BAPRAS
British Association of Plastic Reconstructive and Aesthetic Surgeons

BAPRAS Guideline Interpretation - Reducing COVID-19 Transmission Risk and PPE Guidance for Plastic Surgeons

The aim of this advice is to provide a practical guide for plastic surgeons to apply the content/principles of the NHS & independent sector PPE guidance[1] (Public Health Executive (PHE), Health Protection Scotland (HPS), Public Health Wales (PHW), HSC Public Health Agency), which BAPRAS broadly supports. This may be used in conjunction with local guidance.

Hand hygiene, avoiding hand-to-facial contact, maintaining >2m professional distancing, avoiding virus transfer on pens, paper records, phones, and equipment remain critical.

PPE Guidance for Plastic Surgeons

Current PHE/HPS/PHW/HSC guidelines should be referred to as a basis for decision-making in PPE use. Covid-19 testing is not yet widely available or rapid enough for definitive risk stratification in acute care, therefore safety measures cannot be based solely around positive/negative test results. As community incidence rises local policies should define whether or not to manage all patients as if Covid-19 positive. The statements below are intended to provide further guidance to Plastic surgeons and employers on the application of the current PHE guidelines in specific commonly encountered clinical scenarios:

1) Surgery: Risk should be managed by process measures to risk stratify for active Covid-19 infection in patients[3], to minimise case numbers, reduce theatre staffing to a safe minimum, and maximize theatre efficiency by selecting the most appropriate available operator. Group activities together to minimise PPE use. Training cases are not appropriate in high risk circumstances. Strict zoning and donning/doffing protocols must be adhered to.

A) General Anaesthetic procedures

- Surgical staff should leave the environment during intubation/extubation, and not return for >20 minutes.
- As per PHE guidance, theatre suites are areas of aerosol generating procedures (AGPs) hence use of higher risk PPE[2] is advised if unfiltered airflow is possible. Individual theatres become a low risk environment after a patient has had a cuffed endotracheal tube in place for a minimum 2 air exchanges (20 minutes) and all surfaces cleansed, unless further AGPs occur during surgery.
- In certain surgical scenarios higher risk PPE[2] can make specific techniques more challenging (e.g. microsurgery). FFP3 masks are recognised as uncomfortable for prolonged cases. There is no optimum solution for this but respiratory protection should remain paramount, consider alternate respirators as per PHE PPE guidance Section 10.1. Prior to starting the procedure risk assess for temporary intraoperative removal of eye protection to facilitate microscope use.

B) Local Anaesthetic procedures

- If performed in a theatre within an area of undertaking AGPs, use of higher risk PPE[2] is advised
- For other clinical areas, surgeons should risk assess the case/session and use higher risk PPE[2] if AGPs are possible within the area or any cases are deemed by the surgeon to warrant such PPE
- Surgery above the clavicle places the operator at risk of high viral load, and specific consideration should be given to use of high risk PPE[2]. Visors are deemed essential.

C) Plastic Surgery specific devices: in the absence of firm safety evidence on aerosol generation, use of powered tools (including high speed drills, dermatomes, and high-pressure irrigation/debridement devices) should be avoided, if clinically safe.

2) Other clinical encounters: Current PHE advice should be followed. Surgical masks and gloves should be worn as a minimum. Surgeons should, however, risk assess every case/session and use higher risk PPE if AGPs are possible within the area, or any clinical episodes are deemed by the surgeon to warrant such PPE (e.g. examination of the head & neck area).

Where suggested PPE is unavailable, clinical judgement should be exercised by the surgeon as to whether it is safe to proceed. It is reasonable to delay treatment until appropriate PPE is available, when clinically safe.

Principles to Guide Plastic Surgeons in Judgements on PPE

PHE/HPS/PHW/HSC has provided extensive guidance on PPE. This recognises that not all clinical circumstances precisely fit guidance definitions. If this situation arises PHE encourages all healthcare professionals to make a professional judgement on the most appropriate level of PPE. It is helpful considering the following if Plastic Surgeons have to make these decisions.

1) Decide on the risk of viral exposure – likelihood clinical contact has COVID-19
2) Consider the proximity of exposure – is clinical activity to be carried out within 2 metres of the contact
3) Consider the duration of exposure – how long will the clinical activity take (increasing risk >15 minutes)
4) Consider the nature of exposure – the type of contact with an infectious agent, including the difference between examination of different body areas, and operative procedures that involve the aerodigestive tract (highest risk), or aerosol generation (higher risk) or other dispersal of other body fluids (lower risk). Will there be uncontrolled exposure to the clinical contact's exhalations/expectoration.

Methods of Transmission

PHE/HPS/PHW/HSC guidance is based on COVID-19 being transmitted via three major routes:

- Large droplets (>5µm diameter)– these settle rapidly on surfaces
- Manual inoculation/direct contact or contact with secretions
- Aerosols – small droplets (<5µm diameter) that remain airborne for protracted periods

The most likely route of COVID-10 infection is large droplets, or subsequent contact with them after they have settled onto surfaces. It is vital Plastic Surgeons consider this in all clinical encounters.
PHE assumes aerosol spread of COVID-19 is a problem in aerosol generating procedures (AGP), it is not determined if aerosol spread is significant in other circumstances. PHE has adopted a precautionary approach on aerosol spread in COVID-19 positive patients.

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Principles for reducing Risk of Transmission of COVID-19 in all Clinical Encounters

BAPRAS advocates PHE/HPS/PHW/HSC's approach that Plastic Surgeons act to minimise the risk of transmission of COVID-19 in all clinical encounters, using professional judgment to tailor their approach to each circumstance.

- **Contact precautions:** prevent transmission via direct contact or indirectly from the environment and equipment, the most common route of infection.
- **Droplet precautions:** prevent transmission over short distances via droplets from the respiratory tract of one individual onto a mucosal surface of another. A precautionary approach is recommended, and close contact has been defined as within 2 meters.
- **Airborne precautions:** to prevent transmission via aerosols from the respiratory tract of one individual directly onto a mucosal surface of another individual.

The following principles are outlined to guide Plastic Surgeons' decision-making around all clinical care episodes:

1) Where clinically appropriate, carry out clinical contact virtually to avoid any risk of transmission of COVID-19 to a patient from the healthcare environment (particularly for vulnerable groups identified by PHE[4]).
2) If a clinical contact needs to be undertaken, then as far as possible this should be carried out with 2m social distancing provided this does not compromise care.
3) In all clinical contact a focus on large droplet and contact spread should be maintained:
    a) Plastic surgeons are encouraged to adhere to the WHO 5 points of hand hygiene:
        i) before touching a patient
        ii) before clean/aseptic procedures
        iii) after body fluid exposure/risk
        iv) after touching a patient
        v) after touching patient surroundings
    b) Plastic Surgeons should avoid touching their own face when at work.
    c) Before and after clinical encounters, particularly in the clinic setting, all touch surfaces should be wiped with an appropriate antiviral solution (especially desks, taps, keyboards, phones, pens, door handles).
4) If clinical care dictates that a Plastic Surgeon delivers care with the 2m of a patient, then ensure care is delivered in as efficient a manner as possible and PPE use is appropriate.
5) FFP-3 masks should be changed after 8 hours, and may require a fluid resistant surgical mask worn over them.

[1]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/877728/T1_Recommended_PPE_for_healthcare_workers_by_secondary_care_clinical_context_poster.pdf
[2] 'Higher risk PPE' in this guidance is disposable gloves, apron, fluid resistant gown, viral filtering facepiece respirator and eye/face protection as per PHE guidance (published 05/04/20).
[3] https://hpspubsrepo.blob.core.windows.net/hps-website/nss/2936/documents/1_covid-19-guidance-for-secondary-care.pdf
[4] https://www.gov.uk/government/publications/covid-19-guidance-on-social-distancing-and-for-vulnerable-people/guidance-on-social-distancing-for-everyone-in-the-uk-and-protecting-older-people-and-vulnerable-adults