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Guidelines for safe ENT practice in COVID 19

Introduction

1. Ear, Nose, Throat (ENT) is a high-risk speciality. These guidelines are aimed to minimise the spread of COVID-19 infection among ENT doctors, nursing staff, support staff, patients and their attendants.
2. These comprise:

   A. Protocols and SOPs for ENT OPD

   B. Protocol for ENT and Head & Neck Surgery Ward

   C. Guidelines for Operation Theatre for ENT surgeries

A. PROTOCOLS AND SOP FOR ENT OPD

1) **Teleconsultation:**
   - Teleconsultation will be preferable
   - Prior teleconsultation can be done to identify patients requiring physical examination in clinic
2) **Appointment system (time-based appointment to limited numbers)**
   - One patient at a time in examination room, if possible, without attendant
   - Sufficient time should be given for patient evaluation and for time in-between patients
   - Walk-in patients without appointment should be discouraged
3) **Screening of patients at OPD entry:**
   - All patients entering ENT OPD should be screened using screening proforma(**Annexure I**) and thermal screening. The objective of screening is to minimize exposure to staff and to patients. Screening is to be done to pre-screen all patients before entry and to minimize entry to the OPD premises. Patients having symptoms suggestive of Covid 19 (Whether ENT Symptoms or Respiratory Symptoms) should be seen in a separate "Covid-19 screening Clinic" and not in the ENT OPD. This

is so that other patients in the ENTOPD are safe. Also, personnel manning the Covid-19 Screening Clinic will have a different level of PPE.

4) At entry point of OPD:

- Regulate entry of patients and ensure use of mask, hand hygiene and social distancing, as per the standard protocols advocated by M/o Health & Family Welfare

5) Within OPD room:

- ENT OPD room should be well-ventilated.
- ENT doctors should wear Level I PPE kit (N95 mask, gown, gloves, goggles/ face shield) in OPD chamber.
- Avoid performing endoscopy (Nasal endoscopy, 90 rigid or flexible endoscopy for larynx) in routine OPD.
- If endoscopy has to be performed, it should preferably be performed in a separate demarcated area with Level II PPE kit(Cover-all gown, N-95 mask, gloves and goggles).
- Doctor should change gloves if they get soiled and refrain from eating/drinking during OPD timings.
- Doctor should encourage patients and their attendant to follow-up with tele-consultation based upon his/her assessment.

6) Endoscopy and biopsy SOP

- Because of risk of aerosol generation during biopsies and endoscopies, all HCP(doctor, nursing staff and technical assistant) need to wear Level II kit (Cover-all gown, N-95 mask, gloves and goggles) during these procedures.
- It is preferable to have separate donning and doffing area with a supervisor for both procedures
- SOPs for endoscopy and biopsy SOP are at **Annexure II**

B. PROTOCOL FOR ENT AND HEAD & NECK SURGERY WARD

1. GENERAL POINTS FOR ENT AND HEAD & NECK SURGERY WARD

- ENT AND HEAD & NECK SURGERY WARD is supposed to be COVID free and the aim of guidelines is to maintain it as a COVID free ward as possible.

- COVID 19 suspect patients should be treated in a separate ward for COVID 19 patients, and should be shifted to ENT ward only after confirmation of COVID negative status[1].
- Ensure that suspected and confirmed cases of COVID−19 patients are kept separately.
- Patients should be screened for COVID 19 before admission (refer to Annexure I)
- Only one patient's care-taker should be allowed at a time who is also screened like above. They should comply to strict precaution for COVID 19 like wearing of mask, frequent hand washing and social distancing.
- Ensure that appropriate hand washing facilities and hand-hygiene supplies are available.
- Hand sanitization and social distancing posters must be displayed in multiple areas of ward.
- Keep the patient's personal belongings to a minimum.
- Examination instruments should be properly sterilized as per standard sterilisation protocol after every use .
- Ward should be with minimum furniture for proper cleaning and disinfection.
- Visitors should not be allowed.
- Corridors and rooms should be well-ventilated.

2. Scheme for the ENT AND HEAD & NECK SURGERY WARD

1. Distancing of at least 2 meters in between patient beds is mandatory. Additional distance if feasible is desirable as care taker may also be accompanying patients.
2. Ward should be demarcated into separate areas for patients with high aerosol generating potential (e.g. Tracheostomized patients) and for patients with ENT patients
3. If possible, patients in the ward can be segregated depending on the time from admission.

3. SOME COMMON AEROSOL-GENERATING PROCEDURES IN ENT AND HEAD & NECK SURGERY WARD

1. Major bulk of Aerosol-Generating Patients in ENT are tracheostomized patients Encourage use of HME (heat and moisture exchanger), T piece to prevent contamination of room.
2. Tracheostomy tube suctioning/ change
3. Nasogastric tube insertion
4. Procedures in Nasal and Oral cavity such as examination, cleaning, suctioning, nasal packing, foreign bodies' removal etc.

4. RATIONAL USE OF PERSONAL PROTECTIVE EQUIPMENT[1,5,6]

Health care personnel	1- Guard- N 95 mask 2- Health care worker - level I PPE kit (N 95 mask and gown)
Patients and care taker	Gown & triple layer mask
Examination of patients/ Tracheostomy/ Tube change/ suctioning of tracheostomy tube/ cleaning the ward (aerosol generating)	HCP should level II PPE (cover all gown, N 95 mask, gloves, goggle and face shield)

(i) For rational use of PPEs, the following guidelines issued by the Ministry may be referred **:**

https://www.mohfw.gov.in/pdf/GuidelinesonrationaluseofPersonalProtectiveEquipment.pdf and

(ii) Additional guidelines on rational use of Personal Protective Equipment:
https://www.mohfw.gov.in/pdf/UpdatedAdditionalguidelinesonrationaluseofPersonalProtectiveEquipmentsettingapproachforHealthfunctionariesworkinginnonCOVID19areas.pdf

5. PRACTICES FOR ENVIRONMENTAL CLEANING IN HEALTHCARE FACILITIES

Cleaning environmental surfaces with water and detergent and applying commonly used hospital disinfectants (such as sodium hypochlorite) is an effective and sufficient procedure. Regular cleaning is required to keep ward COVID-free.

Cleaning agents and disinfectants[1,3,7]

a) Freshly prepared 1% Sodium Hypochlorite can be used as a disinfectant for cleaning and disinfection
b) Leaving the solution for a contact time of at least 10 minutes is recommended.
c) Ward cleaning should be done with detergent with water or 1% Sodium Hypochlorite.
d) High contact surfaces (door and door knobs) should be regularly cleaned with 1% Sodium Hypochlorite.
e) Nursing station, examination room, tracheostomised patient cubical and cubical with less than 1 week admission need more frequent cleaning than other areas of ward.

f) Alcohol (e.g. isopropyl 70% or ethyl alcohol 70%) can be used to wipe down surfaces where the use of bleach is not suitable, e.g. metals.

g) Sensitive equipment's (BP apparatus, thermometer, endoscopes) should be wiped with 70% alcohol-based rub/spirit swab before each patient contact.

h) Endoscopes can be sterilized by immersing in 2% glutaraldehyde solution for 20 minutes

i) Examination Equipment(heat stable)- (autoclave), chemical (formaldehyde) vapor, and dry heat (e.g., 320º F for 2 hours)

For more details (like frequency of cleaning / different items)- (https://www.mohfw.gov.in/pdf/Guidelinesondisinfectionofcommonpublicplacesincludingoffices.pdf)

C. GUIDELINES FOR OPERATION THEATRE FOR ENT SURGERIES DURING COVID-19 PANDEMIC

Objectives - To escalate the preparedness towards reinstating operation theatre (OT) practices for ENT surgeries in the wake of COVID-19 pandemic.

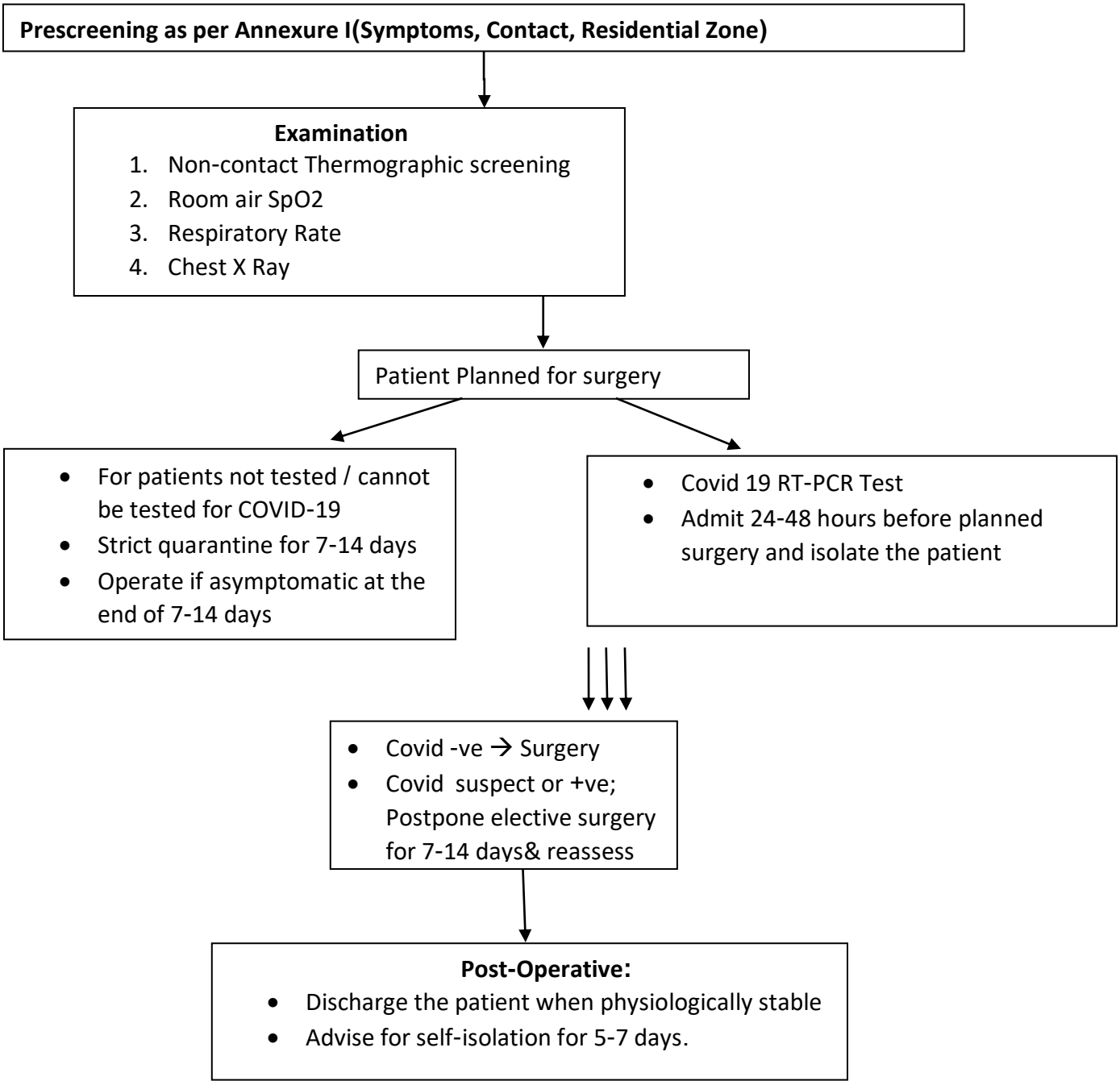
- **No COVID positive patient to have surgeries in OT designated for non-COVID cases.**

- **COVID 19 positive patients to be operated only for emergency indications in designated OT for COVID patients**

- ENT Surgical procedures are associated with very high transmission risk [8] of COVID-19 due to the following factors.
    a. Upper aerodigestive tract is the post of entry, nidus and exit route for the Novel Corona Virus.
    b. High aerosol generation during surgeries in the upper aerodigestive tract
    c. Prolonged aerosolization during and following prolonged operative procedures and procedures using powered instruments like micro-debrider and drills.

Pre-Operative Screening and COVID-19 Testing Paradigm [9]

This flow chart to be considered for non-emergency cases



Modifications in OT set-up and personnel protection

- Emergency procedures (for life/ organ threatening diseases/conditions) in COVID-19 POSITIVE AND SUSPECTED patients to be performed in separate OT complex.

- When not practical, the operating room for such cases must be dedicated and as close as possible to the entrance of the OT block.

- Aerosol generating procedures under local anaesthesia should be avoided.

- Minimum number of personnel (i.e., surgeons, anaesthetists, nurses, technicians) should enter the OR in a timely manner.

- Minimal required material (preferably disposable) should be used for each intervention.

- At the end of each intervention all disposable materials must be disposed of properly and all surfaces as well as electro-medical devices accurately cleaned and disinfected

- PPE must be removed and disposed off outside the OT in dedicated doffing areas.

- All procedures not physically related to the patient (i.e., clinical and surgical documentation) must be performed outside the OT.

PPE Guidelines [10]

Risk Definition	Patient Requirements	OT Personnel Requirements
HIGH RISK PATIENTS ○ COVID-19 positive ○ COVID-19 suspect	Surgical Mask	As per the guidelines for COVID positive patients
OTHER PATIENTS ○ Negative on RT-PCR 24 hours before surgery ○ Asymptomatic till 14 days isolation after	Face cover / surgical mask as per MoHFW's 'Additional guidelines on	Aerosol Generating Procedures * • N95 mask and eye protection (may be appropriate to reuse); • Must use face shield (to allow reuse)

admission	rational use of PPEs'	• Impermeable gown or gown with plastic apron • Double gloves • Powered Air-Purifying Respirator (PARP) for prolonged surgeries to minimize fogging and surgeon comfort <u>Non-Aerosol Generating Procedure</u> • Surgical mask • Goggles or face shield • Gown • Gloves

*Most of the ENT operations involving upper aerodigestive tract including the common procedures summarised below would be considered aerosol generating.[10]

- Direct laryngoscopy, trachea-bronchoscopy, esophagoscopy
- Peritonsillar abscess drainage
- Nasal and paranasal sinus surgeries including nasal packing
- Foreign body retrieval from nose/ pharynx/ airway
- Tracheostomy
- Powered instrumentation in mucosal head and neck surgeries.

<u>Procedure Specific Guidelines</u>

Procedure	COVID Specific Modifications
Head and Neck Malignancy (may be considered as semi-emergent procedures)	• In case of pre-operative COVID positivity, surgeon should weigh the risk benefit of postponing surgery for 14 days or scheduling procedure in COVID-designated OT • Direct laryngoscopy to be avoided just for the sake of obtaining biopsy when FNAC from neck node can be considered • Day care surgery for early lesions preferable • Minimise use of powered instruments to prevent

	aerosolization • Avoid complex reconstructive procedures. • For prolonged surgeries, PARP may be considered
Paranasal Sinus Surgery and Skull Base	• Level II PPE as recommended for aerosol generating category • Avoid in high risk category except in cases with life/ organ threatening complications
Otologic Surgery	• Level II PPE as recommended for aerosol generating category • To be postponed in high risk group except in cases with life/ organ threatening complications
Tracheostomy	○ When feasible, GA following intubation should be considered. ○ If intubation is not feasible, consider superior laryngeal nerve block and inject lignocaine into the trachea prior to incising the trachea to reduce cough. ○ Transient apnoea to be maintained during the brief period tracheal incision to cuff inflation of inserted tracheostomy tube. ○ Closed suction system to be used and usage to be guarded. ○ Double lumen cuffed tube may be used to avoid frequent tube change due to tube blockage post-operatively ○ Heat moisture exchanger (HME) to be attached to tracheostomy tube when patient is shifted to ward ○ For high risk cases, a triple layer/ N95 mask may also be worn over the tracheostomy tube.

Note: These guidelines are dynamic and may be updated from time to time as required.

Annexure I :Screening proforma

a) Symptoms

Table 1-Symptoms for COVID-19 infection

Most common symptoms:	Less common symptoms:	Serious symptoms:
Fever Dry cough Tiredness	Aches and pains Sore throat Diarrhoea Conjunctivitis Headache Loss of taste or smell A rash on skin, or discolouration of fingers or toes	Difficulty breathing or shortness of breath Chest pain or pressure Loss of speech or movement

(a**)** Are you suffering from fever**/**cough**/**difficulty in breathing

(b**)** Are you residing in a containment zone

(c**)** Have you been in contact with a confirmed COVID**-**19 case in last 14 days

Annexure II

ENDOSCOPIES SOP:

1. Adequate patient preparation is mandatory
2. Explaining patient regarding procedure and advise him not to cough/ sneeze during procedure.
3. Mouth should be covered with 3-ply mask when possible.
4. Decongestion of nasal cavity with oxymetazoline drops
5. Lubrication of endoscope tip and adjacent area with xylocaine jelly. Xylocaine spray should be avoided
6. Recording preferably should be done so that repeat endoscopy can be avoided and for keeping record.
7. After endoscopy, endoscope should be sterilized by immersing in 2% glutaraldehyde solution for 20 minutes.

BIOPSY SOP:

1. Patient preparation should be done meticulously using xylocaine lozenges/ gargles.
2. Ensure proper functioning of bipolar cautery and illumination system before start of biopsy.
3. Instruments should be properly sterilized in autoclave after usage.
4. In case of vigorous cough by patient during procedure/ after biopsy, the area needs to be decontaminated before next procedure.

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