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6. COVID-19 infection prevention and control guidance: aerosol generating procedures

Updated 15 April 2021

This publication is available at https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control/covid-19-infection-prevention-and-control-guidance-aerosol-generating-procedures

An aerosol generating procedure (AGP) is a medical procedure that can result in the release of airborne particles (aerosols) from the respiratory tract when treating someone who is suspected or known to be suffering from an infectious agent transmitted wholly or partly by the airborne or droplet route.

This is the list of medical procedures for COVID-19 that have been reported to be aerosol generating and are associated with an increased risk of respiratory transmission:

- tracheal intubation and extubation
- manual ventilation
- tracheotomy or tracheostomy procedures (insertion or removal)
- bronchoscopy
- dental procedures (using high speed devices, for example ultrasonic scalers/high speed drills
- non-invasive ventilation (NIV); Bi-level Positive Airway Pressure Ventilation (BiPAP) and Continuous Positive Airway Pressure Ventilation (CPAP)
- high flow nasal oxygen (HFNO)
- high frequency oscillatory ventilation (HFOV)
- induction of sputum using nebulised saline
- respiratory tract suctioning*
- upper ENT airway procedures that involve respiratory suctioning*
- upper gastro-intestinal endoscopy where open suction of the upper respiratory tract occurs*
- high speed cutting in surgery/post-mortem procedures if respiratory tract/paranasal sinuses involved

*The available evidence relating to Respiratory Tract Suctioning is associated with ventilation. In line with a precautionary approach, open suctioning of the respiratory tract regardless of association with ventilation has been incorporated into the current (COVID-19) AGP list. It is the consensus view of the UK IPC cell that only open suctioning beyond the oro-pharynx is currently considered an AGP i.e. oral/pharyngeal suctioning is not an AGP. The evidence on respiratory tract suctioning is currently being reviewed by the AGP Panel which is an independent panel set up by the four CMO's to review new or further evidence for consideration.

NB. Certain other procedures or equipment may generate an aerosol from material other than patient secretions but are not considered to represent a significant infectious risk for COVID-19. Procedures in this category include administration of humidified oxygen, administration of Entonox or medication via nebulisation.

The New and Emerging Respiratory Viral Threat Assessment Group (NERVTAG) advised that during nebulisation, the aerosol derives from a non-patient source (the fluid in the nebuliser chamber) and does not carry patient-derived viral particles. If a particle in the aerosol coalesces with a contaminated mucous membrane, it will cease to be airborne and therefore will not be part of an aerosol. Staff should use appropriate hand hygiene when helping patients to remove nebulisers and oxygen masks. In addition, the current expert consensus from NERVTAG (https://www.swast.nhs.uk/assets/1/cpr_as_an_agp_-_evidence_review_and_nervtag_consensus.pdf#:~:text=NERVTAG%20consensus%20statement%20on%20Cardiopulmonary%20Resuscitation%20%28CPR%29%20as,increased%20risk%20of%20transmission%20of%20acute%20respiratory%20infections) is that chest compressions are not considered to be procedures that pose a higher risk for respiratory infections including COVID-19.

Further information on AGPs for neonates (https://hubble-live-assets.s3.amazonaws.com/bapm/redactor2_assets/files/729/COVID__FAQ_19.10.20.docx.pdf) and a literature review for AGPs during COVID-19 (https://hps.scot.nhs.uk/web-resources-container/sbar-assessing-the-evidence-base-for-medical-procedures-which-create-a-higher-risk-of-respiratory-infection-transmission-from-patient-to-healthcare-worker/) are available.

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