Interim Arrangement for Acute Respiratory Unit –UHND

Purpose

This paper sets out the requirements to ensure safe and effective management of respiratory patients at UHND as an interim arrangement until a new dedicated acute respiratory unit is re provided.

Background.

During COVID the old coronary care unit of 8 side rooms was re-commissioned to enable us to operate an Acute Respiratory Unit (previously Paediatric Assessment Area). However, with the decline in COVID -19 admissions, the unit has been returned to PAA. This facility offered individual isolation areas for patients with confirmed or suspected COVID and associated respiratory symptoms who may need non-invasive ventilation (NIV) treatment such as CPAP/BiPAP which is classed as an aerosol generated procedure (AGP).

Non-invasive ventilation (for the purposes of this document, BiPAP, CPAP and HFNO) is the delivery of ventilatory support via a patients' upper airway using a face mask, nasal mask or hood, without intubation of the trachea. BiPAP is the 'gold standard' treatment for acute hypercapnic respiratory failure in people with COPD; its use is associated with significant reduction in mortality. There is evidence that use of CPAP (rather than invasive ventilation) is associated with reduced mortality in patients with COVID.
NIV should only be initiated by appropriately trained medical staff. Patient care should be delivered by appropriately trained nursing / therapy staff in order to maintain patient safety. NIV should only be undertaken within designated areas: these include A&E, HDU and Acute Respiratory Units.

Pre-COVID the NIV patients were managed in cohorted bays within the respiratory wards/ARU to a capacity of 8 acute NIV beds. However, post-COVID, as the procedure is classed as AGP, all patients irrespective of COVID status are required to be nursed in single cubicles in accordance with ICP guidance. There are only 4 cubicles within the respiratory ward.

Patients requiring in-hospital NIV fall into two broad cohorts:

1.) Those requiring NIV for acute respiratory / ventilatory failure

2.) Those requiring 'long term' BiPAP or CPAP – for example patients with obstructive sleep apnoea. These patients are often proficient in managing their own machine. They usually do not require respiratory nursing support, and can be cared for on a non-respiratory base ward.

The standard operating process for CDDFT when demand exceeded capacity of 8 acute NIV was to utilise critical care areas to maintain BTS standards and a full escalation plan was in place, however this SOP was pre-COVID .

There has been Gold agreement to re-provide an ARU environment co-located with the respiratory ward at UHND on Ward 12. This will need to have the same options for isolation and ventilation (externally vented cubicles). It has been agreed that x 2 - 4 bedded bays will

be converted to make separate ensuite cubicles, which with the existing cubicles will maintain a compliment of 9 ARU beds. However, until this is completed the number of cubicles within the designated ward areas is limited to 4 cubicles within the respiratory ward, Ward 6, which will not be sufficient to meet demand. Therefore, alternative escalation options need to be considered by CDDFT.

As PAA are moving back into the old coronary care unit, this leaves the management of NIV as set out within the SOP for when demand exceeds capacity. Agreement is being sought for the steps below.

Escalation Stages to be considered (to be worked up into SOP once agreed)

General Principles

In order to achieve best practice all respiratory patients should be cared for within the respiratory ward where practicable.

The 4 cubicles on the respiratory ward should be ring-fenced for patients requiring Acute NIV.

All Acute NIV /HFNO must be initiated by medical staff and nursed in a cubicle by appropriately trained respiratory nurses.

If cubicles are reaching full capacity following risk assessment, should be given to any patients occupying these cubicles who have home based NIV to be managed on other base wards in a cubicle following ICP guidance.

Patients who have home CPAP, but who have presented with a non-respiratory illness, should be cared for in a cubicle on a ward appropriate to their presenting diagnosis, *at least until they have a negative COVID swab.*

All COVID +ve patients must remain in a cubicle until asymptomatic as per IPC guidance

Escalation Protocol

If 3 cubicles on Ward 6 are in use, then a plan for the next acute NIV patients should be in place. The nurse in charge of Ward 6 should be aware of this plan.

At the daily Ward 6 board round, the Respiratory Consultant/ senior SpR should identify:

- patients requiring acute NIV who can be safely weaned more rapidly than standard NIV protocol
- patients in cubicles who could be managed in a bay, or on another medical ward, without compromise to their care
- patients who would be suitable for escalation to Intensive Care (i.e. for invasive ventilation / alternative modalities of NIV)

- clinical risk of COVID in patients requiring NIV, taking into account clinical course, imaging and COVID PCR / serology.

On weekends, this will be reviewed by the Consultant Physician covering Ward 6.

If 4 Cubicles on Ward 6 are in use:

1.) If one or more patients on NIV **are** suitable for ITU escalation, the Consultant in charge should discuss with the ITU Consultant regarding transfer of a patient to an ITU bed in the event that an additional NIV cubicle is required. If the new admission is a patient suitable for ITU escalation then their NIV should be delivered on ITU.

    This may not be possible if ITU is at or near capacity. NIV patients may need to be transferred back to the Respiratory Ward if Level 3 beds are required urgently.

2.) If there is no patient appropriate for ITU transfer OR no ITU bed is available then a discussion must be held with IPCT and Medical Director/Exec Director of Nursing regarding the cohorting of patients requiring AGP.

    As an interim measure, a single patient requiring NIV could be nursed in a four bedded bay.

    Patients who a) clinically do not have COVID b) have not had COVID contacts c) have remained in a cubicle since admission and d) have had two negative COVID PCR swabs 48 hours apart can be cohorted in a four bedded bay with other patients requiring AGPs who are judged to be clinically at low risk of COVID.

If all cubicles used at DMH within 8 bedded ARU and side wards then consideration needs to be given to the above escalation plan

Original sop below to be amended once agreed as above

SOP - Management of Patients requiring