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COVID Challenges: Perspectives of Medical Administration Experience at our Centre: Joint Effort by Clinicians and Administrators. Strategic Planning and Guidelines & Challenges Faced by the Medical Administration

By Dr. Gauri Ahuja, Dr. Ashwini Jogade, Dr. Deepak Patkar,
Dr. Mitusha Verma & Dr. Anurag Mishra

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COVID Challenges: Perspectives of Medical Administration Experience at our Centre: Joint Effort by Clinicians and Administrators. Strategic Planning and Guidelines & Challenges Faced by the Medical Administration

Dr. Gauri Ahuja [α], Dr. Ashwini Jogade [σ], Dr. Deepak Patkar [ρ], Dr. Mitusha Verma [ω] & Dr. Anurag Mishra [¥]

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I. Introduction

Dr. Balabhai Nanavati Hospital, blessed by Mahatma Gandhi, inaugurated by India's first Prime Minister, Jawaharlal Nehruin 1950 was reintroduced as Nanavati Super Specialty Hospital (NSSH).

Nanavati Super Specialty Hospital has been at the forefront of healthcare for the past 70 years.

As the COVID 19 pandemic struck our community, NSSH proactively took the initiative of systematically screening as well as triaging and getting ready to serve the community.

At NSSH, we made stringent protocols to segregate suspected cases, collect samples for testing and, if required, admit them in dedicated isolation units. The COVID-19 isolation wards & Isolation Intensive Care Unit was set up in a separate building to ensure the safety of other patients.

In the current dynamic scenario, the number of positive COVID-19 cases is on the rise, and guidelines need to be updated time and again. As a responsible medical facility, NSSH was gearing up to be prepared to provide continuous medical support in keeping with National and International standards. In its thirst for continual improvements, NSSH strived to serve the society at large and be in the frontline as CORONA WARRIORS.

We would like to discuss various steps taken by the administration in dealing with the COVID-19 crisis at a tertiary care hospital, along with the hurdles faced & the measures taken. We aim to share our experience & practice, which could be insightful to other hospitals, who would eventually have to face these challenges if an unprecedented surge does occur.

Few Facts

- Pneumonia of unknown cause detected in Wuhan, China.
- First reported to the WHO Country Office in China on 31 December 2019. (1)
- Cause identified as severe acute respiratory syndrome corona virus 2 (SARS-CoV-2)
- On 11March, 2020, WHO declared COVID-19 as a global pandemic. (1)
- India declared COVID-19 as a Notified Disaster on 14 March, 2020. (2)

II. Role of Medical Administration

Considering the severity of the disease, Medical Administration geared up, and along with Chief Operating Officer, Executive Director, formed a multi-disciplinary Task Force named Apex Committee. The committee prepared detailed process flows, conducted training sessions &initiated the process. Following were the objectives to start with:

- To form a COVID CARE multidisciplinary planning committee/Team.

Author α: MBBS, DNB Radiodiagnosis, Affiliation: Consultant Radiologist, Nanavati Super Speciality Hospital, Mumbai, Maharashtra, India. e-mail: gaurane@gmail.com

Author σ: Affiliation: Medical Superintendent ,Nanavati Super speciality hospital. e-mail: ashwini.jogade@nanavatihospital.org

Author ρ: Affiliation: Consultant Radiologist, Head, Department of Imaging, Nanavati Super Speciality Hospital, Mumbai. e-mail: drdppatkar@gmail.com

Author ω: Affiliation: Consultant Radiologist, Nanavati Super Speciality Hospital, Mumbai. e-mail:drmitusha@gmail.com

Author ¥: Affiliation: Assistant Medical Superintendent, Nanavati Super Speciality Hospital. e-mail: anurag.mishra@nanavtihospital.org

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- To formulate a COVID PREPAREDNESS PLAN.
- To Formulate a Structure for planning and decision making as, no previous guidelines were available.
- To formulate a Policy and process planning to identify, Screen and, Triage patients—to segregate suspect from other patients.
- To develop Standardized, written protocols for identifying, Segregating, Monitoring and, reporting of COVID-19 patients.
- To formulate Training protocols for all healthcare Staff.
- To do extensive research and study of existing guidelines and directives provided by various authorities and governing bodies: MOHFW, MCGM, ICMR, WHO. These guidelines were and continue to be updated & incorporated into the current SOPs; major reason being that COVID-19 disease presentation and management had several variable factors.
- To do Strategic and human resource planning.
- To form Toolkits and checklists. Acopy of the hospital preparedness plan was made available at the facility for all staff.
- To Establish Standard operating procedures for various departments and form process flows.
- To create two Emergency Units: Red a & E for suspected & positive COVID patients. Green A &E for Non-suspect emergency patients.
- To do the Budgeting for the contingency plan.
- To initiate the Purchase of Safety equipment urgently namely personal protective equipment (PPE) kits, Infrared thermometers, N95 masks, sanitisers & all Hospital Infection control tools .
- To devise standard Safety guidelines to be followed by all staff and to ensure that these guidelines were strictly adhered to by everyone with the help of regular training and audits. The final aim is to safeguard the health of the entire healthcare personnel and to prevent transmission to the vulnerable population.
- To form a Safety Team: comprising of representatives of Quality, Clinicians, Nursing staff, and Human resource department.
- To Conduct safety Audit regularly.
- To strive towards Staff motivation and encouragement.
- To arrange regular meetings with supervisors and owners to discuss progress, daily activities, and new ideas to tackle this crisis.
- To be ever ready & promptly solve all crisis situations.
- To have PR, Media preparedness plan.

The first step towards getting our hospital prepared was to establish an APEX committee for COVID care. The key members of this committee were:

Hospital Director and Chief Operating Officer: Their leadership and support ensured that all departments worked collectively.

The Director of medical services, Medical superintendent, Deputy Medical Superintendent and General manager, Operations: They organised and led the daily meetings and finalized decisions based on inputs from the multidisciplinary team. Their excellent leadership and decision-making were pivotal to the smooth functioning during the whole preparedness process.

Director of Critical Care, and Department Heads of Medicine, Emergency Medicine, and Surgery: These were the departments dealing with the patients directly. Coordination between various department heads, administrators, and their staff was essential for ensuring success of the planning process.

Chief Nursing Officer and Accreditation Co-ordinator, played a vital role in dealing with nursing issues for COVID patients, conducted regular training for staff for screening, Triage, and management of COVID patients.

Quality Manager and Hospital Laboratory and Infection Control Committee: who studied the ever changing guidelines from WHO, Ministry of health and family welfare, CDC, and implemented them effectively. Ensuring the safety of staff was very crucial to this plan.

III. Execution

a) Screening and Triage



Figure 1: Screening



Figure 2: Screening Booth

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Figure 3: All personnel Screenedat entry



Figure 4: Social Distancing in OPD.

The most crucial and essential step to control the spread of the disease was to segregate COVID suspect patients from routine patients. We used case definitions and guidelines issued by the Ministry of health and family welfare (3).

COVID-19 Case Definitions (3)

Suspect Case:

A patient with acute respiratory illness (fever and at least one sign/ symptom of respiratory disease (e.g., cough, shortness of breath) AND a history of travel to or residence of a country/area or territory reporting local transmission (See NCDC website for an updated list) of COVID-19 disease during the 14 days prior to symptom onset;

OR

A patient / Health care worker with any acute respiratory illness AND having been in contact with a confirmed COVID-19 case in the last 14 days prior to onset of symptoms; OR

A patient with severe acute respiratory infection (fever and at least one sign/symptom of respiratory disease (e.g., cough, shortness of breath) AND requiring hospitalization AND with no other a etiology that fully explains the clinical presentation.

ORA case for whom testing for COVID-19 is inconclusive

Laboratory Confirmed case:

A person with laboratory confirmation of COVID-19 infection, irrespective of clinical signs and symptoms.

Immediate measures were taken to isolate the patientas soon as a case was identified, and the concerned authorities were immediately notified.

Screening Protocols were standardized, based on guidelines from respective authorities with timely amendments. Screening guidelines were updated with changes made accordingly in the screening checklist provided to all the personnel on screening duty.

Every Single Personnel entering the hospital (patient, visitor if any, healthcare staff, vendoretc.) was screened.

The temperature was checked immediately after entry; then personnel was sent to the screening booth for history using a screening checklist, to identify people with history of travel, contact or symptoms of acute respiratory illness(ARI) like fever, cold, cough, and breathlessness.

Multiple screening desks were available to ensure the fast transit of patients. The screening was done by trained healthcare personnel in recommended PPE (Personal Protective Equipment) Screening checklist (questions to ask and actions to take)-to rapidly identify and isolate suspect COVID-19 cases was provided to them along with extensive training.

Screening was done following social distancing guidelines. Patients were supposed to stand on stickers marked at least 6 feet apart.

Additional Doctors were stationed at the screening booth to further strengthen the process by identifying patients not disclosing all relevant history.

Anybody with a positive history was sent to the triage area (Fever/Flu clinic) where a detailed assessment was done to identify risk factors and severity of the disease. Patients were asked to fill a Self-Declaration form; wherein a checklist is available. Swabs were further collected for testingCOVID-19 as per the clinical condition &advice.

The patients were segregated into

1) COVID suspects –symptomatic stable or unstable (critical).
2) COVID Positive –symptomatic stable or unstable (critical).

The symptomatic patients were admitted to COVID wards, and the critical patients with serious disease were admitted to COVID Intensive care units.

After the test results were available, patients were shifted to normal non-COVID wards if the test results were negative and screening HRCT Chest did not reveal COVID like findings. Isolation units with secluded beds had been created for COVID suspect and positive patients in a separate building.

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Screening and Triage Protocol

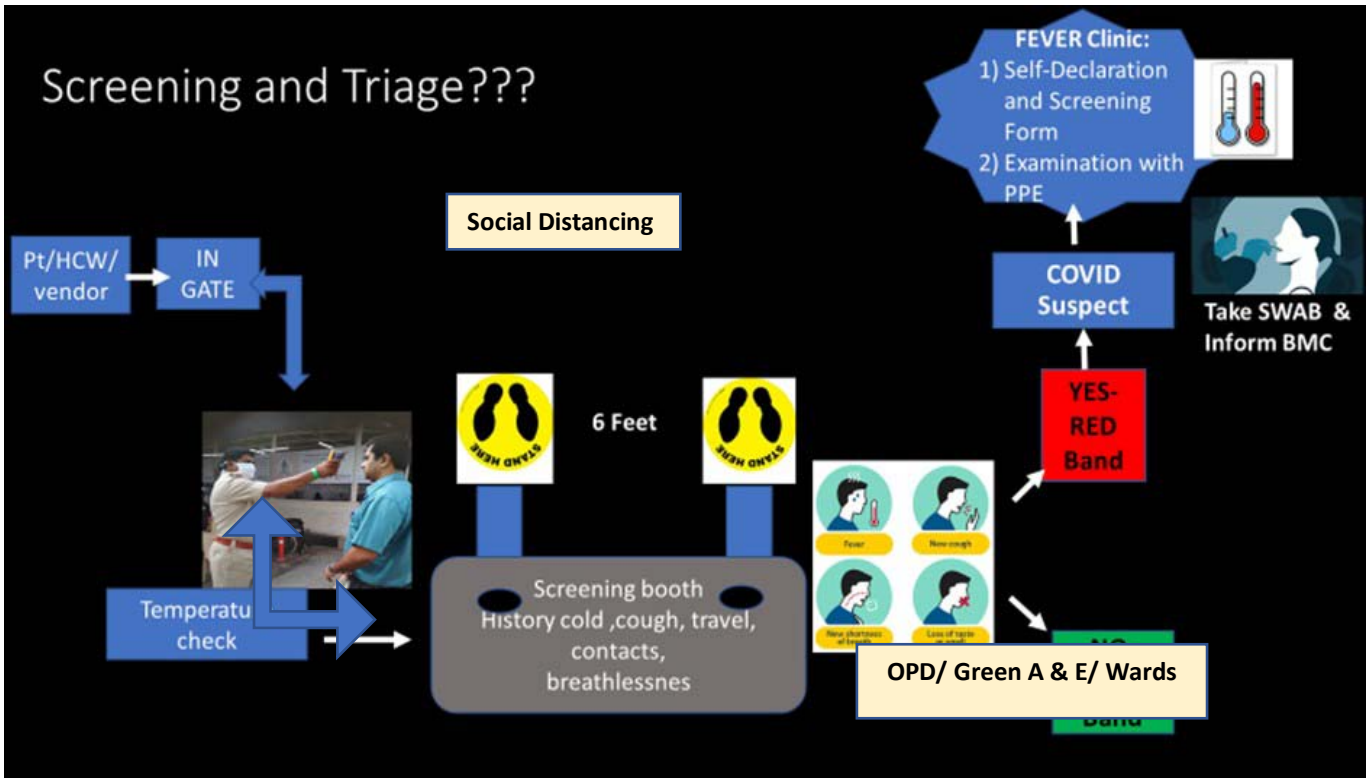

Figure 5: Screening and Triage



Figure 6: Screening booth

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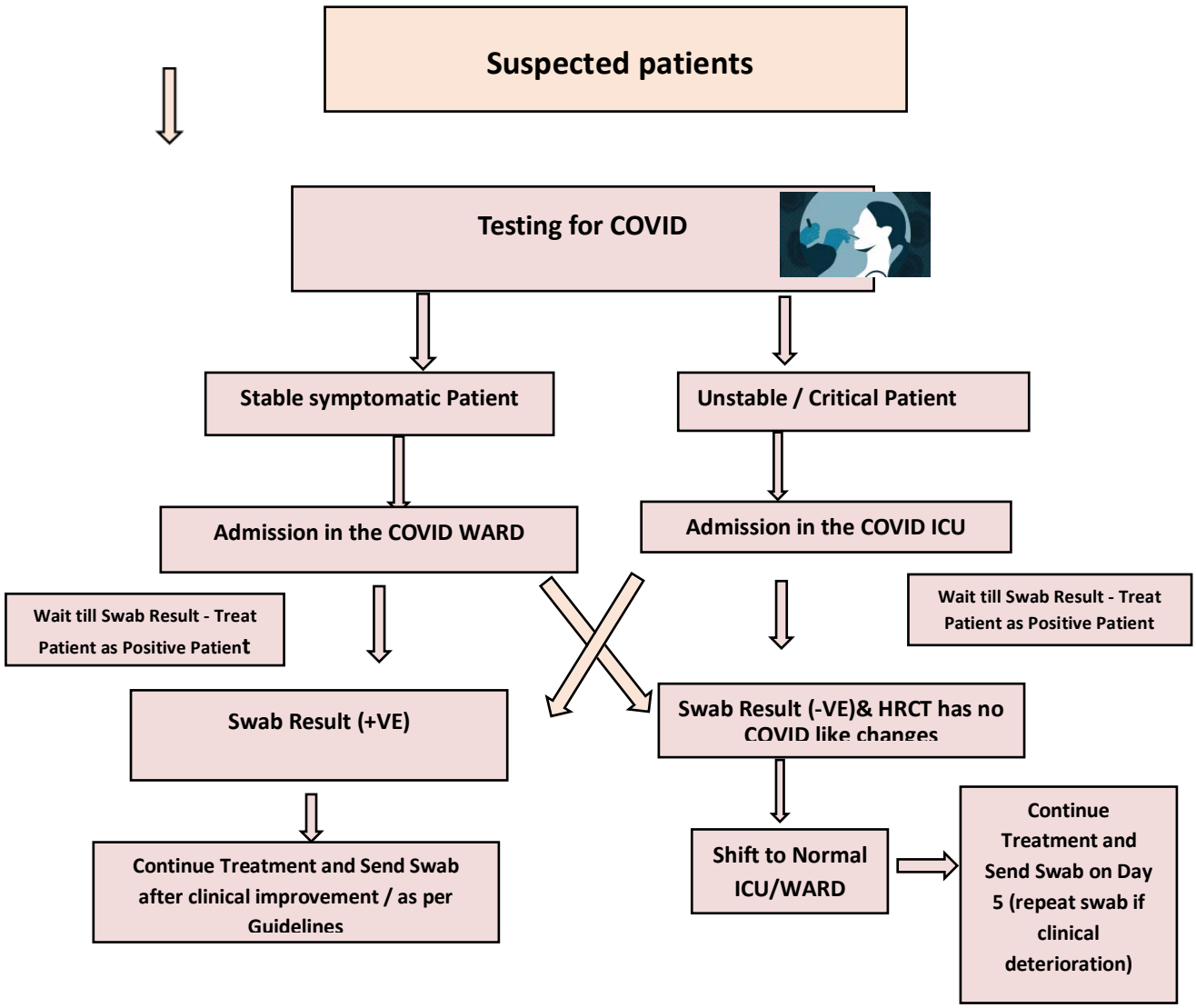

IV. Activities in Lockdown Period

On the evening of March 24th, the government declared a 21-day lockdown from midnight onwards to control the spread of COVID -19. (4)

The lockdown was further extended in phases, and India was under a nationwide lockdown till 31st May in the city. (5)The Ministry of Home Affairs released new guidelines called 'Unlock 1.0' that allow the opening of malls, restaurants, and religious places in all areas except the containment zones from June 8th, 2020. (6)

The biggest challenge &in fact the need was to restrict the footfall to the Hospital, which could help social distancing & decrease the chances of infectivity.

All outpatient services were closed in an attempt to reduce footfall and prevent transmission. All elective procedures/investigations had been canceled/rescheduled. Only emergency cases were being managed like stroke, obstetric emergencies, myocardial infarction, neurosurgery cases, pediatric emergencies, etc. Patients on hemo dialysis and those requiring chemotherapy were offered care using proper precautions to ensure their safety as these patients are at risk due to immune suppressed status.

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Measures taken to slow the spread of disease and prevent overburdening of healthcare facilities

No visitors/attendants except with children and dependent patients.
Outpatient services closed.
All non-emergent investigations rescheduled/canceled
Only Emergency/semi-emergency investigations (including Imaging) conducted.
Screening using proper social distancing rules
Isolation wards for COVID suspect/positive patients in a separate building.
Only medical and surgical emergencies admitted like Stroke, Myocardial Infarction, obstetric emergencies.

a) Isolation Wards



Figure 7: Isolation ward



Figure 8: Isolation ward

Once patients were found to have risk factors, it was of utmost importance to segregate them from the routine patients and admit them in dedicated isolation wards. This required strategic planning and the management faced a dual responsibility here, to safeguard the health of already admitted patients and patients coming in for services like chemotherapy and hemo dialysis while making sure proper care was provided to the ones suffering from this dreadful disease. to ensure these, a separate building (Annex) within the hospital premises, which had an exclusive access, was designated as the isolation building. It had special COVID wards and Intensive care units.

The designated wards were made using guidelines which were followed strictly.

- The building had a separate entry and exit.
- Good ventilation; these areas were not a part of the central air-conditioning.
- A minimum distance of 1 meter maintained between adjacent beds in the designated Ward/ ICU.
- Lines of demarcation for restricted entry in the ward were put in place.
- The Donning and Doffing areas for PPE were separate. A shower facility was available.
- The Dirty Utility Area was segregated and dedicated to the Ward/ICU and not shared with any other area.
- Portable X-ray was placed inside the Ward and dedicated for the use of COVID 19 patients.
- The isolation wards/ICUs had a separate toilet with proper cleaning and supplies.
- Visitors were strictly not allowed in the isolation facility.

All healthcare workers working in these wards had to follow stringent safety protocols and exhaustive management guidelines. Doctors, Nurses, Housekeeping Staff, and administrators posted to isolation facility were dedicated and not allowed to work in other patient-care areas

- Healthcare workers in this ward are posted for 14 days with weekly offs and 6 hours duties. Swabs were sent between days 5 and 7 after the last working day. Doctors on duty were provided accommodation in a good facility nearby; expenses of which were borne by the management.
- Regular training sessions and motivational support was provided time and again by the Medical Superintendent, Director of Medical Services. The Management provided immense support and

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encouragement to all the Consultants, Clinical Associates, Residents, and nursing staff.

- ❖ Teams were formed like a safety team to ensure proper use of PPES and safety protocols. General audits were held to assess the effectiveness of training sessions.
- ❖ The housekeeping staff was provided regular training and guidance as these are the ones who directly come in contact with biomedical waste.
- ❖ All healthcare workers were provided prophylaxis (hydroxychloroquine). NSSH was probably the first hospital to initiate this along with MAX Hospitals.
- ❖ Management protocols were designed for the treatment of COVID-19 patients, which were updated timely.
- ❖ All the patients were strictly monitored.

Routes for patient transfers: COVID-19 patients requiring investigations like CT scan or Magnetic Resonance Imaging (MRI) were transferred through a separate Brown corridor, which was created during every patient transfer. This required coordination from the entire staff, including administrative managers, doctors, housekeeping, cleaning team, etc. Safety precautions were taken, and sanitization was done immediately after the transfer of a suspected or positive patient.

Disinfection and Sanitization-strict protocols were laid down for cleaning and disinfection.

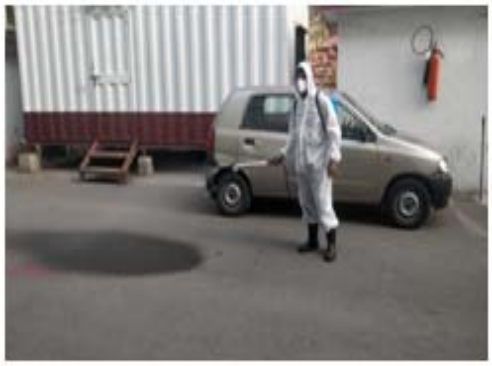

Figure 9: Sanitization post patient transfer



Figure 10: Cleaning Handles



Figure 11: Disinfection



Figure 12: Cleaning Door Knobs



Figure 13: Disinfection Spray

Receiving a Suspect/positive patient from outside

- Prior information was given to the appropriate authority in the hospital.
- The COVID Code brown was activated.
- All dedicated personnel in COVID Care team were informed.
- The patient arrived in an ambulance and entered from EXIT Gate (to avoid risk to other patients)
- Accompanied by a security guard in full PPE to Isolation area
- Directly admitted in ISOLATION ward in separate Building (Annexe)
- SOCIAL Responsibility: MCGM, Authorities were immediately in formed so that necessary precautions and actions could be taken, eg. contact tracing/line listing and quarantine or seal residential areas/buildings to prevent spread.
- Corridor sprayed with Sodium hypochlorite (from ambulance up to the ward entry)

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V. Training Training Training

Training was probably the most difficult and essential aspect of a successful preparedness plan.

Training sessions

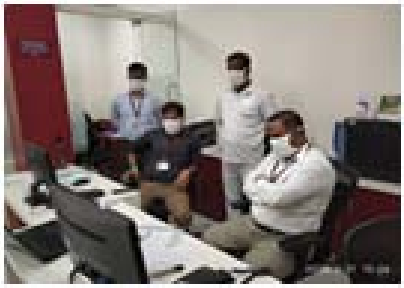

Figure 14



Figure 15



Figure 16



Figure 17

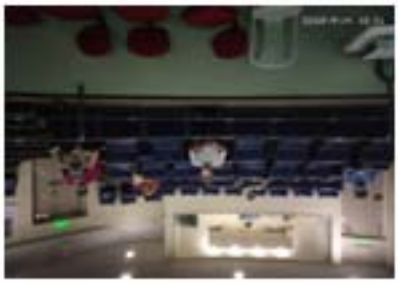

Figure 18



Figure 19

Training had to be provided for all healthcare staff

- Consultants, clinical associates, residents, and interns
- Nursing staff-safety, Housekeeping staff
- Security personnel
- COVID Screening team-screening and Triage
- Staff safety TEAM was created to audit training processes.

The training effectiveness was judged by continuous, surprise Audits of Staff Health & Staff safety team, feedbacks, etc. Reinforcement Training was conducted regularly.

On job, training was the preferred module as it was interactive & many queries could be resolved immediately.

Training Calendar was prepared, and training was conducted. Pre & post-training tests were provided as a part of the process.

Detailed presentation with videos, graphics, etc made in English & Marathi for better understanding were made.

VI. Covid 19-Staff Health & Safety Team

Caring for suspected/confirmed COVID 19 patients in the hospital posed a new set of challenges. Staff at the frontline needed to learn new skills, follow new patient care guidelines, deal with a never before encountered crisis, and, most importantly, protect themselves, their patients, and their co-workers from the spread of this highly virulent infection. No amount of infection prevention precautions was going to be enough; the minutest gap could lead to catastrophic consequences to staff and patients. The safety of healthcare workers, therefore, is of paramount importance. They are the organization's most valuable resource. NSSH is taking all efforts to ensure the best standardsofmedicalcareandstaffsafetyareputintoplaceandtoensurethehealthandwell-beingofthestaffas they navigate this challenging time. To check the effectiveness, learn about opportunities for improvements, and putim mediate corrective measures in placeona daily basis, we constituted "Staff Health and Staff Safety Team."

The team comprised of the following:

- One Senior Consultant (Physician in charge of Staff Clinic)
- One Senior Manager from HR
- One Infection Control Officer

The team started reporting to the Unit Head and Medical Director of the hospital. The following objectives were imparted to the Staff Health and Staff Safety Team.

- To be familiar with NSSHs policies and procedures relating to COVID 19.
- To take frequent rounds of all areas of the hospital to monitor implementation, guide staff, identify gaps, and take corrective measures.
- Ensure staff screening, prophylaxis, and quarantine facilities are available.

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- Ensure staff is provided with standardized PPE in sufficient quantity.
- Check-in with staff frequently during this time; set an expectation for managers to reach out to staff regularly.
- Make sure staff is provided with the resources, and support they need. Escalate and resolve any issues on an urgent basis to the Unit Head and Medical Director.
- Deal with Exposure Management, Quarantine and Clinical Guidance in case the staff gets infected.
- Find ways to show support and care for the staff. They should be able to reach out to the team for any issue or concern.
- Make sure the staff is taking care of themselves and their families. Provide counseling referrals for those who need to deal with their stress, burnout or are feeling overwhelmed. Ensure staff can access food, refreshments, transportation, etc.
- Recognize and engage staff: find ways to acknowledge, motivate, and appreciate them.

- Set up a buddy system, where two employees partner together to support each other, and monitor each other's stress, workload, and safety. The goals of the buddy system were to:
- Get to know each other, talk about background, interests, hobbies, and family. Identify each other's strengths and weaknesses.
- Keep an eye on each other. Try to work in the same location if you can.
- Set up times to check-in with each other. Listen carefully and share experiences and feelings. Acknowledge tough situations and recognize accomplishments, even small ones.
- Provide help with basic needs, such as transportation.
- Monitor each other's workload and encourage each other to take breaks.
- Communicate your buddy's requirements and their limitations to the managers – try to make your buddy feel "safe" to speak up.
- The Staff Health & Safety Team conducted daily audits, immediately started doing closures of the Audit findings ; training was continued .

a) Infectious waste management

Biomedical waste management is probably the most challenging aspect of this entire process. Waste management was done following guidelines as per BMWM rules, 2016, Ministry of Health and Family Welfare guidelines (Mo HFW)

- Separate color-coded bins/bags/containers were placed in isolation wards and proper segregation of waste was maintained as per BMWM Rules, 2016.
- As precaution double-layered bags (using two bags) were used for collection of waste.
- All waste collected in different colored bags was finally.
- Placed in a double-layered yellow bag and sealed after spraying 1%sodium hypochlorite over the inner waste bags.
- A dedicated collection bin labelled as COVID-19 was used to store COVID-19 waste and keep separately in temporary storage room before handing over to authorized staff.
- Separate record of waste generated from COVID-19 isolation wards was main tained.
- The surface of containers/bins/trolleys used for storage of COVID-19 waste were disinfected with 1% sodium hypochlorite solution daily.

VII. Process Flow of Imaging

Only emergency and semi emergency investigations were done .All elective procedures were canceled.

Following investigations were done:

- MRI-Indications like stroke, seizures, paediatric emergencies, etc.
- Ultrasound-obstetric scans, severe abdominal pain-ureteric colic, appendicitis, obstruction, surgical indications like appendicitis, cholecystitis, and pediatric emergencies.
- CT scan-Stroke, trauma, severe breathlessness to rule out pulmonary thromboembolism

- In COVID-19 patients, CT scan was indicated only when it impacted management or was required for ruling out other causes of worsening of disease like cardiac failure, pulmonary thromboembolism (PTE).
- HRCT Chest was done to see the CORAD Score in suspect cases. This test was of immense help to the Clinicians as there was a very significant clinical correlation.
- The screening was again done at this level – travel history, contact history, history of ARI.
- Patients were asked to sign self-declaration form and consent forms.
- Standard operating procedures were devised by the management for patient movement (transfers) for investigations and steps to be taken in respective departments to ensure the least time spent and the safety of all personnel involved.
- Strict disinfection protocols were laid down for cleaning machines, equipment, high touch surfaces, and entire departmental cleaning after the completion of the procedure.
- Appropriate PPEs were made available to all staff involved.

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a) *Imaging investigations protocol*



Figure 20: Ward boy in PPE



Figure 21: Machine cleaning with Aerodes in



Figure 22: Suspect Patient in CT Dept

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b) Radiology department layout for COVID suspect/positive patients

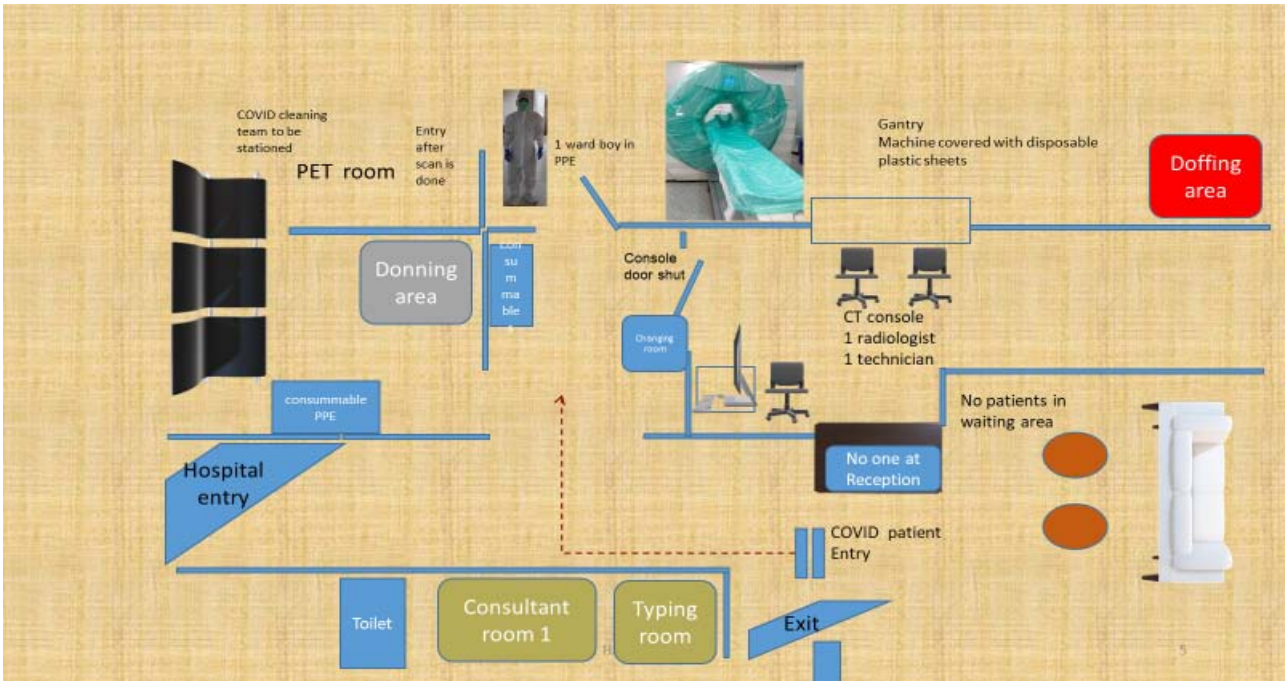

Figure 23: CT department layout for COVID suspect/positive patients

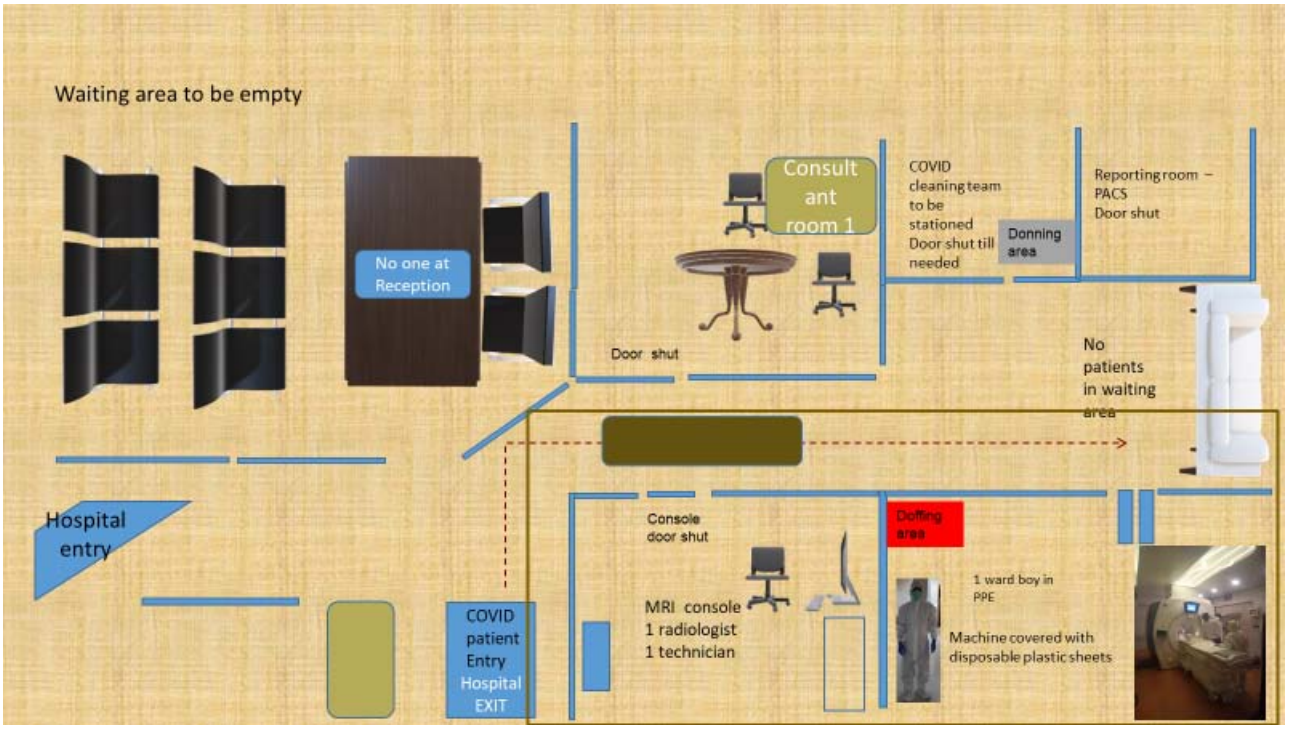

Figure 24: MRI department layout for COVID suspect/positive patients

VIII. Protocol for Emergency and Semi Emergency Patients

Patients requiring emergency assistance forms a critical group, management of which was quite tough amidst dealing with COVID patients. The risk of transmission was always high, but complete precautions were taken to prevent it while providing the necessary care. *Emergency and Semi emergency indications-Not postponed*

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Examples	Precautions
Cardiac patients with symptoms	Screening history
Trauma	Full PPE
Vascular indications	Cleaning and disinfection with settling time in between cases at least 20 min
Obstetric emergencies	Informed consent to risk of COVID 19
Stroke	High risk consent for procedures
Cancer /Dialysis	OT staff to wear Full PPE
Surgical emergencies-appendicitis/cholecystitis	

IX. The Discharge Policy for Covid Positive Patients

- Criteria and guidelines have also been laid down for discharge of positive patients. We follow MCGM guidelines for the discharge. Care was being taken that they were asymptomatic, No worsening of CXR.
- SPO2 > 95% on RA
- Quarantine advice was given as per guidelines.
- In case if the patient had any difficulty after discharge; the warning symptoms if any were clearly explained to the patient and patients were provided with an emergency contact number too.
- Psychological support was provided if needed.
- Surveillance and follow up was done.

a) Safety precautions and Personal Protective equipment

Education and ensuring practice of Universal safety precautions were given importance and training for the same was given time and again Personal Protective Equipment (PPEs) are protective gear designed to safeguard the health of workers by minimizing the exposure to a biological agent. Components of PPE are goggles, face-shield, mask, gloves, coverall/gowns (with or without aprons), head-cover, and shoe-cover. There are guidelines for the appropriate use of PPE depending on the risk.

For ease of staff training, we divided the Key areas & the PPE was defined as per the functional role. Reference was taken from Moh FW (3), MAX Hospital SOPs (7).

Respiratory/Flu clinic/Screening Area		Dedicated COVID Hospital		
S. No.	Setting	Activity	Risk level	PPE
1	Screening at entrance of hospital	Triaging patients, history, provide triple layer mask to patients, Screen patients, offer hand sanitization, check temperature	Moderate	• N 95 mask • Gloves • Surgicalgowns
2	Front Office/Reception /Security	Provide information to patients Registration Billings	Moderate	• N 95mask • Gloves
3	At Triage / Respiratory / Flu Clinic Nursing Counter	Record temperature with handheld thermal recorder, Screening history	Moderate	• N 95 mask or FFP 2 equivalent • Isolation Gown (Full Head to Toe) • Gloves • Eye Protection (goggles/visor)
4	Doctor Chamber in Triage / Respiratory /Flu Clinic	Clinical Management (Doctors, Nurses)	Moderate	• N 95 mask or FFP 2 equivalent • Isolation Gown (Full Head to Toe) • Gloves • Eye Protection (goggles/visor)
5	Sample Collection Room n Triage / Resp / Flu Clinic	Taking sample COVID 19	High	• N 95 mask or FFP 2 equivalent • Isolation Gown (Full Head to Toe) • Gloves • Eye Protection (goggles/visor)

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6	Housekeeping Staff in Triage / Resp / Flu Clinicarea	Cleaning frequently touched surfaces/ Floor/ Cleaning Linen	Moderate	• N 95 mask or FFP 2 equivalent • Isolation Gown (Full Head to Toe) • Heavy duty gloves • Eye Protection (goggles/visor)

OPD			Dedicated COVID Hospital	
	Setting	Activity	Risk level	PPE
1	Front Office/Reception /Security	Provide information to patients Registration Billings	Moderate	• N 95 mask Gloves
2	Chamber of Dental/ENT doctors/ Ophthalmic doctors	Clinical management	Moderate	• N 95 mask or FFP 2equivalent • Isolation Gown (Full Head to Toe) • Gloves • Eye Protection (goggles/visor)
3	Pre- anesthetic check-up clinic	Clinical examination	Moderate	• N 95 mask or FFP 2equivalent • Isolation Gown (Full Head to Toe) • Gloves • Eye Protection (goggles/visor)
4	Antenatal Clinic	Clinical examination	Moderate	• N 95 mask or FFP 2equivalent • Isolation Gown (Full Head to Toe) • Gloves • Eye Protection (goggles/visor)
5	All other OPDs	Clinical examination	Moderate	• N 95 mask or FFP 2equivalent • Isolation Gown (Full Head to Toe) • Gloves • Eye Protection (goggles/visor)
6	Pharmacy counter	Drugs issue and billing	Mild	• Triple layer medical mask • Gloves
7	Sample Collection Room for non COVID Sampling	Samples for lab testing	NA	• NA
8	Visitor's accompany ng young Children and Elderlies	Support in navigating various service areas	Mild	• Triple layer medical mask

Emergency Dept.			Dedicated COVID Hospital	
S. No.	Setting	Activity	Risk level	PPE
1	Green Emergency Unit	Attending Emergency cases	• Moderate	• N 95 mask or FFP 2 equivalent • Isolation Gown (Full Head toToe) • Gloves • Eye Protection (goggles/visor)

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2	Green / Red Emergency Unit	Attending Emergency cases when Aerosol Generating Procedures are anticipated	• High	• Full complement of PPE • N 95 mask or FFP 2 equivalent • Isolation Gown (Full Head to Toe) • Gloves • Eye Protection (goggles/visor)
3	Red Emergency Unit Isolation (For suspect or confirmed COVID cases)	Attending to severely ill patients of suspected or confirmed COVID 19	High	• Full complement of PPE • N 95 mask or FFP 2 equivalent • Isolation Gown (Full Head to Toe) • Gloves • Eye Protection (goggles/visor)

Day Care Facilities			Dedicated COVID Hospital	
S. No.	Setting	Activity	Risk level	PPE
1	Bronchos copy and Endoscopy	Aerosol generating Procedures	High	• N 95 mask or FFP 2 equivalent • Isolation Gown (Full Head to Toe) • Gloves • Eye Protection (goggles/visor)
2	Dialysis	Dialysis	High	• N 95 mask or FFP 2 equivalent • Isolation Gown (Full Head to Toe) • Gloves • Eye Protection (goggles/visor)
3	Chemotherapy& Radiotherapy & Other Day care services		High	• N 95 mask or FFP 2 equivalent • Isolation Gown (Full Head to Toe) • Gloves • Eye Protection (goggles/visor)

IPD Services			Dedicated COVID Hospital	
S. No.	Setting	Activity	Risk level	PPE
1	Isolation Ward: Individual Isolation rooms/ cohorted isolation rooms/ ward	Clinical Mgmt.	High	• N 95 mask or FFP 2equivalent • Isolation Gown (Full Head to Toe) • Gloves • Eye Protection (goggles/visor)
2	ICU	Critical care	High	• Full complement of PPE • N 95 mask or FFP 2equivalent • Isolation Gown (Full Head to Toe) • Gloves • Eye Protection (goggles/visor)
3	Labor room	Intra-partum care	High	• N 95 mask or FFP 2equivalent • Isolation Gown (Full Head to Toe) • Gloves • Eye Protection (goggles/visor)
4	Operation Theatre And Cath lab	Performing Surgery, procedures administering Anesthesia	High	• N 95 mask or FFP 2equivalent • Isolation Gown (Full Head to Toe) • Gloves • Eye Protection (goggles/visor)

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OTHER Services			Dedicated COVID Hospital	
S. No.	Setting	Activity	Risk level	PPE
1	Housekeeping Staff	Cleaning frequently touched surfaces/ floor/ changing Linen	Moderate	• N 95 mask or FFP 2 equivalent • Isolation Gown (Full Head to Toe) • Heavy dutygloves • Eye Protection (goggles/visor)
2	CSSD /Laundry	Cleaning, disinfection, sterilization	Moderate	• N 95 mask or FFP 2 equivalent • Isolation Gown (Full Head to Toe) • Heavy dutygloves • Eye Protection (goggles/visor)
3	Other supportive Services	Administrative, Financial Engineering, Security, Vendors, Students, Volunteers, Candidates for interviews, Staff at Food outlets outdoor staff (valets, drivers) etc.	Mild	• Triple layermask

b) Prophylaxis

Prophylactic Hydroxychloroquine was given to all healthcare personnel, frontline as well as others Dose: Tablet Hydroxychloroquine 400 mg BD, followed by 400 mg once a week.

Management of accidental exposure in healthcare personnel-safety of the staff was our prime concern, but accidental exposures do occur, and their management had to be done swiftly. This included contact listing as well with the help of CCTV footage and questioning.

c) High-Risk Contact :(3)

- Healthcare personnel who have had direct physical contact with the body of the patient including physical contact.

Examination without adequate PPE.

- Anyone in proximity (within 3 ft.) of the confirmed case without precautions.

Management of such High-risk contacts: Stop all health care interaction with patients for a period of 14 days after the last day of exposure.

SWAB sent on day 5

Quarantine for 14 days

d) Low risk-HCW wearing proper PPE(3)

Management: Self-monitor temperature and respiratory symptoms daily for 14 days after the last day of exposure to a COVID-19 patient and inform if symptoms occurred.

Reinforce contact and droplet precautions when caring for all patients. Guidelines provided by Mo HFW were utilized. (3)

X. Counseling and Psychological Support

Counseling staff was a major challenge as it was of utmost importance to maintain the morale of all healthcare staff working for COVID-19 patients. Patient counselling was another issue tackled by the aid of video/tele-services as patients in isolation were under mental and psychological stress away from families.

Counseling sessions were arranged for staff regularly.

Methods used:

- Tablets were provided to patients. Counseling was done using phone, Whats App, and video calls.
- Family Briefing and Counseling was arranged using electronic media like TAB video counselling.
- The consultant doctor in charge of the patient would engage with the family /attendant once a day and as and when required with documentation in family briefing form done onceevery day.

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Figure 25: Counseling Session for Dept Staff



Figure 26: Counseling for Nurses

a) Motivational Programmes

The entire healthcare force has been under tremendous pressure during these times, not just physically but emotionally as well. Social distancing and quarantine measures have had an impact on psychology. Keeping the staff motivated throughout the whole process was very crucial. The management was trying to keep the morale high by arranging regular counseling sessions for all staff .Entertainment activities like singing sessions were organized for staff on weekends to lift their spirit. Video calls and other virtual methods of contact were advised between healthcare staff and supervisors for any guidance needed.

Change is inevitable but at the same time, adapting to change is difficult. Everything in our workplace has currently changed, but what keeps employees motivated and what employers and leaders can do remains the same, that is, to appreciate, encourage, and support. The administration strongly believed in this.

b) Digital health-Telemedicine

Digital health is turning out to be a promising solution currently. (8) Telemedicine has proved to be a key enabler during these difficult times.

Teleconsultation services were provided to patients with mild symptoms not related to COVID-19 and who did not need a hospital visit, using guidelines provided by the Ministry of health and family welfare and Maharashtra Medical Council (9, 10). During this pandemic, the utilization of tele health services certainly helped to slow transmission by reducing direct contact of patients with healthcare facilities, also enabling patients not suffering from COVID-19 to continue to receive care. This was particularly important for older adults, immune com promised patients and diabetics who were at the most risk during this pandemic.

For Radiology services, home workstations with remote access were provided to radiologists wherever feasible. Teleradiology made it possible for radiologists to view and report scans from their homes, thus protecting them from exposure while providing the much-needed expert guidance in patient care and management.

Tele- technology also made it possible to conduct training sessions, administrative meetings, and educational activities effectively. Multiple webinars had been arranged by various academic groups throughout the country to ensure continuous learning was not hampered.

c) Challenges faced by the Medical Administration

COVID-19 pandemic brought with it many challenges having a deep impact on social life and the economy. NSSH took the initiative of screening and triaging all hospital visitors. The administration and management team of the hospital worked relentlessly to prepare an efficient strategy and make SOPS for proper management of hospital operations.

The economic impact faced by the hospital due to reduced footfall, closed OPDs, loss of international patients, and cancellation of elective procedures was going to be a tough one, but the primary aim was to safeguard the health and save lives. To ensure COVID preparedness, hospital expenditures also increased as funds had to be arranged for safety equipment like

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PPEs, cleaning and disinfection supplies, ambulances for patients. The fixed costs of running a hospital are immense. To manage these, while managing to pay staff salaries and ongoing operations were and are going to be tough tasks.

The number of positive COVID 19 cases are rising daily. The guidelines and strategies for testing, management, and screening provided by various authorities like ICMR, WHO, MOHFW, MCGM had to be thoroughly read and understood and appropriately updated time and again. As a responsible medical facility, NSSH was prepared to provide continuous medical support in keeping with National and International standards.

A nationwide lockdown was announced by the government to reduce spread of the disease. However, this also had an impact on healthcare facilities.

- Constant supply of Protective equipment's: PPEs, disinfection, and sanitization, arranging supplies for safety also was a concern as the stocks were not enough. This pandemic was an unprecedented one and preparation for this was not possible due to the already existing shortage of supplies in the market. Finding distributors and liasoning was a major concern. But we could overcome this with the support of Authorities.
- Staff movement and transportation –shut down of local transport caused difficulties to healthcare personnel to reach the hospital for duty. The hospital management arranged bus transportation for the staff& sought the help of Authorities for staff' transport.
- Psychological impact -Doctors, Staff Nurses, support staff administrators are human too! They have been called CORONA warriors, but this war has had a toll on all. Time away from families due to excessive work as also quarantine measures had surely affected all. The Management started communication on a daily basis and even were approachable in emergencies. There was constant dialogue, interaction with personnel & in some cases had one to one conversation with their families too.

Documentation

- The biggest challenge was to ensure documentation. In normal circumstances, the relatives were available for signatures after communication & counseling. In this COVID crisis, as the relatives were usually quarantined, it was very difficult for the doctors to maintain records .Various electronic media had to be used.
- Doctors in PPE faced a lot of practical difficulties to do the paperwork.

Medical Administrative staff could do audits to check the documentation but in case of the COVID scenario , wherein papers could not be transferred to Non-COVID areas , it was difficult to do so.

Challenges faced by the Medical administration

Extensive research and study with long working hours away from family -strategy planning
Prepare a COVID preparedness plan to manage COVID patients while ensuring safety and providing care for routine patients.
Continuous updating of guidelines from various authorities , implementation of the guidelines
Ensure adequate screening and triage procedures to segregate routine patients from Suspects
Extensive training protocols with adequacy audits.
Devise Standard Operating Procedures for management of patients in various departments-correct errors
Quarantine measures and Contact listing for accidental exposure of healthcare staff
Deal with issues like shortage of staff due to Quarantine following accidental exposures.
Psychological support to all staff and families back home.
Arrange for staff transport and safety during lockdown
Deal with economic impact of the pandemic while maintaining staff morale and their financial security along with operations and preparedness expenditures
Manage shortage of Supplies like PPE and liasoning with distributors/manufacturers
Documentation In normal circumstances, the relatives were available for signatures after communication & counselling . In COVID crisis, as the relatives were usually quarantined , it was very difficult for the Doctors to maintain records . Electronic media had to be used . Practical difficulties faced by doctors in PPE while doing paperwork. Documentation audits by Medical Admin staff were difficult as papers could not be transferred to Non-COVID areas.

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XI. Conclusion

Tackling this pandemic has caused stress on hospitals everywhere, financial, psychological, and social. But there will be ways to weather this storm, and we must not lose hope. Doctors are the soldiers; the world will remember once this war is over. Our current priorities for COVID-19 preparedness should be to focus on early detection, limiting exposure, safety precautions, training, and maintenance of operations and staffing. Patience, calm minds, new administrative ideas and strategies, individual and cumulative discipline, a sense of solidarity, and a shared sense of purpose are all that we need currently to overcome these unprecedented and challenging circumstances.

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References Références Referencias

1. https://www.who.int
2. https://economictimes.indiatimes.com/news/politics-and-nation/india-declares-covid-19-a-notified-disaster/articleshow/74631611.cms?from=mdr
3. https://www.mohfw.gov.in/pdf/GuidelinesfornotifyingCOVID-19affectedpersonsbyPrivateInstitutions.pdf
4. .https://qz.com/india/1842004/continued-lockdown-is-indias-best-bet-against-coronavirus/
5. https://indianexpress.com/article/india/india-lockdown-4-0-extended-guidelines-live-updates-corona virus-6414038/
6. https://www.thehindu.com/news/national/india-coronavirus-lockdown-may-30-2020-live-updates/artice/31708100.ece
7. MAX SOP
8. Ting, D. S. W., Carin, L. Dzau, V. et al. Digital technology and COVID-19. Nat Med 26, 459–461 (2020). https://doi.org/10.1038/s41591-020-0824-5
9. https://www.mohfw.gov.in/pdf/Telemedicine.pdf
10. https://www.maharashtramedicalcouncil.in/

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