“Why do we remain so blasé about administering oxygen?”

Oxygen is one of the most commonly administered drugs in acute care, often at high doses. However, given inappropriately, it can have adverse effects and, in susceptible patients, its injudicious use causes harm—even death.

The 2008 British Thoracic Society guidelines recommended prescribing oxygen by target saturation range (94-98% for patients most acutely ill and 88-92% for those at risk of hypercapnic respiratory failure). Previous attempts at oxygen prescription often failed as any adjustment required a doctor to rewrite the prescription. The 2008 guidelines represented a cultural shift—registered nurses could monitor saturations and titrate oxygen to maintain them within the prescribed target range.

Later national audits have shown some improvements in oxygen management: in 2008, 32% of patients on oxygen had a prescribed target range, but in 2013, this had risen to 55%. This means almost half have no written prescription—I doubt nurses would willingly administer any other drug so consistently without one. Six years after the guideline was published, overall patient outcomes have improved little.

The aim of oxygen therapy is to achieve safe, appropriate correction of hypoxaemia but the 2013 audit results showed that, although observations were undertaken regularly, less than two-thirds of patients achieved their target range, and saturations outside this were not acted on.

Nurses are used to managing patients who are clinically unstable and respond to abnormal clinical signs. A hypoglycaemic episode will be treated and blood sugar checked to ensure it has worked. Patients on antihypertensives have their blood pressure monitored regularly. Why is the management of oxygen different?

Perhaps it is because no other drug requires nurses to adjust the “dose” independently—in this case altering the percentage or l/min of inspired oxygen. There remains a lack of confidence in changing treatment without direct medical advice, perhaps combined with a lack of concern, on the part of both nursing and medical staff, of the potential risks of giving patients too little or too much oxygen.

The consequences of poor oxygen management are all too clear in respiratory medicine; over-oxygenation of patients with chronic hypercapnic respiratory failure can precipitate an acute acidosis requiring treatment with non-invasive ventilation and a prolonged hospital stay. But it is not just these known vulnerable patients who should be managed correctly. It is unacceptable to leave hypoxia uncorrected; evidence shows excessive oxygen is not beneficial and may harm those with non-hypoxaemic myocardial infarction or stroke.

Oxygen treats hypoxaemia. It does not treat breathlessness in the presence of normal saturations. Prescribing a target saturation range provides guidance as to what is “normal” and acceptable for each patient. Nurses must take a lead in ensuring patients receive safe and effective treatment within that prescription. NT

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