Multimodal strategies for implementing behaviour change improves medication administration practices

Improving medication administration in an Emergency Department and Intensive Care Unit

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Background

Errors involving medication administration reportedly occur more commonly than any other step of the medication management cycle in Australian hospitals. They can lead to increased hospitalisation costs due to increased length of stay and can cause physical and psychological harm to patients.

Objective

To collaborate with nursing colleagues to improve medication administration practices and reduce audit identified medication administration errors.

Action (Methods)

Pharmacists collaborated with nursing staff to implement practice change surrounding medication administration using the JBI methodology for evidence implementation.

BASELINE

This involved an observer (nurse/pharmacist) measuring current practice against best practice using a validated and evidence-based medication administration evaluation and feedback audit.

INTERVENTIONS

Identified gaps were targeted with strategies to improve compliance to best practice. Targeted strategies were multimodal including education, improved access to resources with feedback and discussion sessions to encourage culture and behaviour change, focusing on independent second checking and patient engagement*. See Figure 1 and 2 for example education tools utilised.

FOLLOW UP

A follow-up observation audit was conducted after 6 months, to assess if strategies were successful leading to a reduction in medication administration errors.

***Patient engagement audit questions:** refer to audit criteria questions that reflect any engagement with patients at the point of medication administration, that could potentially reduce medication errors.

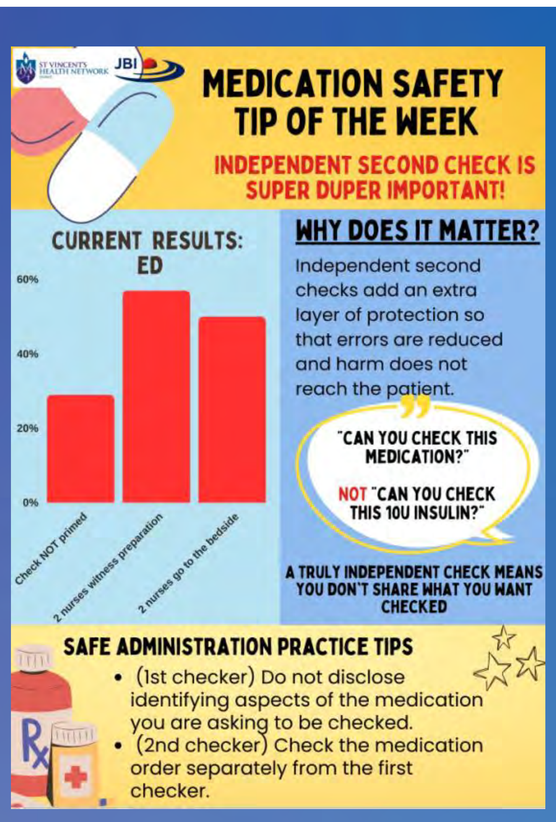

Figure 1: Medication Tip of the week educational poster for Independent Second Check in ED

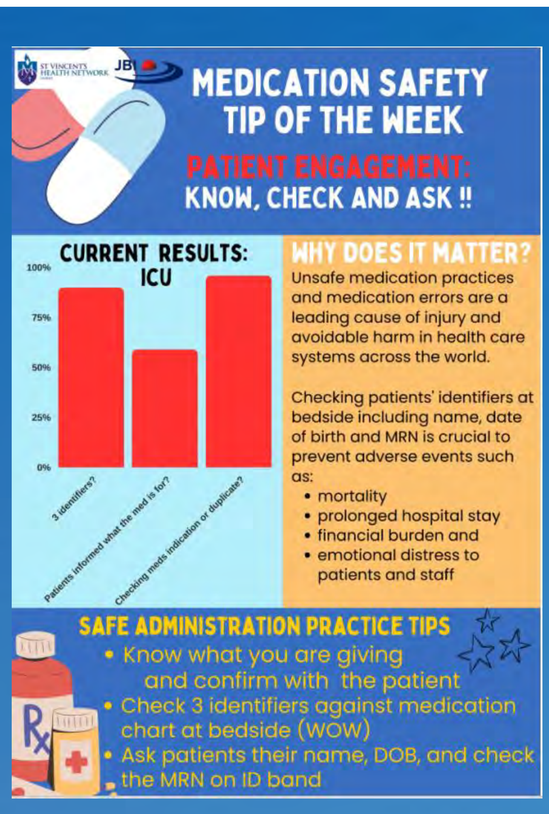

Figure 2: Medication Tip of the week educational poster for Patient Engagement in ICU

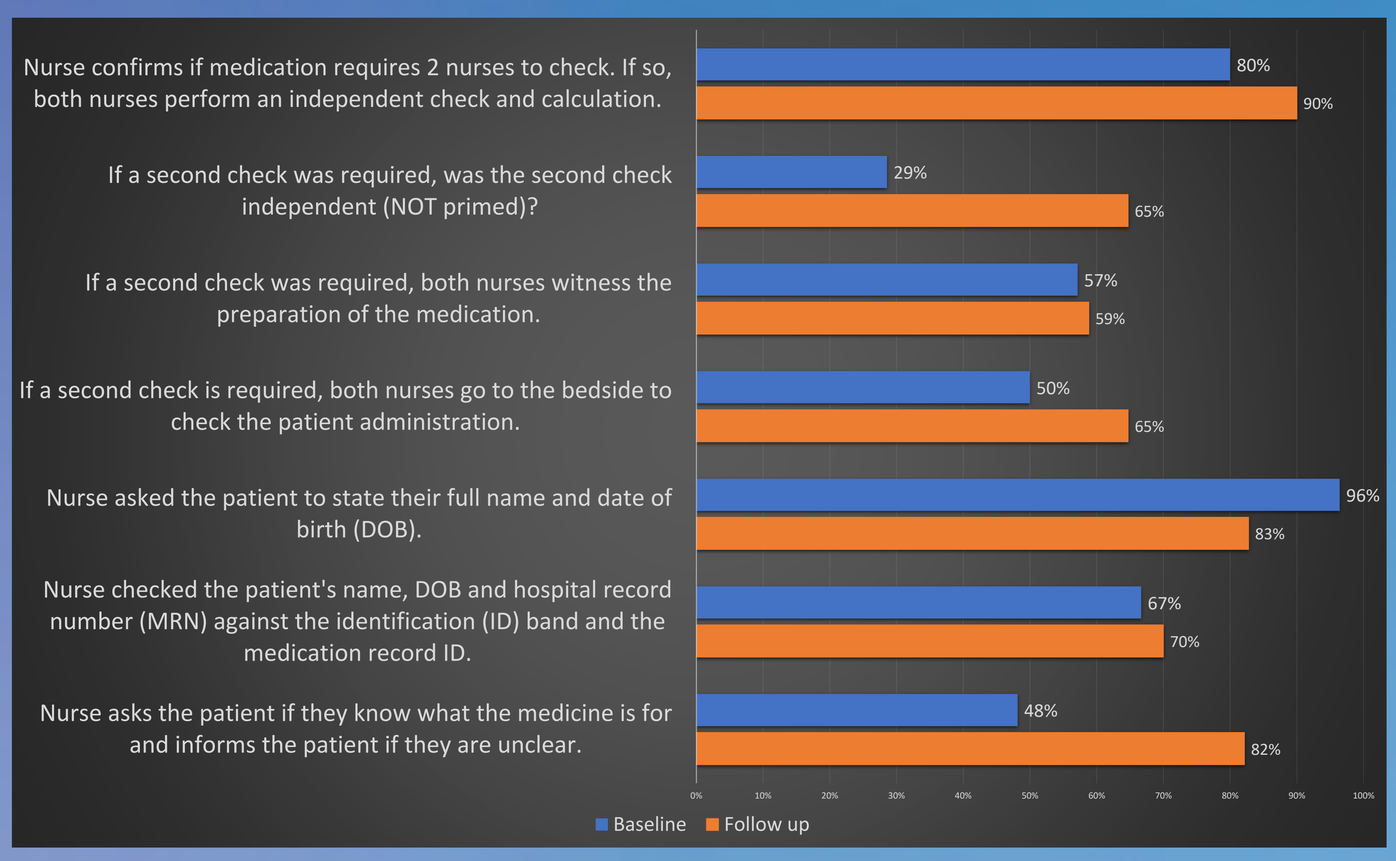

Figure 3: Baseline and follow up compliance (%) with audit criteria focused on the independent second checking of medication administration and patient engagement - EMERGENCY DEPARTMENT results

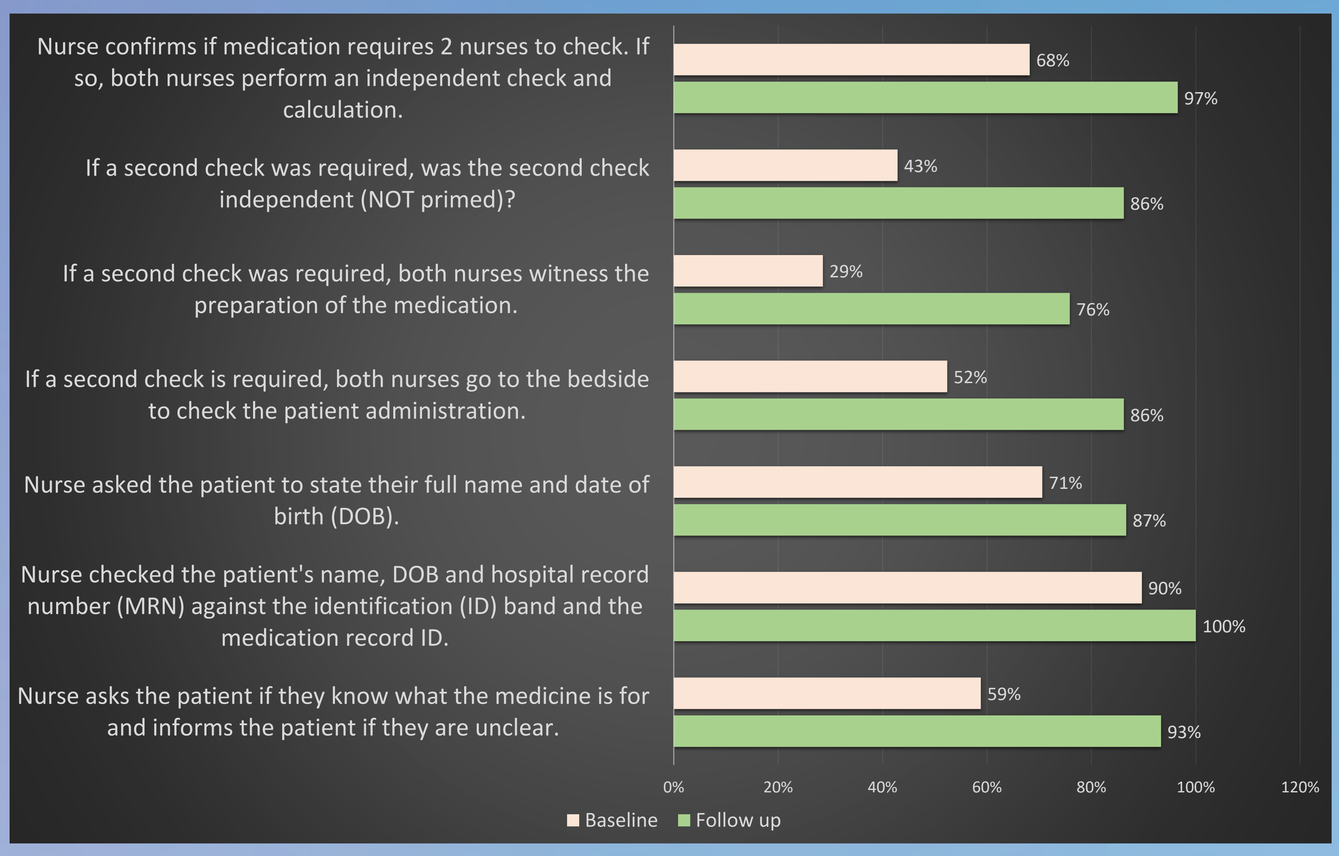

Figure 4: Baseline and follow up compliance (%) with audit criteria focused on the independent second checking of medication administration and patient engagement- INTENSIVE CARE UNIT results.

Evaluation

Gaps were identified to achieving best practice for medication administration and percentage increase in compliance was largely observed in ED (Figure 3), ICU (Figure 4) and across St Vincent's Public Hospital Sydney (Table 1).

Audit Criteria [based off the validated Medication Administration Evaluation and Feedback (MAEFT) tool]	ED		ICU		SVHS (Overall)	
	Baseline	Follow up	Baseline	Follow up	Baseline	Follow up
13. Nurse confirms if medication requires 2 nurses to check. If so, both nurses perform an independent check and calculation. Including IV rate is set correctly.	80%	90%	68%	97%	87%	95%
14. If a second check was required, was the second check independent (NOT primed)?	29%	65%	43%	86%	58%	83%
15. If a second check was required, both nurses witness the preparation of the medication.	57%	59%	29%	76%	71%	83%
16. If a second check is required, both nurses go to the bedside to check the patient administration.	50%	65%	52%	86%	69%	91%
17. Nurse asked the patient to state their full name and date of birth (DOB).	96%	83%	71%	87%	79%	93%
18. Nurse checked the patient's name, DOB and hospital record number (MRN) against the identification (ID) band and the medication record ID.	67%	70%	90%	100%	67%	91%
21. Nurse asks the patient if they know what the medicine is for and informs the patient if they are unclear.	48%	82%	59%	93%	48%	85%

Table 1: Baseline and follow up compliance (%) with audit criteria focused on independent second checking and patient engagement in the Emergency Department, Intensive Care Unit and Hospital-wide (SVHS).

Discussion

Medication administration is a core nursing task that is both complicated and ingrained in each individual nurse's practice. Targeted multimodal strategies for improving compliance with best practice medication administration behaviours was shown to be successful when utilising JBI-methodology. Scheduled audits will be repeated to determine if improvements can be sustained.