UNMC Nebraska Medicine

ADDENDUM I

Otolaryngology, Head & Neck P (OHNS) & Oral Maxillofacial (OMFS) Procedures

Updated: May 12, 2020

Summary

These guidelines provide decision support for the perioperative management of patients requiring anesthesia and surgical services. They are fluid and reflect the changing prevalence in COVID-19, and the best available evidence of risk of transmission during aerosolizing procedures, recognizing that there is divergence in the literature on optimal PPE and testing paradigms. Recommendations are formulated in the context of responsible use of our PPE availability and reuse capability and maximal provider protection.

Principles

- Otolaryngologists and OMF surgeons are among the highest risk health care workers (HCW) with respect to contracting COVID 19 disease while performing upper airway procedures and examinations if not using appropriate personal protective equipment (PPE).
- When a surgical procedure is necessary for urgent or emergent care and the patient is COVID-19 positive, COVID-19 exposed, or COVID-19 status of the patient cannot be confirmed, the patient should be handled as if they are COVID-19 positive and PPE consistent with airborne isolation should be employed.
- COVID-19 symptom screening and COVID-19 testing should be performed prior to all non-emergent procedures consistent with AAO-HNS statement of March 23, 2020, "Unless emergent, surgical procedures should only be undertaken after ascertaining the COVID-19 status."
- Providers and all surrounding staff must don necessary and appropriate PPE defined by the patient's COVID-19 status and risk, the planned procedure, and the PPE availability.

Definitions

- *Standard COVID-19 PPE*: team members don full contact, droplet, and airborne PPE. Minimum PPE includes N95 fit-tested respirator with eye protection (face shield / goggles), gown and double gloves.
- Aug*mented COVID-19 PPE*: team members don full contact, droplet, and airborne PPE. This includes PAPR/CAPR plus gown and double gloves. When wearing a PAPR/CAPR only standard surgical mask is utilized.

Procedures

Many procedures performed by OHNS and OMFS in the context of the COVID-19 pandemic are classified as *Ultra-High-Risk Surgeries* due to their inherent risk of significant and prolonged aerosol generation. In general, these procedures include but are not limited to:

- Procedures on the glottis/airway, oropharynx, nasopharynx, mastoid, or sinuses
- ENT/OMFS procedures using cautery, laser, drills, saws and debriders within nasal cavity, sinuses, mastoid, airway, subglottic airway or oral cavity

- Procedures utilizing rigid laryngoscopy or rigid bronchoscopy

Prior to scheduling any procedure surgeons should confirm:

- All patients are screen negative for symptoms of flu-like-illness suggestive of a respiratory viral infection per Nebraska Medicine protocol.
- All patients undergo COVID-19 testing as close to the time and date of procedure but at most 48 hours prior to the DOS. Results must be reported in EPIC prior to DOS.
- Time allowing, social distancing should be encouraged for two weeks prior to all procedures with self-quarantine at home for the time between testing date and DOS.

On day of procedure:

- Confirm screening for exposure and symptoms suggesting viral respiratory infection
- Confirm COVID-19 test results are in EMR (EPIC).
- Huddle with surgical team (surgeons, anesthesia, nursing) to affirm plan for surgery and necessary PPE based upon symptoms, testing, and surgical procedure

COVID-19 Screen and Real-time RT-PCR test Negative

Community standards of care for OHNS/OMFS procedures have not yet been established. Guidance from peer institutions across the country is similarly divergent (Stanford vs. MGH) regarding practice recommendations in COVID-19 screen/test negative patients with respect to COVID PPE vs. standard PPE. Recent CMS recommendations on Re-opening Facilities to Provide Non-emergent Non-COVID-19 Healthcare: Phase I states that in "Non COVID-19 Care" procedures on the mucous membranes including the respiratory tract, with a higher risk of aerosol transmission, should be done with great caution, and staff should utilize appropriate respiratory protection such as N95 masks and face shields.

We believe that given established findings of pre-symptomatic viral shedding in some at risk populations as well non-otolaryngologist imprecise nasopharyngeal sampling, that there is a real, but non-quantifiable possibility of false negative COVID-19 RT-PCR tests. Given the elevated and prolonged aerosol generation of specific Otolaryngology and OMFS procedures, surgeons should adhere to the following guidelines:

A. Standard OR attire should be used during:
    a. Oral cavity closed airway procedures (intubated) not involving drills, saws, suction, cautery and like instruments are considered non-aerosolizing. Example~~s~~: Removal of an oral lesions, oral biopsy, simple dental extractions, etc.
    b. Non-oral cavity closed airway procedures (intubated) not involving drills, saws, and like instruments are considered non-aerosolizing. Examples: parotidectomy, thyroidectomy, otolaryngology facial plastics procedures, etc.
    c. Open or closed airway procedures involving nose or nasal cavity where no drills, cautery or saws will be used. Example: functional rhinoplasty and facial plastics.
    d. Open mask airway procedures. Example: myringotomy and/or tubes.

B. Standard COVID PPE should be used by ALL members of the OR team during the following Ultra High Risk Operative Procedures.
    a. Open airway procedures (no intubation), laryngoscopy, and bronchoscopy, where there is suctioning and uncontrolled release of respiratory and anesthetic gases, patient's secretions, and along with the likelihood of multiple intubations / extubations. If anesthesia provider and circulator cannot remain outside six feet from airway or behind ether screen, they should also employ PPE similar to surgeon.
    b. Any oral procedure with open or closed airway where drills, saws, or extensive electrocautery will be used generating bleeding and profuse aerosolizing droplets. Examples: Repair of mandibular and facial fractures or osteotomies and removal of tonsils and adenoids, (excess smoke plume)
    c. Any sinus - nasal and base of skull surgery with open or closed airway where drills, saws, or extensive electrocautery will be used generating bleeding and profuse aerosolizing droplets
    d. Patients undergoing mastoidectomy employing extensive drilling and uncontrolled production of aerosolizing droplets.
    e. Head and neck operations where the airway is initially closed but during the procedure will be opened, exposed, and manipulated with extended periods of aerosolization and potential bleeding. Example: Laryngectomy with Neck Dissection and tracheotomy. If anesthesia provider and circulator cannot remain outside six feet from airway or behind ether screen, they should also employ PPE similar to surgeon.

COVID-19 Positive or COVID-19 Unknown Emergent or Urgent Procedures

Presence of any symptoms attributable to a viral respiratory infection, or if patient is unable to provide a history (e.g. cardiac arrest), or if cannot determine if symptoms are due to infection or not:

A. Defer the procedure until symptoms resolve. This is strongly recommended to minimize risk to providers and to minimize the risk of post-operative complications.
B. If procedure cannot be deferred until symptoms resolve, then proceed with the procedure assuming COVID Positive:
    a. Limit the number of individuals in the room to essential personnel only
    b. Perform the procedure with all personnel using augmented PPE
C. Follow **Guidelines for Patients with COVID-19 Suspected or Confirmed Infection in the Perioperative Environment** If the procedure is considered ultra-high risk, all OR personnel (including circulator) will don augmented PPE.
    a. If patient is already intubated follow **standard protocol for Transporting Patients with or under investigation for COVID-19** to operating room.
    b. If patient is NOT intubated and if OHNS/OMFS is directly involved in airway management or if difficult airway is anticipated do not intubate in negative

pressure room but bring directly to the operating room, following standard protocol for Transporting Patients with or under investigation for COVID-19.

c. Before any AGMPs (e.g., intubation and extubation) are performed, all OR personnel must don Augmented PPE, in addition to gown and gloves.
d. After the procedure is completed suction canisters are turned off and prepped for change to allow for egress.
e. Per protocol, patient and team must remain in the room 15 minutes post AGP, prior to extubation to allow for egress and for 99%+ clearance of OR.
f. Follow Guidelines for Patients with COVID-19 Suspected or Confirmed Infection in the Perioperative Environment for guidance on doffing, egress, and transfer of patient to COVID bed or PACU isolation.

Surgical Site specific modifications on the above:

A. Nose and sinus - prior to cautery consider inserting a tracheal suction catheter with bone wax covering the finger hole in the contralateral nostril on a second suction to direct and control the cautery plume.
B. Airway / Tracheostomy-
    a. Tracheostomy, perform entire procedure under complete paralysis
    b. Prior to tracheostomy incision in the airway: patient is pre-oxygenated, and ventilation held; ETT cuff deflated and tube advanced; ETT cuff is re-inflated and ventilation resumed.
    c. Ventilation is paused and cuff left inflated while the incision is made.
    d. Incision is made, the cuff deflated (ventilations are still paused) and pulled back until instructed the stop. Surgeon or assistant must have suction in the tracheotomy during this transition to evacuate any particles escaping. Trach tube is place and anesthesia circuit is connected, ventilations resume. (AAO-HNS, ENTUK)
    e. Rely on cold instrumentation and avoid monopolar electrocautery where possible.
    f. If patient is in COVID ICU, discuss with critical care team appropriateness of performing procedure at bedside.
    g. Please refer to Nebraska Medicine Policy for tracheostomy (HME etc).
C. Ear Surgery- no specific recommendations
D. Oral cavity- No specific recommendation

Resources related to Precautions and Risks:
COVID-19 and Ear Surgery (Robert K. Jackler, MD)
Update on Precautions Regarding Endoscopic Procedures & COVID-19 (Zara M. Patel, MD; Peter H. Hwang, MD; Jayakar V. Nayak, MD, PhD; Juan Fernandez-Miranda, MD; Robert Dodd, MD, PhD; Hamed Sajjadi, MD; Robert K. Jackler, MD)

Report from the Stanford Endoscopic Sinus & Skull Base Team (Zara M. Patel, MD; Peter H. Hwang, MD; Jayakar V. Nayak, MD, PhD; Juan Fernandez-Miranda, MD; Robert Dodd, MD, PhD; Hamed Sajjadi, MD; Robert K. Jackler, MD)

Tracheostomy recommendations during covid-19 pandemic (March 27, 2020) AAO-HNS
Tracheostomy guidance during the COVID-19 Pandemic (March 19, 2020) ENT UK
Givi B, Schiff BA, Chinn SB, Clayburgh D, et al Safety Recommendations for Evaluation and Surgery of the Head and Neck During the COVID-19 Pandemic.
JAMA Otolaryngol Head Neck Surg. 2020 Mar 31.

American Neurotology Society Postiion Statement on Management of Otologic & Neurotologic Patients During the COVID 19 Pandemic, Elliot D. Kozin, Aaron K Remenscneider, Nicholas Blevins, et al Otology, Neurotology, April 16th, 2020.