# Improving oxygen prescription compliance on acute medical wards at the Royal Shrewsbury Hospital

Theme | Quality Improvement Project

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## REASON WHY?

Oxygen is regarded as a drug and must be prescribed with a documented target saturation range according to British Thoracic Society (2017) guidelines to ensure safe use, particularly for patients at risk of hypercapnic respiratory failure. Previous national audits have highlighted persistent gaps in compliance and have emphasised oxygen safety as a vital patient safety issue.

## SMART AIM

S SPECIFIC | M MEASUREABLE | A ACHIEVABLE | R RELEVANT | T TIME-BOUND

To increase the proportion of acute medical inpatients receiving oxygen who have a valid oxygen prescription (signed, dated, with an identifiable prescriber and target saturation range) from 10.8% to at least 20% within 4 weeks on the acute medical wards at RSH.

## PLAN

A baseline audit conducted on the Acute Medical Floor revealed significant non-compliance with oxygen prescribing standards, including:

- Only 10.8% of all inpatients had oxygen prescribed.
- 22 patients were receiving oxygen, but only 7 had a prescription.
- Target saturation ranges were documented in only 7/102 (6.8%) cases.
- Valid prescriptions 10/102
- Oxygen administration was never signed during drug rounds.

The plan was to increase staff awareness and prompt clinicians to prescribe oxygen with target saturations at the point of admission.

## DO

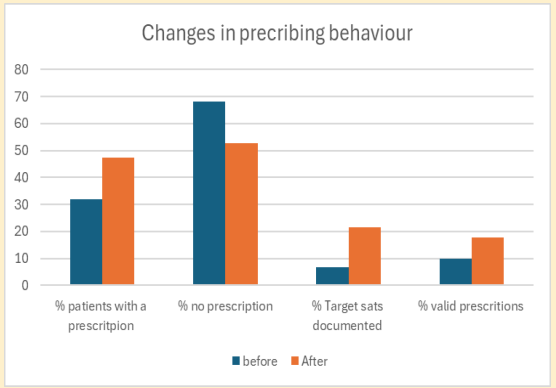
Weekly WhatsApp reminders were sent to resident doctors, emphasising oxygen prescribing and target saturations.

Posters were displayed in doctors' offices in AMA, AMU, SSW, and SDEC.


## STUDY

A second audit of 102 new patients was conducted 4 weeks after the interventions.

•(47.4%) had a prescription
•10/19 (52.9%) patients on oxygen had no prescription
•Target saturations were documented in 22/102 patients
•Valid prescriptions 18/102.




Although there is a modest improvement (a fall from 68% to 53%), a significant proportion of patients still lacked a prescription. This suggests that awareness-based interventions alone were insufficient to change behaviour.

The most meaningful improvement was seen in the quality of prescriptions written (valid prescriptions increased from 10 to 18), likely indicating better documentation when prescriptions were completed. However, overall prescribing consistency remained poor.

## ACT

The intervention produced limited change, indicating the need for a second PDSA cycle focused on solutions to prompt prescription completion rather than on reminders alone.

**What was learned –**

- **Behavioural reminders alone are insufficient to alter deeply ingrained prescribing habits.**
- Drug chart design can contribute to incomplete prescriptions.

**Next Steps**

- Re-designing the drug chart might take some extra time In the meantime, a short-term fix could be to add oxygen-prescribing prompt stickers to all drug charts and clerking forms.
- To consider incorporating oxygen prescription checks in huddles.
- Liaise with the nursing team to determine help available.
- Posters to be kept permanently.
- Re-audit 8 weeks after changes are implemented.

ACKNOWLEDGEMENTS & REFERENCES | Thank you to my medical colleagues on the acute medical floor.