SOP for NIV in COVID-19 Pandemic

This SOP should be used in conjunction with the management of respiratory failure in COVID guideline https://www.bsuh.nhs.uk/library/wp-content/uploads/sites/8/2020/03/Covid61.1_BSUH-NIV-pathway-V6.1.pdf and the NIV standard protocol/indications https://viewer.microguide.global/BSUH/ANAESTHESIA#content,d9f9299a-c3ba-4e5e-93b8-8531e279065c

This is based upon BTS guidance specific to NIV in COVID issued in March 2020 https://www.brit-thoracic.org.uk/media/455095/advice-on-acute-niv-technical-aspects-final-16-march-2020.pdf as this is a known aerosol generating procedure (AGP) and as such requires full PPE (personal protective equipment) at all times NIV is in use and for at least 60 minutes after its use with full door closure; visors, fluid-repellent gowns, gloves, FFP3 and appropriate infection control measures for the room as for other AGP. Infection control measures when the room is vacated include a deep clean, and as per the BTS guidance, twice daily cleaning whilst the room is in use.

This SOP refers to all patients either requiring NIV acutely or who are long-term users as the red/green pathways will be the same for acute and long-term NIV users. It should be noted that a red long-term/home NIV user, whilst needing discussion with critical care might well be able to be managed outside critical care as they might be independent with their machine, but this would require a case-by-case decision.

Green Pathway

As supplementary information to the current NIV pathway, all patients requiring NIV who are suspected green need a rapid COVID swab to confirm green status and discussion with respiratory consultant 8am-5pm (critical care consultant out of hours). If a rapid COVID swab is not available the patient will need rapid chest imaging to confirm green status as well as routine COVID swab sent for processing. NIV can be started once green status confirmed by rapid swab OR chest imaging. Green patients will have NIV delivered in green ARU side room (Catherine James/Egremont or Overton). Green patient might go to Courtyard side room as a respiratory outlier with competent nursing support if no respiratory beds available) at RSCH, but this is likely to pose difficulties with nursing support. Transfer of patient to appropriate area will be after PTWR consultant review by AMU consultant (8am-8pm), with initial assessment in green ED and transfer to either AMU side room or green side room in ARU. No patients should leave level 5 without PTWR/consultant review.

If there are no green side rooms available need to consider closing Catherine James so that only green NIV patients in the open bay are cared for. Currently at PRH, NIV is delivered in side rooms on Pyecombe (currently, the Red ward at PRH, with a plan to change to Green within the next few weeks, once other ward moves have occurred – this is predicated on Hurstpierpoint ward re-opening following the fire on this ward). NIV will continue to be delivered in the Pyecombe side rooms irrespective of whether the ward is 'Green' or 'Red' , with the appropriate staff and PPE usage. The same rules regarding level 5 and PTWR/consultant review do not apply at PRH, as patients need to move out of PRH ED where possible and RAMU is only operational 0800-2000, although prompt review by consultant at the appropriate time remains the aim.

There remains the BTS recommendation of 1 nurse per 2 NIV patients, in the setting of a side room that nursing to patient ratio needs to be 1:1 whilst the patient is on NIV (this might be overnight only).

Red Pathway

All red patients with hypercapnic respiratory failure need to be discussed with critical care if they are for escalation, but NIV is not likely to be an appropriate ventilation modality. NIV delivered on critical care will follow the current critical care nursing:patient ratio.

Changes to Home NIV users

As per BTS guidance (March 2020) all inpatients requiring NIV should be using a non-vented mask and no humidification (this might require modification of home NIV machines/provision of a new interface for patients in hospital with their own home NIV). https://www.brit-thoracic.org.uk/media/455095/advice-on-acute-niv-technical-aspects-final-16-march-2020.pdf. On discharge home NIV users can restart their humidification, use their own interface and return to usual interface application/ventilation initiation.

All NIV in Inpatients

In addition for all NIV delivered in hospital, all patients should have mask on→ventilation on→ventilation off→ mask off

THIS IS DIFFERENT TO USUAL MANAGEMENT.