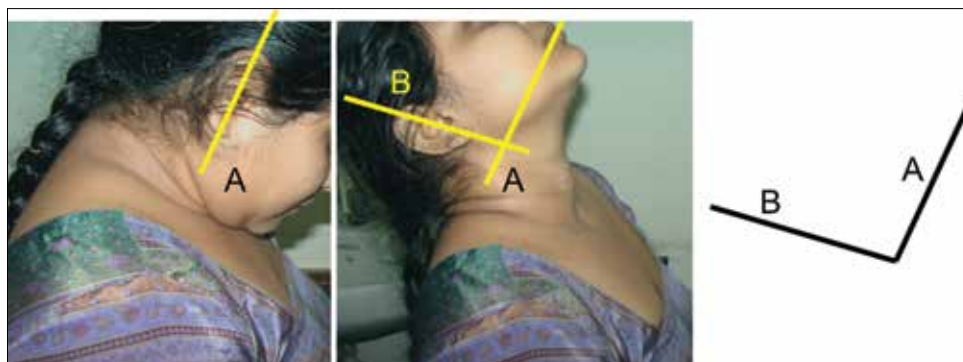


## Appendix – IA

### **Application of AMF Approach in Patients Suspected of Having Disease That is Highly Contagious Through Aerosols.**

The world had never been devoid of infectious diseases that can spread through aerosols, be it open tuberculosis or H1N1 infection. But this pandemic of COVID -19 has taught us an important lesson, i.e., not to take things casually or for granted. The airway manager is likely to get exposed to aerosol from the patient for the first time during preanesthetic check-up (PAC) and airway assessment. It is only to be expected (and hoped) that all airway managers would now onwards meet *all* their patients for the first time (be it the formal PAC clinic or their chambers outside the OTs or elsewhere) wearing at least surgical gown, surgical cap, surgical mask, goggles, and gloves.



**Figure 3:** The edge of the scale is placed on two points; one marked on the upper margin and another marked on the lower margin of the patient's pinna in extreme flexion (left picture) and the scale is held there (A). The patient is now asked to gently extend the neck as much as possible and the edge of the other scale is held such that it touches both the marked points (B) and that edge of the first scale that was touching these very points (A) (middle picture). The angle between those edges (A and B) of the two scales that were touching the two points is the neck range of motion (ROM) of this patient (right picture)

### Modifications suggested for airway assessment

1. General preparation: Use Assessment Proformas wherever possible (online proforma are preferred over paper proforma). Use mike to make the communication with the patient easier across barriers.
2. Preparation for the assessor: Assessor should be wearing a surgical gown, surgical cap, N-95 mask, gloves, and a face shield in the correct manner.
3. Preparation for the patient: The patient should come wearing a mask (at least a surgical mask, if not N95) over her mouth and nose and maintain social distancing.
  - a. *Option 1:* The patient should sit across a transparent plastic barrier with two openings for the assessor's hands and arms to pass. This may look a far-fetched idea but has the potential of becoming a norm if COVID-19 spills over into 2021, as some epidemiologists predict.
  - b. *Option 2:* The patient should also be wearing a mask (at least a surgical mask, if not N95) over her mouth and nose and sit at least 1 m (3 feet) away from the assessor while focused history and general examination are underway.
4. The focused history should begin with a detailed history of any suspicious illness and/or contact (of the patient and all her contacts) in the past 2 weeks.
5. Conduct of LOS Examination: After eliciting focused history and conducting the focused general examination, explain the LOS examination to the patient.
  - a. Additional tools – A camera phone with flash covered with a disposable polythene cover.
  - b. Steps –
    - i. Counsel the patient and explain that she will be asked to perform certain maneuvers, which the assessor will demonstrate on himself. Also, tell her that photographs will be clicked to aid the assessment.
    - ii. Ask the patient to take off/pull down her mask.
    - iii. Click three photographs, one front and two side views (from either side).
    - iv. Demonstrate how to evert the tip of the nose. Now ask the patient to evert her nose gently. At this time click another picture from the front. The camera is zoomed to the nostrils with flash on at the time of clicking the picture.
    - v. Now demonstrate how to perform the test for nasal patency. Hand over a cotton wisp to the patient and ask her to perform the test for nasal patency. Note the movement of the cotton wisp while the patient herself does the test. Ask her to dispose-off the wisp safely in a covered bin.
    - vi. Now examine the lips and teeth.
    - vii. Test for IIG should be conducted at the end *as it involves the scale to be kept very close to patient's open mouth, almost touching her teeth or gums (if the patient is edentulous).*
    - viii. For performing the MMP ask the patient to open her mouth fully and protrude the tongue. Take the lens of your camera phone in line with the oral cavity and about 1 foot away from her mouth. Click a picture with flash on. Now bring down the camera so that the hard palate is visible. Take another picture with flash on.
    - ix. Examine the lower jaw next and perform the ULBT/ULCT as applicable.
    - x. Ask the patient to reapply the mask with the chin exposed.
    - xi. Feel the compliance of the submandibular region next and measure the TMD and SMD simultaneously with

- a 30 cm (1 foot) *disposable cardboard/paper scale*.
- xii. Ask the patient to pull the mask over her chin as well.
  - xiii. Examine the whole length of the neck.
  - xiv. Identify the cricoid cartilage.
  - xv. Measure the neck thickness (neck circumference). If using a *30 cm disposable scale*, place one edge of the scale on the thyroid notch, and gently bend the scale around one side of the neck. Place your finger at the point of contact of the other edge on the back of the patient's neck. Remove the scale and place it back so that edge on thyroid notch is now at the point that your finger was marking and gently wrap it around the patient's neck to reach the thyroid notch again. If the mark on thyroid notch is 6 cm then the neck circumference is a little over 36 cm (most scales have a few mm extra on either side of the beginning and end of markings).
  - xvi. Ask the patient to turn by 90° to the right or left and ask her to flex her neck maximally and take a picture. Now ask the patient to extend the neck to the maximum without moving her shoulders back and take another picture.
  - xvii. Finally, measure the IIG. Hand over the disposable scale to the patient. Demonstrate the measurement of IIG by using another scale. Ask her to open her mouth and place the scale as shown by you. Take a picture of the patient with a scale in position.
6. Dispose off the disposable scale and the camera phone cover safely and change your gloves once the airway assessment is complete.
  7. Use the pictures to assess the malar region, nose, face, IIG, MMP, palate, and neck range of motion (NROM) [Figures 3 and 4].
  8. NOTE:
    - a. If using a reusable torch and measuring tape for assessment, these should be decontaminated appropriately before reusing.
    - b. The assessor and the patient come in contact only during marking the cricoid cartilage, measuring the TMD, SMD, and neck circumference.



**Figure 4:** (Clockwise from top left): Pictures showing how (i) malar region and face, (ii) nose, (iii) interincisor gap (IIG), (iv) modified Mallampati (MMP) class, and (v) palate can be assessed from properly taken photographs