ASI's Consensus Guidance document

ABCs of what to do and what not during the COVID-19 pandemic

Expert Panel presided by Dr. P Raghu Ram, President ASI

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THE ASSOCIATION OF SURGEONS OF INDIA

Background & Introduction

Following severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS), Coronavirus disease 2019 (COVID-19) is the third coronavirus infection in two decades that quickly gained pandemic repute [(1)]. The profile of the disease suggests that 15% of COVID19 cases react severely, 5% become critically ill with septic shock, respiratory and organ failure, while 80% face mild symptoms [(2)]. By the time this guideline panel was assembled on 3rd May 2020, the COVID-19 has affected more than 70,000 Indians and resulted in more than 2000 deaths [(3)]. The epidemic situation influenced the normal course of clinical practice leading to significant delays in healthcare services that need optimization.

Balancing the need for continued delivery of other health services with response to COVID-19 is particularly challenging for decision-makers in low- and middle-income countries (LMICs), where health systems already face significant capacity and resource constraints. In this unexpected and rapidly changing environment, it is essential to strengthen the health systems and reorganize the service delivery to respond to COVID-19 crisis. Healthcare workers must determine in a novel way the issues of who should have surgery and how it should be performed. Strict personal and institutional practices needs to be adopted, and policies to allow a new best practice needs to be implemented to provide the best prevention measures against Covid19 infection in public or private healthcare facilities. WHO has issued a wide range of technical guidance on the COVID-19 response emphasizing important health system measures and policies reflecting clinical and public health action [(4)].

In the era where COVID 19 has transformed the delivery of surgical care in the country, The Association of Surgeons of India (ASI) has embarked upon bringing out a Consensus Guidance document – broad based guidelines that aims to empower the membership at large about **"ABCs of What to do and What not "** during these most unprecedented times in our lifetime.

Dr. P Raghu Ram, President ASI took up this initiative and set up a Panel comprising of chief office bearers of ASI, past Presidents of ASI (2015-2019) and a couple of experts. After taking active inputs from across the country, 27 key questions that needed to be addressed were identified.

These questions were further sub sectioned and passed on to each of the Panel members well before calling for a web based virtual consensus Panel discussion, which was held on 3 May 2020. This meeting, which lasted for over two hours was presided and moderated by the President ASI.

Panel members presented the evidence and practical recommendations for each of the questions allotted to them. All the 27 key questions were discussed in detail and the proceedings of this meeting were audio recorded to ensure accuracy.

This Document aims to provide ASI members with practical pragmatic messages relating to decision making, resource allocation, infection prevention / control measures among patients and healthcare staff, indications for triage and management of cancer patients, prioritization of surgical approaches and maintaining core essential services across the continuum of care.

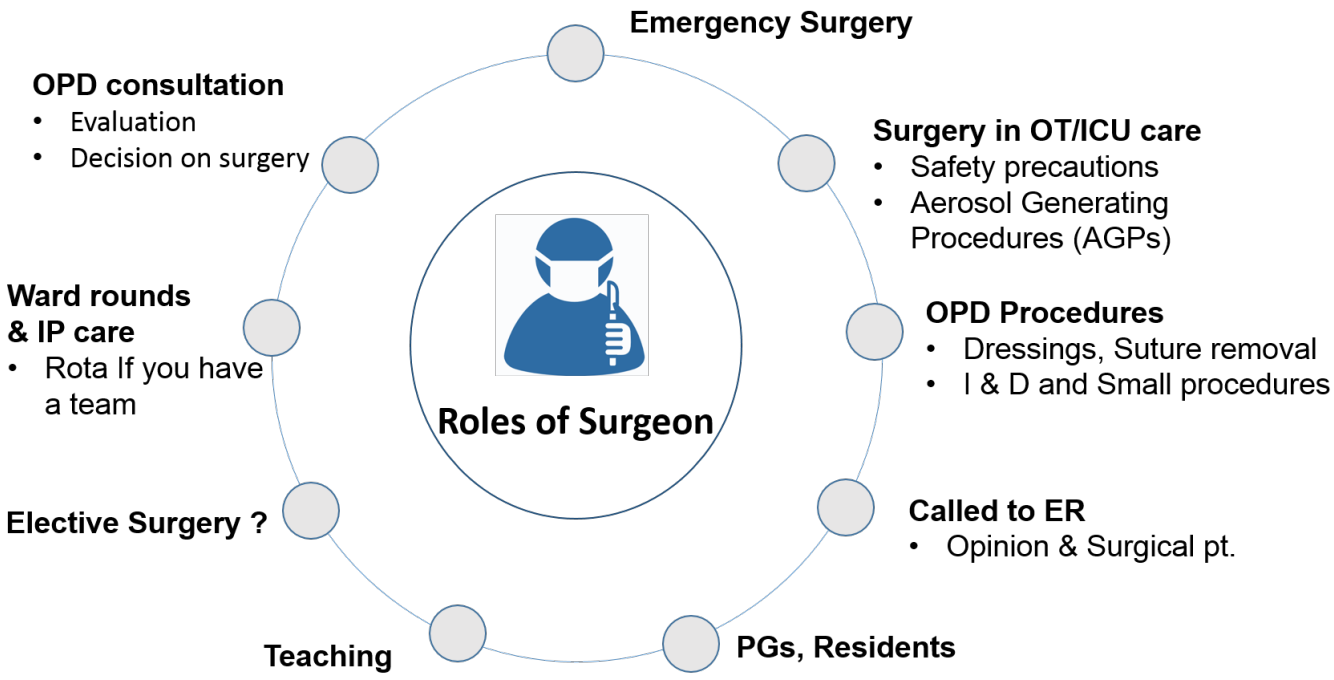


Figure 1: Illustrating the different roles of surgeon

Question 1: What should be the dress code for surgeons to go to work place and general precautions to follow after reaching?

For those engaged in COVID19 critical care, more stringent precautions need to be carried out to protect oneself, family members and also to reduce the contamination. Detailed guidelines on surgeon's attire were published by MoHFW. Additional dress code recommendations to support healthcare facilities in the reinforcement of best practices related to wearing of surgical attire include:

While leaving from home	**After reaching work place**
➢ Wear simple dress with shoes & socks ➢ No accessories like watch, ring, tie, coat, wallet ➢ Wear mask	➢ Change to hospital scrub suite ➢ Change the footwear on entering hospital premise while donning scrubs ➢ Place the travel dress in a cupboard ➢ Wear appropriate mask ➢ Clean your mobile frequently before, during, and after patient care activities. Mobile phones may be kept in a Ziploc bag during work activities. The phone can be used while in the bag **While leaving hospital** ➢ Remove the hospital scrub & subject it to proper wash

Addendum: ***MOHFOW provided recommendations on surgical attire and the steps of surgical scrub are as follows: [-The scrubbing facility: tap and sink, - Remove rings, watch and bracelets, - Clean the fingernails, - Starting with the fingers, apply soap/ antiseptic to all surfaces of hands, - Rub between fingers, - Continue to apply soap/ antiseptic till the elbow, - Starting with fingers, rinse each hand and arm till the elbow with the hands above the level of the elbow, - Dry with a sterile towel beginning with the fingers and till the elbow, - Keep the scrubbed hands above the waist level].***

Footwear must be made of sturdy, washable material with closed toes to protect the feet from splashes, and injury due to falling instrument. If footwear are not available shoe covers can be worn. These are disposable or reusable.

Question 2: What transportation to be used to reach workplace?

Commuting to and from hospital will depends on your condition and where you live. The expert panel recommended reasonable measures to follow during daily commute to work place.

➢ Best is to use own vehicle ➢ Avoid public transport as much as possible and Govt. approved Taxis	➢ Sanitize hands after getting in & after getting down the vehicle ➢ In case if commuted through public or shared vehicle, maintain physical distance.

Question 3: What should be the entry to hospitals & what rules to follow for patients & healthcare workers during entry and exit from hospital?

Institutional infection prevention practices should be established in the care of all patients and healthcare workers all of the time. Expert panel recommend below precautions that are designed to protect both the healthcare workers and patients and to prevent from spreading the virus.

➢ Ensure separate entry for healthcare workers and for patients ➢ For patients - At the entry, a senior health care worker/staff nurse should check the temperature along with check-history of fever, signs of cough, throat pain, contact with fever patients & whether staying in red zone etc. ➢ Staff members must ensure if patients are sanitizing hands and wearing mask properly or not.	➢ The same protocol must be applicable to all health care workers

Question 4: What to do after reaching home?

In these unprecedented times, health care providers need to be meticulous to take all preventive measures available. It would be a reasonable thing to wash the hands carefully or use the hand gels after reaching home. This section brings together the latest practical recommendations provided by expert panel on how to minimize the infection risk after work.

➢ Leave footwear outside ➢ Sanitize hand, car keys, mobile ➢ Remove the mask and dispose off appropriately ➢ If reusable cloth mask – put it for wash & rinsing with soap water	➢ Take shower and wear clean dress meant for home ➢ Clean hard surfaces at home with an effective disinfectant solution (e.g. 60% alcohol)

Question 5: How to schedule appointments?

Despite the fear of COVID-19, routine checkups and regular appointments are crucial in finding potential health issues. Expert group consensus suggested certain precautions to follow during scheduling the appointments

➢ Every patient must fill up a comprehensive online registration form **or prior** appointment with brief history about cough or fever and purpose of hospital visit and urgency. ➢ On arrival at hospital parking lot, please call reception so doors may be opened to let patient in. ➢ Every one visiting hospital should be wearing mask. ➢ There should be only one entry / exit to patients. ➢ Ask patient to hand sanitize at the entrance. ➢ To rule out fever, a temperature check will also be performed. ➢ Only the patient will be allowed in the office. Minors may have 1 parent/guardian who may accompany them. ➢ For physically challenged – one relative (properly sanitized)	**Instructions to Patient:** ➢ Ask your driver / accompanying person to stay in the car during your appointment. ➢ Hospital or you may call your driver when you are ready to leave the facility and escort you out. ➢ **NOTE: If you or a member of your household has a cough, fever, and/or flu-like symptoms or traveled out of the country in the last 8 weeks, please inform hospital right away as your appointment may be rescheduled.**

Question 6: How do you prioritize surgeries?

In the face of pressures placed by the COVID-19 pandemic, guidance is needed on how to deliver surgical procedures safely and effectively. Currently, the available data is very limited and to mount an effective response to COVID-19, specific recommendations are duly needed. A Surgical Review Committee, composed of Surgeon, anesthetist and Nursing personnel is essential to provide defined, transparent, and responsive guidelines for the hospital. The expert panel recommended certain guidelines to support health service leaders by identifying key domains that should be covered in pandemic preparedness plans.

➢ While elective surgeries remain on hold, emergency procedures cannot be postponed. ➢ These surgeries require careful planning and prioritizing to ensure proper treatment and safety measures are taken. ➢ Elective surgeries should be started in the hospitals once corona curve shows continuous decline for 15 days. ➢ Follow the local, state & central govt. guidelines in this regard.	➢ Go into surgery either knowing if the patient is [COVID-19] positive or not. ➢ Some surgeries that cannot wait for the results of a 12-hour test must proceed. ➢ Anytime a COVID19 positive case is observed, try to identify these patients and **en**sure to distance them from new patients and other staff members. Refer to COVID hospital.

***Addendum:* As per SAGES guidelines, all elective surgical and endoscopic cases should be postponed during the COVID19 crisis. These decisions however should be made locally, based on COVID-19 burden and in the context of medical, logistical and organizational considerations. This minimizes the risk to both, patient and health care team, as well as minimizes utilization of necessary resources, such as beds, ventilators, and personal protective equipment (PPE).**

Question 7: Precautions to be taken while doing OPD work?

It is crucial to establish extraordinary precautions to ensure the locations are safe. Although MOHFW issued comprehensive guidelines, expert panel provided additional guidance to follow during COVID19 pandemic.

➢ Routine OPD work should be kept to a minimum. This will ensure less crowding and transmission outside clinics. ➢ No relatives should be allowed in unless unavoidable. ➢ Social distancing must be practiced within clinics and hospitals, with waiting-room chairs placed six feet apart, and all patients and attendants wear mask in the waiting area and instructed on cough and sneeze hygiene.	➢ Doctor's clinics should be well ventilated and patients should be seated and stay six feet apart except during physical examination. ➢ The doctor should wear a surgical mask, a face shield and scrub hands with soap and water and use an alcohol-based disinfectant after each patient interaction

Question 8: Precautions to be taken while doing minor surgery in OPD?

In china, several series of infections were emerged from operating theaters [(6)]. Hence adequate knowledge about disease transmission, and institutional infection control protocols are essential to prevent spread of infection among healthcare workers. Prevention of COVID19 spread from patient to patient and to healthcare workers is one of the immediate priorities. Expert panel provided certain recommendations derived from their own practices and various national guidelines.

➢ Explain to the patient about the individual risk of coming to the hospital, office, or surgery center for surgery during the pandemic. ➢ Perform essential minor surgeries after screening, adequate PPE preferably under local or regional anesthesia.	➢ There are many surgical procedures that are not an emergency ➢ Look for non-surgical options if available.

Question 9: How to visit & see patients in Emergency Room (ER)?

Careful planning and strict institutional protocols must be in place that may help minimize staff shortages related to uncontrolled viral spread. The table outlines recommendations from the expert panel to surgeons visiting patients in ER.

➢ Initial consultation should be on phone with the casualty staff. ➢ Take history and order necessary investigations on phone and visit the patient once you know that he/she does need an emergency surgery.	➢ Take all necessary precautions and keep contact with the patient and relatives to minimum. ➢ Allow only one attendant with a patient. Social distancing norms to be maintained as far as possible.

Question 10: PPE- what to wear – where? How to dispose?

Healthcare workers must take prevention measures in strict accordance with the epidemic assessment level [7]. Based on the available evidence from China, health care workers are at high risk of infection. Preventive and mitigative measures are key in both healthcare and community settings. WHO recommended guidelines [8] to provide the information about the rational use of PPE and preventive measures such as hand rub with 70% alcohol before wearing & after removal of gloves, following are the consensus guidelines provided by expert panel for protecting oneself while performing duties.

Sr. No.	Setting	Activity	Risk	Recommended PPE	Remark
A.	**Out Patient**				
1	Doctor chamber	Provide information to patient	Mild risk	▪ Triple layer mask ▪ Latex examination gloves	No aerosol generating procedure should be allowed
2	Pre-anaesthetic check-up clinic	Pre-anaesthetic check-up clinic	Moderate risk	▪ N-95 mask ▪ Goggles ▪ Latex examination gloves	* Only recommended when close examination of oral cavity/dentures is to be done
B.	**In-patient Department (Non-COVID Hospital &Non-COVID treatment areas of a hospital which h s a COVID block)**				
1	Ward/individual rooms	Clinical management	Mild risk	▪ Triple layer medical mask ▪ Latex examination gloves	No aerosol generating activity

2	ICU/ Critical care	Critical care management	Moderate risk	▪ N-95 mask ▪ Goggles ▪ Nitrile examination gloves +Face shield	Aerosol generating activities performed. Face shield, when a splash of body fluid is expected
3	Operation Theater	Performing surgery, administering general anesthesia	Moderate Risk	▪ Triple Layer medical mask ▪ Face shield (wherever feasible) ▪ Sterile latex gloves + Goggles	Goggles for personnel involved in aerosol generating procedures
C. **Emergency Department (Non-COVID)**					
1	Emergency	Attending emergency cases	Mild risk	▪ Triple Layer medical mask ▪ Latex examination gloves	No aerosol generating procedures are allowed
2	Emergency Procedure Room	Attending to severely ill patients while performing aerosol generating procedure	High risk	▪ Full complement of PPE (N-95 mask, coverall, goggle, Nitrile examination gloves, shoe cover)	

Component of PPE kit: Goggles, face shield, mask, gloves, cover all, head cover, shoe cover. All PPE are not same. There are Basic KIT with 45 GSM, Medium Kit with 70 GSM and Advanced Kit for ICU 180 GSM.

Disposal of PPE kit

Single-use PPE should be disposed of in a red plastic bag, which is sealed & then sprayed with 1% hypochlorite solution. It should be labelled as HAZMAT and then disposed off as per biomedical waste disposal protocol.

<u>Addendum:</u> MOHFW provided certain specifications for PPE, medical mask, and gloves with following standards on quality compliance:

- ***Gloves [A. EU standard directive 93/42/EECClassI,EN455 B. EU standard directive 89/686/EEC Category III, EN 374 C. ANSI/SEA 105-2011 D. ASTM D6319-10]***
- ***Coverall (medium and large) ['Meets or exceeds ISO 16603 class 3 exposure pressure, or equivalent']***

- ***Goggles [A. EU standard directive 86/686/EEC, EN 166/2002 B. ANSI/SEA Z87.1-2010]***
- ***N-95 Masks [Quality compliant with standards for particulate respirator that can be worn with full- face shield]***
- ***Shoe Covers ['Made up of the same fabric as of coverall']***
- ***Face Shield [A. EU standard directive 86/686/EEC, EN 166/2002 B. ANSI/SEA Z87.1-2010]***

Question 11: What do you mean by Aerosol-Generating Procedures (AGP)?

Aerosol-generating procedures (AGPs) are procedures performed on patients that are more likely to generate higher concentrations of infectious respiratory aerosols than coughing, sneezing, talking, or breathing. These AGPs may put healthcare workers (HCWs) at an increased risk for exposure and infection.

The SARS-CoV2 is predominantly transmitted by droplets (5-10 microns); however, it can become aerosolized during aerosol generating procedures. Recommendations from CDC suggest the use of enhanced respiratory PPE greater than N95 level for certain aerosol generating procedures [(9)]. Below is the certain guidance on procedures recognized as Aerosol generating procedures:

➢ Airway Surgeries (e.g., ENT, Thoracic, Trans sphenoidal Surgeries) ➢ Intubation and Extubation ➢ Chest Compressions ➢ Nebulization ➢ High flow oxygen, including nasal cannula, at > 15L ➢ Non-invasive positive pressure ventilation (e.g. CPAP, BIPAP) , Oscillatory ventilation, Manual ventilation (e.g. manual bag-mask ventilation before intubation), Disconnecting patient from ventilator	➢ Bronchoscopy, Sputum induction ➢ Open suctioning of tracheostomy, Tracheostomy change ➢ Upper endoscopy (including transesophageal echocardiogram) and Lower endoscopy ➢ Chest physical therapy ➢ Venturi mask with cool aerosol humidification ➢ Mechanical In-Exsufflator (MIE) ➢ Ventilator circuit manipulation

Question 12: Which is better for urgent category surgeries - Lap or open?

The use of laparoscopy can contribute to decreased length of stay and faster recovery as compared with open surgery. Laparoscopy in turn increases the resources that are limited such as availability of beds. However, the American College of Surgeons stated an insufficient evidence to recommend for/against an open versus laparoscopy approach.

SAGES guidelines recommend the use of filters for the released CO_2 during laparoscopy and robotic surgery. All these guidelines were discussed and the expert panel recommends the current practices that can be made to minimize any potential risk for transmission of the virus to operative staff.

➢ Multi-faceted approach: proper room air filtration and ventilation, appropriate PPE, smoke evacuation devices with suction and filtration system, minimal use of cautery & energy devices ➢ Procedures which create aerosolization should be avoided. ➢ Laparoscopic surgery require an ultra-filtration (smoke evacuation system of filtration) ➢ Procedures which require regional anaesthesia are preferred.	➢ In our setting open surgery may be better than laparoscopy. ➢ The advantages of laparoscopic surgery (short hospitalization) should be weighed against the risk of aerosolization ➢ Use smoke evacuator when electrocautery/energy devices are used ➢ Proper decision can be taken on procedure to procedure basis

Addendum: ***As per SAGES recommendations, there is very little evidence regarding the relative risks of Minimally Invasive Surgery (MIS) versus the conventional open approach, specific to COVID-19. We will therefore continue to monitor emerging evidence and support novel research to address these issues. Although previous research has shown that laparoscopy can lead to aerosolization of blood borne viruses, there is no evidence to indicate that this effect is seen with COVID-19, nor that it would be isolated to MIS procedures.***

Nevertheless, erring on the side of safety would warrant treating the coronavirus as exhibiting similar aerosolization properties. For MIS procedures, use of devices to filter released CO2 for aerosolized particles should be strongly considered. Use of smoke evacuators such as Megadyne and Airlseal Rapidvac etc. are recommended by SAGES and EAES. Also usage of double seal trocars was recommended to help minimize the gas leak during the instrument exchange.

Question 13: How to organize emergency surgery & should COVID19 test to be sent before doing emergencies?

To face the current COVID-19 pandemic, all healthcare centers should organize dedicated protocols and workforce training. Usage of surgical appliances and staff must be well contemplated and balanced [(11)]. All surgical procedures on all suspected COVID-19 patient should be postponed when possible until infection clearance is confirmed. However, a fundamental issue in emergency surgery is to consider every patient as COVID positive in order to minimize infection spread and usual precautions to be taken. The expert panel outlines recommended clinical pathways during life threatening emergencies such as:

➢ Standard precautions, in a given setting, is far more important than universal testing. ➢ For instance, a positive report is always positive but a negative report has 30 % chance of being false negative. ➢ Given the volumes of cases expected and the infrastructure available, precautionary measures may not exist at large number of the centres in coming months. Hence in an ideal situation, a crucial approach is to keep the services operational while maintaining safety precautions. ➢ An exposure history and history of respiratory symptoms forms a vital part of initial assessment of the patient to evaluate possibility of COVID.	➢ Surgeries during pandemic can be divided into 5 categories : - Emergency Surgery < 1hr - Urgent Surgery < 24 hours - Urgent Elective surgery ~2 weeks - Elective Essential 1-3 months - Elective(discretionary) >3months ➢ The first two categories need to be taken up even without COVID report being available. ➢ The surgery should be performed **in separate identified** COVID **OT with all** precautions. ➢ DO NOT hesitate to transfer patient to COVID designated facility

***ADDENDUM*: SAGES guidelines highly recommend COVID19 testing to every pre-operative patient**

Question 14: Where should patient be transferred & managed after an emergency surgery? Post-operative care for elective patients – where?

Postoperatively, efforts should be made to minimize the contamination risk to the patients such as:

➢ Patients to be kept in separate COVID suspect room/ward and all precautions to be taken ➢ RT PCR needs to be performed if symptoms develop	➢ If positive, the patient should be kept in isolation for at least 48 hours if not on ventilator. ➢ Full protection as per MOH guidelines

Question 15: Do we test patients before discharge?

Patients showing symptoms of COVID or pneumonia need to be evaluated. The expert panel discussed the available guidelines and recommended the following practices that can be made to minimize any potential risk for transmission of the virus. As per present govt. guidelines no need to do test before discharge.

➢ If possible, get a test done before taking up for surgery and the report may become available before or after surgery. However if not sent before surgery, do it as early as possible after surgery. ➢ It is important to do the test as patients who are COVID positive and are taken up for elective or emergency surgery are at much higher risk of postoperative mortality of up to 20 %. Hence, it is important to document it beforehand.	➢ If patient is known COVID positive, any surgical procedure which can be avoided, must be avoided. ➢ Refer to COVID designated hospital if positive

Question 16: Should we insist on RT PCR testing before Elective surgeries and what are pre-op screening strategies?

Extending the logic of COVID19 testing to all admitted patients is reasonable given the cost concerns and the delay in patient management is taken care of. Currently, there are 3 options available for pre-op screening and expert panel discussed about availability of each options and following are the considerations:

RT-PCR	• RT PCR (though with false negativities reported) still remains the only investigation to guide a surgeon. • RT-PCR is positive within 5 days with a sensitivity of 71% if done within 72 hours. • The test will be negative during incubation period but the patient can still be infective. • There is reported 10% negativity due to procedural errors. • The reported shortage of kits coupled with its consumption for pre-op screening at the expense of diagnosis, will make such practice an unethical one. • Imbalance between availability of these kits between Government and private hospitals can raise an alarm. • Value of resorting to RT PCR after one week of infection is minimal. • A negative RT-PCR hence gives ONLY a false sense of security**.**

Antibody spot rapid test	• Antibody spot rapid test can be done only in the 2nd week and has a sensitivity of 81%.
HRCT	• A HRCT Chest may be option to suspect impending COVID status and take post-operative measures to decrease morbidity and mortality. A study on 1100 patients was done in Tongji hospital, Wuhan, China, and the paper was published in the journal of Radiological society of North America, on Feb 26th, 2020. • HRCT lung - is more sensitive and outperformed lab tests in the diagnosis of Novel COVID-19. It's a more reliable, practical, and rapid method of diagnosis. • In patients with negative RT- PCR, 75% were found to have positive HRCT chest finding; and among the 75% of HRCT positive patients, it was further found that 48% were high risk, and 33% belonged to low risk. • The advantages of HRCT includes: ✓ It's a plain CT ✓ NPO not required ✓ Contrast not required ✓ Results available immediately

***Addendum:* As per ICMR guidelines, testing all hospital admissions for COVID-19 is not recommended in its testing guidelines except for pregnant women residing in infection clusters or containment areas** [13].

Question 17: What is the ideal OT specifications? Is it necessary to have dedicated COVID theatres?

Ideal operation theatre specifications are still under considerations. One important understanding is negative pressure operation room. In Indian set-ups, there are three types of hospitals

a. Small size nursing home set-up with single operation room
b. Mid/Large size private Institutes with multiple operating room (in one place or at different places)
c. Mid/Large size public funded Institutes with multiple operating room (in one place or at different places)

Sudden changes into ideal operation rooms will not be possible in all the above set-ups.

In cases of multi-operation room set-up, a dedicated operating room may be ear-marked. In the post lock-down period, it is advisable to have dedicated COVID theatres. Have separate donning and doffing area. However, the suggestions at present would be

➢ Stagger the operations ➢ Minimum HCWs in operating room during anesthesia ➢ Complete PPE protection during surgery ➢ Use of minimal energy source ➢ Surgeons and personnel not needed for intubation should remain outside the operating room until anesthesia induction and intubation are completed for patients with or suspected of having COVID-19 infection. ➢ No visitors or observers in OT.	➢ Controlled smoke (Aerosol) evacuations – suggestions are still dynamic ➢ Minimum HCWs during reversal from anesthesia ➢ Sanitize the room with 1% hypochlorite solution (every equipment used) ➢ Keep the doors of OT open for sufficient time between cases (1 Hr between cases)

OT/OR preferable requirements are as follows:

Air Changes Per Hour -> 20
Air Velocity -25-35 FPM (feet per minute)
Positive Pressure-2.5 Pascal (0.01 inches of water)
Air Handling & Filtration- The AHU (air handling unit)-HEPA Filters
Temperature & Humidity 21 C ± 3 C & 20 to 60%

Addendum: ***Few inter-association surgical practice recommendations include***

- ***Negative pressure room is desirable where possible***
- ***Minimum no. of personnel to be inside operating room***
- ***Limit the size of surgical team as much as possible***
- ***Avoid the operating room personnel stepping out of OT during the procedure***
- ***Minimum 1 hour time gap to be given between two surgeries/procedures***
- ***Minimize duration of surgery. No surgical or nursing training during this period and avoid multiple and complex procedures***
- ***Reusable accessories are cleaned and disinfected with appropriate solutions as soon as the procedure is over***
- ***1% sodium hypochlorite solution cleaning is recommended for OT tables and trolleys as soon as the patient is shifted***

Question 18: How about blood transfusion?

The risk of transmission of COVID-19 through transfusion of blood and components is now only theoretical and likely minimal [(12)]. There is no restriction on blood transfusion. Any actions taken to mitigate risk are therefore precautionary.

Guidelines issued by National Blood Transfusion Council, MoHFW and standard laboratory biosafety practices, based on national or international guidelines, should be followed in all circumstances. Pandemic may affect blood supply therefore activities for blood collection and voluntary blood donation, are required to be continued judiciously during this period to meet the blood requirements.

Question 19: How to manage cancer patients?

There are around 1.7 million cases of cancer in India with new case incidence of 1 million. Around 7.5 lakh patients succumb to cancer every year. Cancer is a semi-emergency disease and its treatment is time-bound.

There are 2 aspects to consider:

- Impact of COVID per se on cancer patients.
- Impact of cancer on COVID patients

Cancer patients are immunocompromised and are at high risk. They are more susceptible to COVID. There is rapid deterioration of general condition in COVID affected cancer patients. First golden rule as a doctor is, “Do no harm”. Delay in treatment results in stage migration, need for more radiotherapy/ chemotherapy. There is also a significant economic impact. Therefore, decision based stratification and triage by telecommunication should be performed for the assessment of severity of disease, co-existing comorbidities and logistics. All MDT’s for managing cancer patients should be organized on virtual tele-communication. Surgical society of oncology (SSO) guidelines in alliance with BSO and ISO have proposed three categories as follows

Category I	Low-risk patients with non-life threatening disease	The treatment can be postponed for 6 to 8 weeks after telecommunication

Category II	Intermediate-risk patients presenting with non-life threatening disease, but with a potential for further increase in morbidity and mortality if there is a delay in treatment	Oral chemotherapy or short course radiotherapy can be given.
Category III	High- risk patients, with life threatening disease	Surgery is proposed

There are two studies published in China and Taiwan with reference to delay of treatment which revealed that treatment delay in Category II and Category III were independent risk factors for increased cancer related mortality. Delay of three months showed a drop of one year survival from 91% to 60% and decrease in 5 year survival from 71% to 38%.

Question 20: Can we operate on COVID recovered patients?

The question of safety of health worker takes a secondary preference. The primary concern is the management of the patient. A patient is deemed as "COVID Recovered" when,

- Two consecutive swabs are negative in a span of 7/14 days
- Antibody spot test - IgM is negative
- Antibody spot test - IgG is positive

The grade of severity of COVID - 19 in these patients have to be assessed, which depends whether they were managed in the ward or by quarantine, or in the ICU. The lung changes are reported to be reversible.

Question 21: Consenting cancer patients – special format?

Informed consenting is an essential component in clinical practice. Available evidence seems to indicate the poorer outcomes and high mortality rate in cancer patients with older age infected with COVID19. Thus, it is crucial to include the data about the effect of cancer and cancer treatment risks in the informed consent form and a special format is needed to take consent for cancer patients specifying the risk involved to self and to the attended and Outcome mortality difference.

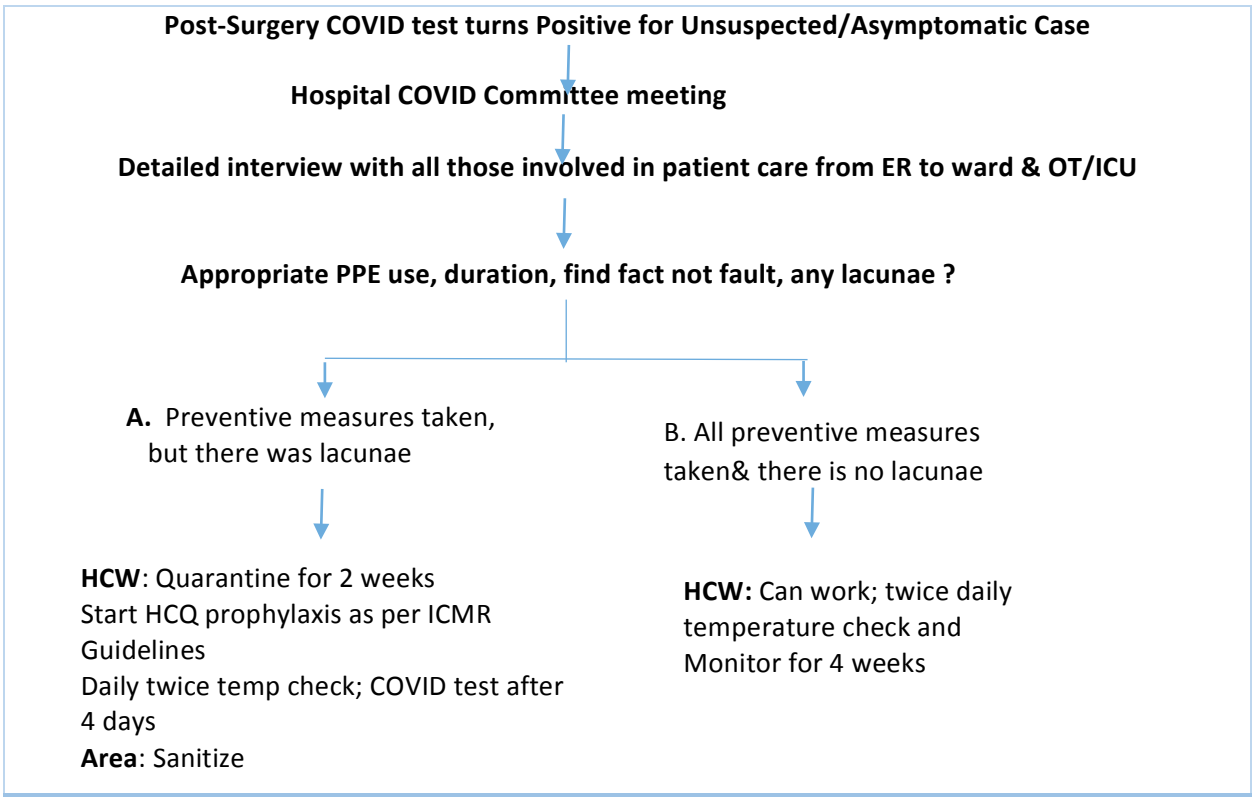
- Specifying the risk involved
- Risk to self and to the attended
- Outcome mortality difference

Question 22: Postop COVID complications- Diagnosis/treatment?

Latest evidence suggests that surgery may accelerate and aggravate disease progression of COVID-19 [14]. All patients developed COVID-19 pneumonia shortly after surgery with abnormal findings on chest computed tomographic scans. Considering the evidence available, expert panel looked into these concerns and following recommendations were outlined to address these challenges.

Symptoms	▪ Fever ▪ Sore throat ▪ Respiratory difficulty
Signs	▪ Tachypnoea ▪ Tachycardia ▪ Hypertension ▪ Bilateral chest creps/wheeze, air hunger disproportionate to signs
Investigations	▪ CXR - ground glass- serial worsening. ▪ HRCT - bilateral ground glass ▪ ABG - Hypoxia
Treatment (ICU monitoring & Supportive treatment in consultation with intensivist)	▪ O2 ▪ Ventilation ▪ HCQ ▪ Steroids ▪ anti-inflammatory

If post-Surgery COVID test becomes Positive for Unsuspected/Asymptomatic Case then expert consensus was that standard treatment guidelines to be followed along with below recommendations were outlined to address these challenges



Question 23: Are there any Medico-legal issues involved?

Considering the evidence available, expert panel looked into these concerns and following recommendations were outlined to address these challenges

- No Law is passed on COVID morbidity & mortality and hence need to go by the notification issued by Union Ministry of Health.
- Separate consent explaining morbidity and mortality of surgery is advisable.

Question 24: Additional Cost involved. How to deal?

- Cost gets escalated with use of PPE for all involved in surgery and postoperative care and is estimated to come over Rs 15000/- per case.
- Agencies like ESI/CGHS/ECHS and even insurance needs to be informed and directed through ministry to exclude the cost from the package for operations agreed upon.
- Patients & relatives need to be explained/counseled about the cost before surgery- Is a must at least to the funded group as they need to make the additional payment

Question 25: What about surgeons above 65 years?

- As per the Government directives people above 65 years are prohibited from moving out of house as they carry a huge risk of contracting the infection. Mortality from infection with many likely co-morbid diseases is certainly high.
- Surgeons above 65 years are hence recommended to avoid getting into health care activities. The proposed blanket insurance for healthcare workers by central Government will not become applicable to such people in case the infection is proved to be from clinical practice.
- They can be involved in online teaching, academic, administrative activities & supportive role with due precautions.

Question 26: What about academic activities in post COVID era?

- COVID will be existent in the future and hence all closed group travel and assembly will have a risk to the personnel. The Governmental policies from time to time will guide the future of such meetings.
- The vibrant Regional Refresher Courses of ASI for 2020 will be conducted on a web based platform.
- Web based knowledge sharing is in the pipeline.
- State/ Sectional meetings need to be worked out on the web-based platforms for 2020.

Question 27: What is the latest recommendation by ICMR regarding HCQ prophylaxis for Healthcare professionals?

As per revised advisory on the use of Hydroxychloroquine (HCQ) as prophylaxis for SARS-CoV-2 infection issued by ICMR on 22nd May 2020 it has recommended hydroxychloroquine as chemoprophylaxis for all asymptomatic healthcare workers involved in containment and treatment of COVID-19 with dosage of 400 mg twice a day on Day 1, followed by 400 mg once weekly for next 7 weeks; to be taken with meals. It further recommends use beyond 8 weeks on weekly dosage with strict monitoring of clinical and ECG parameters, and one ECG should be done anytime during the course of prophylaxis [(15)].

Table I: Take Home Messages

- Wear simple dress and mask while leaving, change to hospital scrub at work place and subject the scrub to proper wash while leaving the hospital
- Best is to use own vehicle, avoid pubic transport
- Separate entry for healthcare workers and patients, screening for everyone
- Sanitize hands and all accessories after reaching home. Rinse the reusable mask with soap water
- Ensure all patients fill a comprehensive online registration form or prior appointment with brief history
- Emergency surgeries cannot be postponed. Elective surgeries can be temporarily on hold
- Extra precautions such as minimizing routine OPD work to contain the spread of the virus
- Adequate knowledge about the disease transmission and institutional infection control protocols are the need of the hour
- Adherence to inpatient, outpatient and emergency department PPE guidelines. PPE must be labelled as HAZMAT while disposing
- Use of enhanced respiratory PPE greater than N95 level for certain aerosol generating procedures
- Use smoke evacuator when electrocautery / Aerosol generating energy devices are used
- Do not allow surgical smoke, plumes to go to your lungs
- Procedures creating aerosolization needs to be avoided
- Emergency surgery and urgent surgery must be carried out even without COVID report being available and treat every patient as a possible COVOD positive
- Patients to be kept in separate COVID suspect ward.
- RTPCR testing if symptoms develop postoperatively
- Initial consultations through phone, and maintain minimal contact with patients and relatives
- Documenting COVID test results before taking up for surgery
- In absolute emergency situations, every patient is to be treated as positive and requisite precautions be taken as per guidelines given by MoHFW and ICMR.
- No restriction on blood transfusion

- Decision based stratification and triage by telecommunication for the assessment of cancer patients
- A special format for informed consent form to take consent from cancer patients
- Separate consent explaining morbidity and mortality of surgery is advisable
- ESI/CGHS/ECHS and even insurance needs to be informed and directed through ministry to exclude the cost from the package for operations agreed upon
- Surgeons above 65 years are recommended to avoid getting into health care activities
- Hydroxychloroquine (HCQ) as prophylaxis as per revised ICMR advisory dated 22nd May 2020

Conclusion

Health care systems and society have been severely challenged by COVID19 in a very short period. The proposed mitigation strategies underscore the need for decision-making and resource allocation, while facilitating policymakers and the broader healthcare community to carefully consider the high-priority health needs. It is imperative to come up with rigorous preparations in terms of internal administrative measures such as infection prevention measures, screening and triage strategies, modification of infrastructure and processes, and protocols for healthcare professional, administrative staff and patients. Most importantly, it is also crucial to evaluate the effectiveness of adapted strategies more often for longer-term health system capacity building.

This advisory may very well change in keeping with the dynamic changes taking place in the country. Addendum would be added accordingly.

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