

# Improving oxygen prescribing on the Kardex in ward-level care

**Authors:** Vindhya Samharini Maniarasu,<sup>A</sup> Hushil Singh Sandhu<sup>A</sup> and Gayathri Gunasekaran<sup>A</sup>

## Introduction

Oxygen is considered a type of drug and is one of the most common drugs prescribed in the hospital for treatment of hypoxaemia. As such, it should be prescribed on the Kardex like any other medication. According to the British Thoracic Society (BTS) oxygen use guidelines, unwell patients who are not at risk of hypercapnic respiratory failure should be getting a target saturation range of 94%–98%, whereas those at risk of hypercapnic respiratory failure (ie COPD, morbid obesity, advanced cystic fibrosis, chest wall deformities, neuromuscular disorders, severe bronchiectasis or overdose of opioids/benzodiazepines) should have a target saturation range of 88%–92%, while waiting for the blood gas results.

The administration of inappropriate oxygen concentration can have fatal consequences such as prolonged hypoxaemia or hyperoxia. It is therefore good practice to prescribe oxygen on the Kardex and specify the target range as well as whether patient is at risk of hypercapnic respiratory failure for all inpatients in the wards. This should ideally be done at time of admission even if the patient does not require supplemental oxygen at that time. This is to allow appropriate oxygen therapy to be started promptly and safely if the patient deteriorates with hypoxaemia. It also provides nurses with a clinically safe reason to adjust the oxygen flow to meet the target saturation and document the NEWS score appropriately. The aim of the QIP was to raise awareness about the importance of oxygen prescription among healthcare staff and improve the oxygen prescription rate on the Kardex by 50% in 3 weeks at both surgical and medical wards.

## Method

Data was collected from 25 patients from surgical and medical wards once weekly. Three plan, do, study, act (PDSA) interventions were undertaken. Source of information were the Kardex, NEWS observation chart, direct observation of oxygen delivery at patient's bedside and ward round documentation. The reason both surgical and medical wards were selected was to showcase just how prevalent the use of oxygen is in the hospital regardless of the underlying diagnosis.

## Results

In PDSA 1, only 8% of the patients had oxygen prescribed. The first intervention was to educate the doctors and nurses at the wards on the importance of oxygen prescription and the harmful effects of inaccurate target oxygen saturations. Following this, oxygen prescription increased to 45% in PDSA 2. In the second intervention, visual prompts were displayed in the wards. The oxygen prescription rate in PDSA 3 reached 53%.

## Conclusion

We achieved the goal of this QI project through three PDSA cycles, which was to improve oxygen prescription by 50%. However, there is still room for improvement to sustain this good clinical practice. ■

## References

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**Author:** <sup>A</sup>Altnagelvin Hospital, Londonderry, UK