High Flow Nasal Oxygen Therapy in MHDU and Respiratory Ward (Raigmore)

Before admitting patients to MHDU or commencing HFNO discuss the patient with the appropriate on call Consultant to ensure appropriate support modality is used and to consider whether they should be escalated straight to ICU

Consider NHSH Oxygen and Flowchart Covid-19 guidance

https://tam.nhsh.scot/home/covid-19-coronavirus/hospital-covid-19-community-rgh-raigmore/oxygen-flowcharts-covid-19/

High Risk (Red)

- Covid-19 patients who require HFNO with confirmed status, or where a Consultant has a high index of suspicion for Covid-19
  AND
- are not appropriate for direct escalation to ICU

Location: Red MHDU. Single room mandatory if negative swab but high index of suspicion. Swab positive may have HFNO2 in cohort bay if single room not available (All staff must wear FFP3 within cohort bay)

Full AGP-PPE must be used

Medium Risk (Amber)

- Un-triaged patient with unknown symptoms (such as a person unable to give a history)
- Symptomatic or suspected Covid-19 awaiting test results
- Asymptomatic patient who has declined testing

Location: single room in Green MHDU with expectation that a rapid eplex Covid-19 swab will be available at the point of admission to MHDU

Positive Covid-19 or no result available

Negative result plus low suspicion, documented by Consultant

FRSM, gloves and apron

Low Risk (Green)

- Triaged and clinically assessed patient with no symptoms or known contact with Covid-19
  AND
- 2 x Negative Covid-19 test results

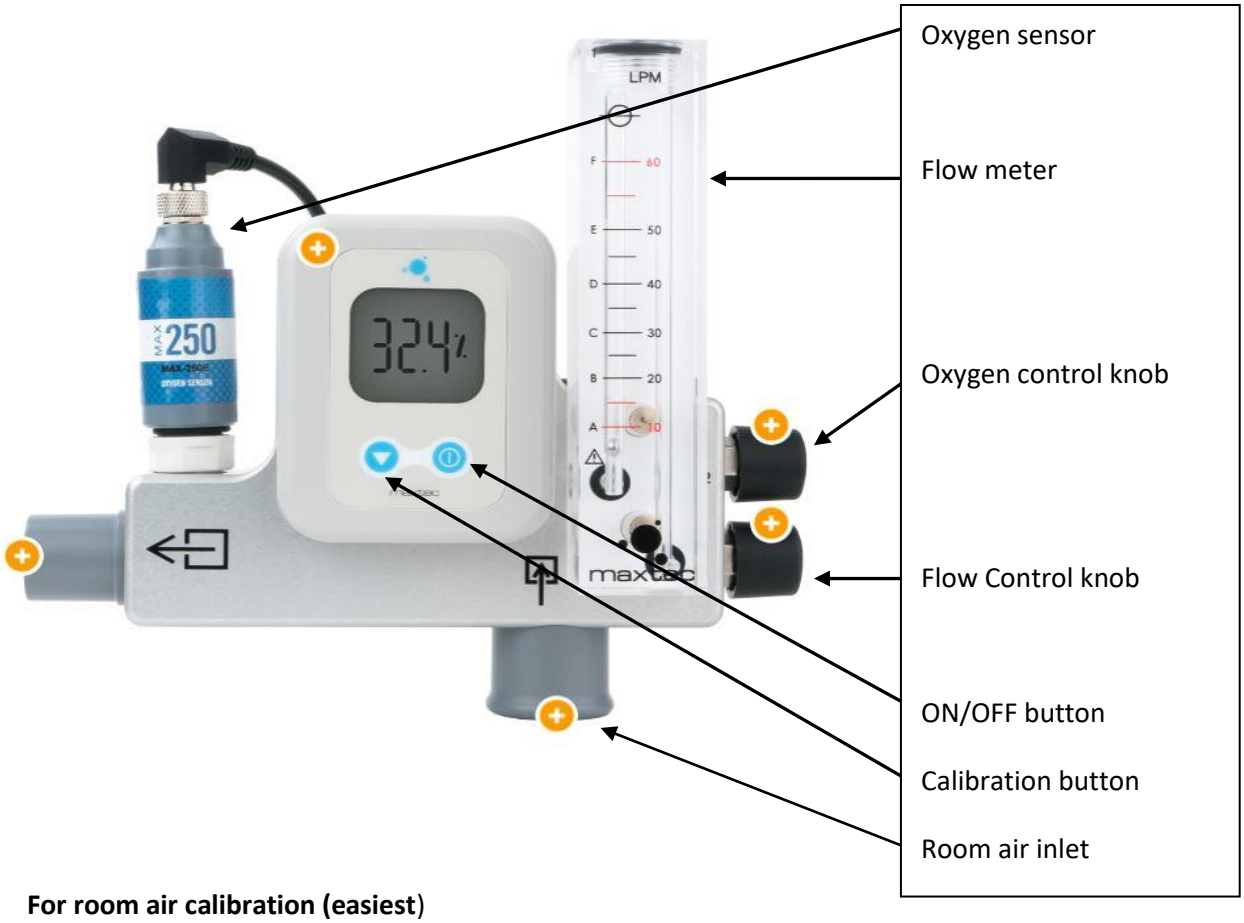
Location - single room in Green MHDU or Ward 7a. Priority should be given to a side room. If none available discuss with Consultant, microbiology, IPCT and bed flow team

Patients receiving ongoing AGP require Covid-19 test every 48 hours to remain on low risk pathway

Review progress and Covid-19 status. Patient may move between pathways following clinical assessment, availability of PCR results and development of any new symptoms.

Remain vigilant to signs of worsening respiratory failure (increasing respiratory rate, work of breathing and failure to improve oxygenation)

MaxVenturi Calibration



For room air calibration (easiest)

1. Pull sensor and diverter out of the device and hang the sensor cord over the device allowing the sensor to hang in room air. Ensure that the sensor is generally in an upright position. Wait for 2 minutes to allow the sensor to equilibrate in air.
2. Press and hold the Cal button (for approx. 3 seconds) until you read the word CAL on the analyzer display. The analyzer will now look for a stable sensor signal and a good reading. When obtained, the analyzer will display the reading. Once calibration is complete return the oxygen sensor to its port.

For 100% oxygen calibration (most accurate)

1. Connect the device to the hospital oxygen supply system. Plug the “Room air inlet” using a standard 22 mm conical plug. Turn the ON/OFF valve to the ON position and turn the lower valve (labeled “Flow”) counter clockwise a couple turns to allow oxygen to flow through the device. Wait for 2 minutes for the oxygen sensor to equilibrate.
2. Press the Cal button until you read the word CAL on the analyzer display. This takes approximately 3 seconds. The analyzer will now look for a stable sensor signal and a good reading. When obtained, the analyzer will display the calibration gas concentration on the LCD.

Initiating HFNO using MaxVenturi System

Switch device on using ON/OFF button below LCD

Perform equipment calibration prior to new patient set-up (page 2)

Assemble equipment as shown on page 4. Ensure humidifier is switched on and set to 'tube' and not mask

Note: poor patient tolerance may result from applying cold gas flow before the humidifier has reached optimum temperature

Connect to oxygen supply and turn ON/OFF valve to ON position

Continuous pulse oximetry monitoring in place

Start flow at *50L/min using the lower flow control knob as shown in diagram 1 (turning anti clockwise)

*Note: some patients may struggle at 50L/min; consider reducing flow to 30L/min and increase every 5 minutes as tolerated

Increase oxygen flow using the oxygen control knob. Start at 40%, recording the FiO2 from the LCD and titrate to meet target saturations 94-98%.

Deterioration or no improvement

Improvement

At FiO2 40% or less, consider switching to low flow nasal cannula or standard oxygen mask.

Maintain target saturations 94 – 98%

Patients may change between oxygen delivery systems

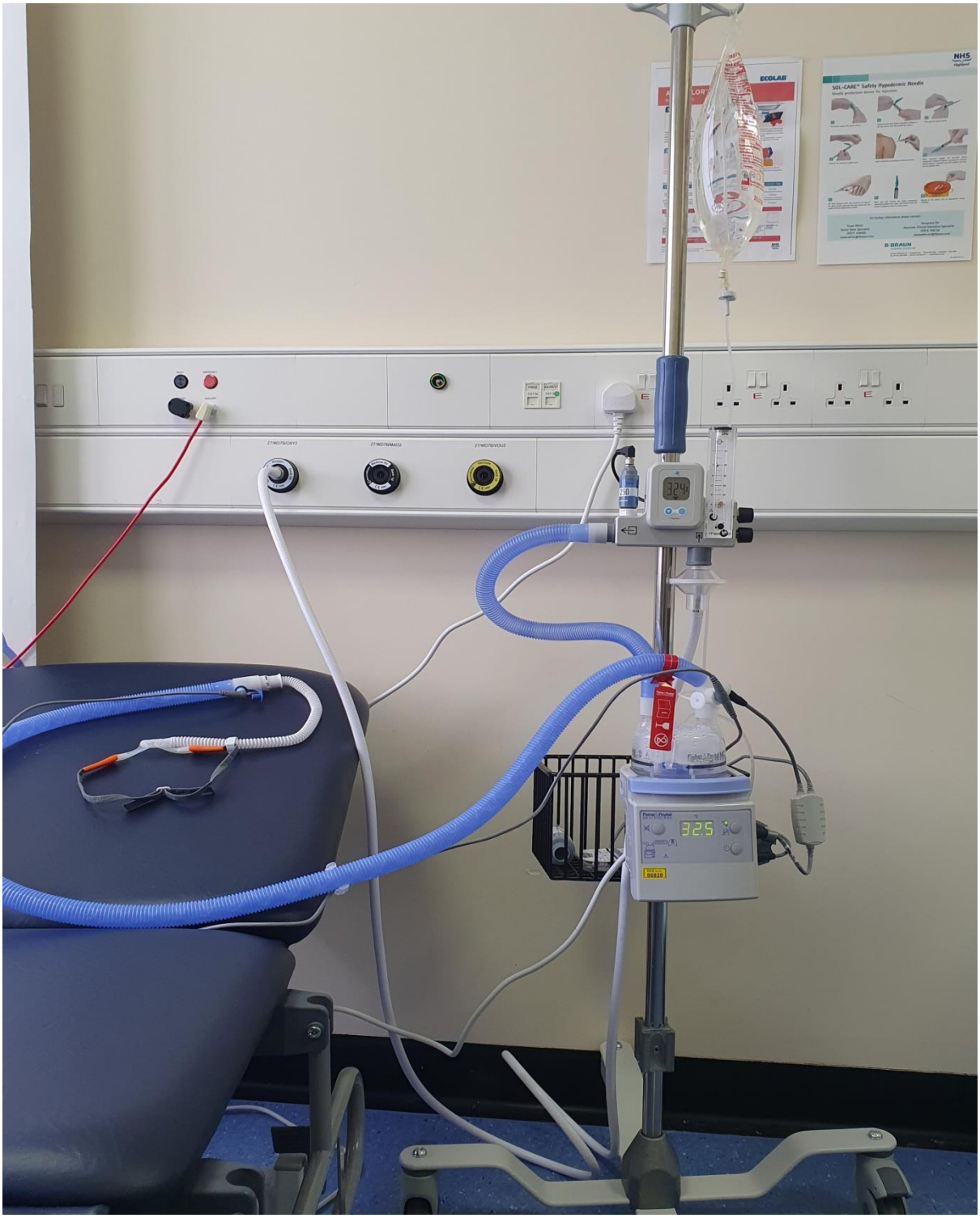
Escalation criteria

Failure to improve or meet target saturations after 1 hour on FiO2 40%

- Increasing resp. rate despite flow 50L/min
- Failure to improve oxygenation on FiO2 40%
- Rapidly increasing FiO2

Senior Medical review

If patient is deteriorating with FiO2 > 40%, sPO2 < 94% and is for care escalation, discuss with ICU (3030)



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