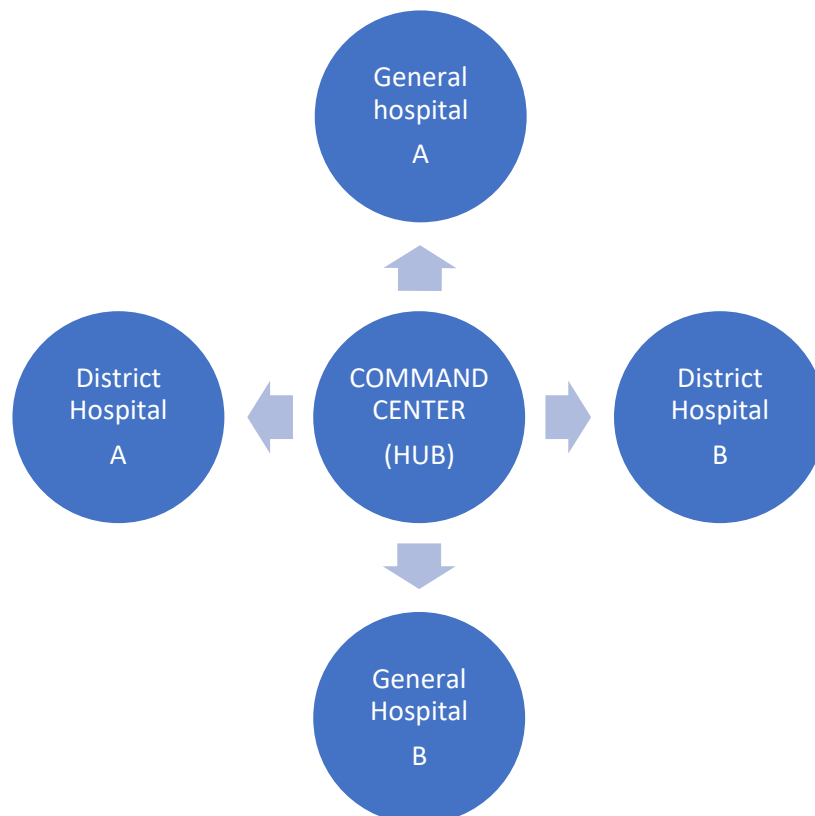
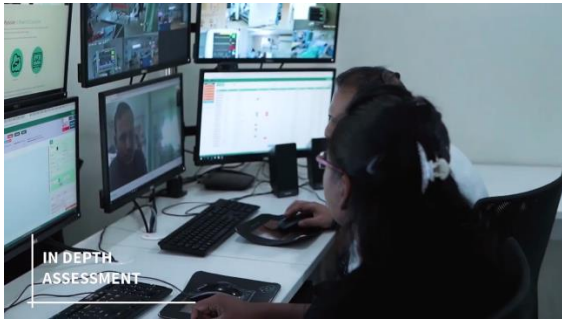
- High speed Internet
- Cameras
- Computers
- Mobile phones/Tablets
- Printers
- Webcam with microphone
- Emergency call button

## **A COMMAND CENTER**

It is set up with The Command Center will be run by Experienced Intensivists and Nurses round the clock\_ This will ensure all Critically ill patients are seen by Intensivists 24/7

- Monitors
- Computers with headphone, speaker
- Software specifically designed for TELE ICU
- High speed Internet connection ( including Backup and UPS

- One Command Center would be able to provide TELE ICU services for 1-2 district  
A hub and spoke model
- So doctors in one command center will be able to treat patients in different  
hospitals





## TRAINING

- Prerecorded Videos can be used to train Nurses and Paramedics
- These modules are 5- 10-minute videos of procedures in ICU
  - Proning
  - Closed suctioning
  - Donning and Doffing
- Online tests can be conducted to assess competency

## ADVANTAGES OF TELE ICU

- Effective management of Human resource- Intensivist and Nurses
- DOCTORS IN QUARANTINE can run the command center (even from Home)
- Critically ill patients can be monitored by Intensivists 24/7
- Decrease in Mortality rate
- As all the information will be electronically available, **it will be easier to collect , analyse , interpret and publish these data**
- If there will be a favorable outcome (Decrease in mortality rate), this model **will be useful not only for other states but also for other developing countries with limited resources.**