



## **ASOHNS Review of Guidance for PPE for ENT surgeons during the COVID-19 Pandemic**

2 April 2020

The executive of ASOHNS and its COVID 19 committee regularly reviews literature and correspondence from members and international committees, in relation to the evolving challenges of the Covid 19 pandemic.

ASOHNS has engaged in discussions with the Office of the Chief Medical Officer to ensure adherence where possible to the national guidance and take a collaborative approach to guidelines production.

Members who fall into the category of vulnerable workers should strongly reconsider any patient contact during this time. Categorisation of vulnerable workers is available on the Commonwealth health website [www.health.gov.au](http://www.health.gov.au)

A substantial amount of this document has been adapted from the NZSOHNS PPE Guidelines for ENT, Head and Neck Surgery published by the RACS on 31-03-20.

This guidance is intended to complement existing advice and recommendations from previous statements:

26 March 2020 - [PDF](#)

22 March 2020 - [PDF](#)

20 March 2020 - [PDF](#)

### **Guidelines for Otolaryngologists, Head and Neck Surgeons on Personal Protection Equipment in the COVID-19 Pandemic**

#### **CONTEXT**

Novel coronavirus (COVID-19) represents an emerging infectious disease threat worldwide, with a spectrum of disease ranging from mild-moderate illness, to pneumonia and severe respiratory distress.

Infection can be caused by virus contacting the upper airway mucosal or conjunctiva through:

- aerosolisation of droplet particles during high risk procedures
- interpersonal contact
- contact with contaminated surfaces.

Otolaryngologists, Head and Neck Surgeons commonly perform invasive examinations and interventions which can be classified as aerosol generating procedures (AGPs), and consequently are at increased risk of contracting or acting as vectors for transmission of COVID-19 to our patients.

Appropriate triaging of the need to perform invasive examinations or procedures in the context of the current pandemic can reduce some of these risks. However, where they are absolutely indicated, risks of transmission are reduced through the use of appropriate personal protective equipment (PPE). It is vital that routine elective procedures and examinations are deferred during the current pandemic.

Access to stocks of different components of PPE has been an issue worldwide as well as throughout Australia. It is important that existing stocks are preserved until increased local manufacturing can compensate for the increase in demand.

## **COMPONENTS OF PPE**

- Hand Hygiene practices
- Gloves (double glove ensuring cuff of gown covered)
- Long sleeve fluid-impervious gowns
- Eye protection (e.g. goggles or visor)
- Surgical cap
- Surgical mask
- Correctly fitted N95 “mask” (also known as the N95 respirator)
- Powered Air Purifying Respirator (PAPR)

It is important to understand that different types of patient contact carry varying risk of exposure. The PPE selected should be appropriate to that exposure. This is to minimise depletion of supply of a limited resource.

It is generally accepted that a surgical mask provides a high level of protection against transmission of COVID-19 in routine patient contact and non-AGP examinations.

Powered air purifying respirators (PAPR) provides greater comfort and flexibility for prolonged procedures. However, very few are currently available nationwide, different brands may be more or less suitable for complex surgery, and patient care should not be compromised by insisting on an inaccessible resource in the current healthcare environment. ASOHNS supports members’ requests for jurisdictions and hospitals to secure robust supplies of the full range of PPE required to protect essential front-line staff engaged in AGPs.

ASOHNS does not believe that there should be preferential provision of PAPR to staff purely on the basis of the professional specialty they belong to. ASOHNS mandates that the use of PAPR should be dependent on stratifying the risk to the professionals most at risk when dealing with COVID positive patients. These would include Oto-rhino-laryngologist, Head and Neck Surgeons performing high risk AGPs.

PAPRs are highly sophisticated PPE and if used incorrectly can result in surgeon contamination and staff contamination. PAPRs require specific training and surgeons must be aware of the potential of PAPRs to impact on the use of other equipment such as headlights, loupes and microscopes in the conduct of surgery. Practitioners engaged in patient contact should ensure they familiarise themselves with the correct techniques for putting on, removing, and disposing of all PPE, as incorrect use decreases the effectiveness of protection. Ideally this should be under the instruction of an Infection Control Professional familiar with the use of the type(s) of PAPR used.

## **COVID-19 INFECTION RISK**

Patients should be risk-triaged according to Communicable Disease Network of Australia Series of National Guidelines (SoNG) for COVID-19.

The following patients are regarded as high risk:

- Positive test for COVID-19
- Close contact with a confirmed case of COVID-19
- International travel within the last 14 days
- Any of the following symptoms:
  - Sore throat
  - Cough
  - Shortness of breath
  - Fever > 38C

Note: there is a watching brief on anosmia as an emerging symptom, although it is not yet included in the COVID-19 symptom guide.

### **“IN-OFFICE”, EMERGENCY DEPARTMENT OR WARD-BASED PRACTICE**

AGPs should be undertaken only if essential, clinically indicated for diagnosis or likely to change management; a senior clinician should make the decision if there is any doubt.

Only essential people should be present to minimise risks and preserve stocks of PPE.

In a COVID-19 positive or high-risk patient, examinations should be performed in a negative pressure room where available.

Regardless of the level of PPE employed, appropriate hand hygiene and “donning & doffing” technique must be employed.

#### **High risk AGPs**

These include flexible laryngoscopy, oropharyngeal examination, rhinoscopy, drainage of peritonsillar abscess, and the management of epistaxis.

Recommended minimum level of PPE:

- N95
- Eye protection
- Surgical cap
- Long sleeve fluid-impervious gown
- Gloves

#### **Low risk AGPs**

These include oral cavity exam (without instrumentation), and essential aural microsuction.

Recommended minimum level of PPE:

- Surgical mask
- Eye protection
- Long sleeve fluid-impervious gown
- Gloves

#### **Non-AGP**

These include neck palpation, and skin lesion examination.

Recommended minimum level of PPE:

- Surgical mask
- Eye protection
- Gloves

## **Additional Recommendations**

COVID-19 “unknown” but symptomatic patients in an emergent setting should be treated as COVID-19 positive.

Consider using a dedicated examination/procedural room with appropriate cleaning between patients.

## **OPERATIVE PRACTICE**

Routine elective surgeries must be deferred for the time being in order to preserve resources for emergency surgery and urgent elective surgery, and to minimise risk of asymptomatic carriers infecting health care personnel.

Below are a list of examples of case types within each category. This list is not exhaustive, and we urge ORLHNS to work collaboratively with colleagues in decision making regarding appropriateness of surgical intervention during this period.

### **Pre-operative testing**

Internationally there is no consensus on pre-operative COVID-19 testing. A recent New England Journal of Medicine publication makes the case for two pre-operative swabs, separated by at least 24 hours. However, other literature points to decreased negative predictive value of PCR testing and a negative test does not exclude viral shedding from the upper respiratory tract.

Testing may not be possible before emergency surgery for life threatening airway or bleeding emergencies.

Testing is indicated in patients meeting the suspected case definition and to inform whether cases such as urgent category 1 surgery should be deferred.

This committee advocates strongly for delaying surgery in known COVID positive patients until their status changes, if possible.

### **Acute/Emergency Surgery**

1. Relief of upper airway obstruction (e.g. intubation/tracheostomy)
2. Management of haemorrhage in the airway
3. Acute mastoiditis or biopsy of suspected malignant otitis externa
4. Removal of foreign body from upper aerodigestive tract
5. Drainage of abscess
6. Complications of acute sinusitis (e.g. orbital, intracranial)

### **Elective Urgent Surgery**

1. Diagnostic procedures for suspected H&N cancer
2. Resection of confirmed H&N mucosal malignancy
3. Resection of complex or metastatic skin malignancy
4. Resection of salivary gland malignancy
5. Thyroid cancer with airway invasion/suspected anaplastic cancer
6. Decompensated chronic airway obstruction
7. Complicated cholesteatoma (facial palsy/intracranial complication)

Decision making regarding appropriate level of PPE to be employed during surgical cases is complex and is summarised in the table below.

**Where full PPE is recommended, this comprises:**

- PAPR if available and surgeon is trained in PAPR use and the use of PAPR does not compromise performance of surgery
- N95 that has been carefully fit-tested before each use
- Eye protection
- Surgical cap
- Long-sleeved fluid-impervious gown
- Gloves

**Standard practice comprises:**

- Surgical mask
- Eye protection
- Surgical cap
- Long-sleeved fluid-impervious gown
- Gloves

**Additional principles:**

- PPE to be worn by everyone in the OR.
- Minimise number of people in the OR.
- Minimise movement in and out of the OR.

***Risk Stratification for Surgical Cases during the COVID-19 Pandemic***

**Acute/Emergent (<48hr window)**

- AGP
  - Treat as if COVID 19 + ve
  - Full PPE
- Non AGP Symptomatic or has definite/suspected Triage risk factors
  - Treat as if COVID 19 + ve
  - Full PPE
- Non AGP Asymptomatic with no definite/suspected Triage risk factors
  - Treat as per standard practice

**Elective Urgent (>48hr window)**

- AGP
  - Asymptomatic patients should be operated on with Full PPE
- Non AGP Symptomatic or has definite/suspected Triage risk factors
  - Cancel Surgery until either - fully recovered (2 weeks asymptomatic)
  - OR -2 x negative swab tests, 24hrs apart
- Non AGP Asymptomatic with no definite/suspected Triage risk factors
  - Treat as per standard practice

COVID-19 testing may aid decision making on the timing of elective surgery with a high aerosol generation potential in order to protect patients and staff.

Have high degree of suspicion of COVID positive status based on Triage risk factors.

**References**

Links to papers below demonstrate the variability in current evidence and therefore the limitations in PCR testing, noting the current prolonged turnaround in PCR, and noting that all these studies occurred in symptomatic patients who would be tested anyway under current guidance.

These papers demonstrate the challenges in guidelines development.

<https://pubs.rsna.org/doi/full/10.1148/radiol.2020200642>

This paper indicates a lower sensitivity of PCR early in hospitalised patients

[https://www.thelancet.com/pdfs/journals/laninf/PIIS1473-3099\(20\)30113-4.pdf](https://www.thelancet.com/pdfs/journals/laninf/PIIS1473-3099(20)30113-4.pdf)

This paper shows a negative throat swab pcr and positive sputum pcr in single pt.

<https://www.nejm.org/doi/full/10.1056/NEJMc2001737>

This paper shows higher viral loads early in disease

<https://www.cmaj.ca/content/175/3/249.short>

This paper shows the problems with PAPR vs n95 and vice versa

Please note – the reference in the last paper to PAPR providing ‘superior protection’ should be seen in light of the experimental conditions of the study and not as a blanket statement.

Also note the mortality risk of SARS-1 is far higher than SARS-2 for Health Care Workers (less than 65 without comorbidities).

## **Disclaimer**

The Australian Society of Otolaryngology Head and Neck Surgery has developed this information as guidance for its members. This is based on information available at the time of writing and the Society recognises that the situation is evolving rapidly, so recommendations may change. The guidance included in this document does not replace regular standards of care, nor do they replace the application of clinical judgement to each individual presentation, nor variations due to jurisdiction or facility type.

The Australian Society of Otolaryngology Head and Neck Surgery Limited is not liable for the accuracy or completeness of the information in this document. The information in this document cannot replace professional advice.