

Educational package for ICU clinical staff

What is changing?

From 15th May 2017, all patients on Salford Critical Care Unit will all have a prescribed target oxygen saturation range. For most patients, this will be 94-98%. For patients at risk of hypercapnia, the target range will be 88-92% and some patients such as those with ARDS/Acute Lung Injury will have a patient-specific target range. This will extend the existing Trust Oxygen Policy for oxygen prescription to the Critical Care Unit which was not covered by this Trust Policy in the past.

Why are things changing?

It has been known for many years that hypoxaemia (the presence of a very low blood oxygen level) is dangerous and is associated with adverse outcomes including increased mortality. For this reason, many clinicians “erred on the side of caution” and delivered high levels of oxygen to ill patients, especially on Critical Care Units.

However, several recent studies have identified increased mortality associated with high blood oxygen levels amongst Critical Care patients and the emerging consensus is that clinicians should aim for a normal or near-normal blood oxygen level for most CCU patients and customised blood oxygen levels for specific groups of patients such as those at risk of hypercapnia or those with ARDS/ALI. Salford Royal already has a policy of targeted blood oxygen prescribing for all patients on general units and this policy will be extended to the Critical Care Unit from Monday 15th May 2017.

What should prescribers do differently?

- If you are a prescriber, you should ensure that all of your patients have a prescribed oxygen target saturation range using the Trust electronic prescribing system. The following target ranges are easily prescribed within Salford Royal EPR.
- The target range is 94-98% for most patients, whether ventilated or not.
- The target range is 88-92% for patients at risk of hypercapnia or those with a history of hypercapnia such as patients with severe COPD or morbid obesity or significant musculoskeletal or neuro-muscular problems (see Trust Oxygen Policy).

- Other patients such as those with ARDS/ALI may have a patient-specific target range determined by the senior clinician caring for the patient.

What should bedside staff do differently?

- Oxygen saturation should be monitored continuously or intermittently based on the circumstances of the individual patient.
- Please check the prescribed target saturation range in EPR on a regular basis and ensure that the target range displayed on the bedside documents is the same as that on the EPR oxygen prescription.
- Bedside staff should make every effort to ensure that patients remain within the prescribed target range for as much of the day as possible, whilst recognising that the oxygen saturation will inevitably fluctuate over the course of the day and may rise slightly above the target range or fall slightly below the target range at times.
- A sudden dramatic fall in saturation may be due to an emergency such as a collapsed lung and requires urgent medical evaluation (and also check for technical artefacts such as a faulty or disconnected probe).
- However, a gradual rise or fall outside of the target range which lasts for more than five minutes should prompt gradual adjustment to either FiO₂ or oxygen flow or ventilator settings to ease that patient back inside their target saturation range.
- If the target saturation range can be achieved breathing air, the patient may remain off supplemental oxygen unless the saturation should fall below the target range at a future time.

What else will happen?

You may be asked to complete an anonymous questionnaire regarding oxygen use in Critical Care Units on a few occasions in the coming months. Completion of this questionnaire is entirely voluntary. You may have been asked to complete it prior to the introduction of the new policy and you may be asked again at a later date to see if your view have changed after you have had personal experience of the new policy.

The implementation team would also appreciate any feedback that you can provide regarding the new system. If you wish to know more about this quality improvement study, or if you would like to see the full protocol including literature survey, please ask any member of the project team.