Evaluation of a Partnered Pharmacist Discharge Prescription Planning model in a tertiary hospital Emergency Department

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Introduction

Patient care in the Emergency Department (ED) is susceptible to medication errors due to high patient turnover, regular interruption of staff and decisions being made under pressure. It is speculated that up to 60% of patients are impacted by medication errors during their admission in ED[1,2] and more than 50% of medication errors occur at transition of care including medication errors on discharge prescriptions[3,4]. There is increasing evidence internationally that collaborative Pharmacist-Medical Officer model (PMO) of charting or prescribing medications greatly reduce medication errors and improve patient care. However, there are currently no literature available on the impact of the PMO model on medication safety for discharge patients from ED Short Stay Units (SSU).

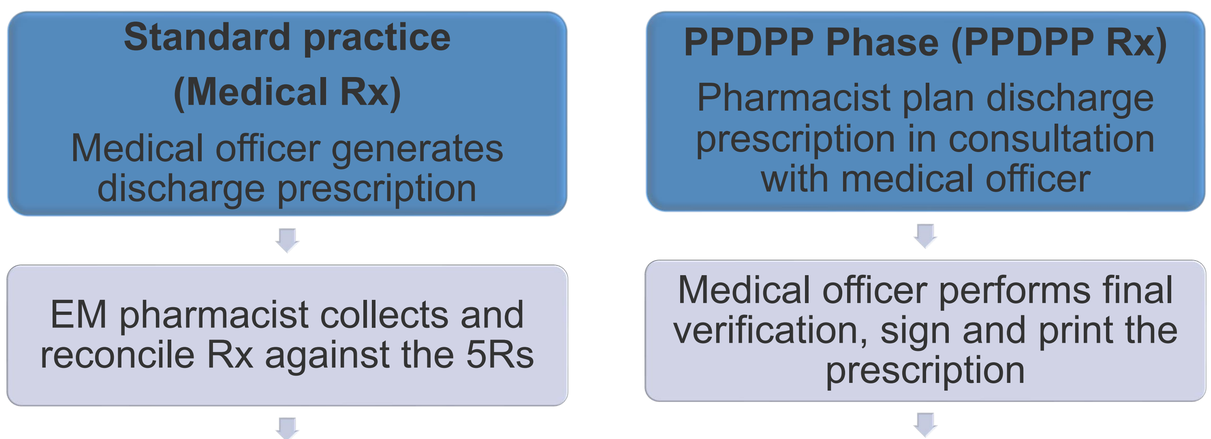
Aims

To implement and evaluate the impact of a Partnered Pharmacist Discharge Prescription Planning (PPDPP) service on the safe use of medicines on discharge.

Methods

A prospective pre- (standard practice) and post-intervention (PPDPP phase) study was conducted over two 3-months periods (March-May and July-September 2022) at a tertiary hospital ED SSU in South-East Melbourne, Australia. A 4-week implementation period prior to PPDPP phase was undertaken for training and education for Emergency Medicine (EM) pharmacists and medical team.

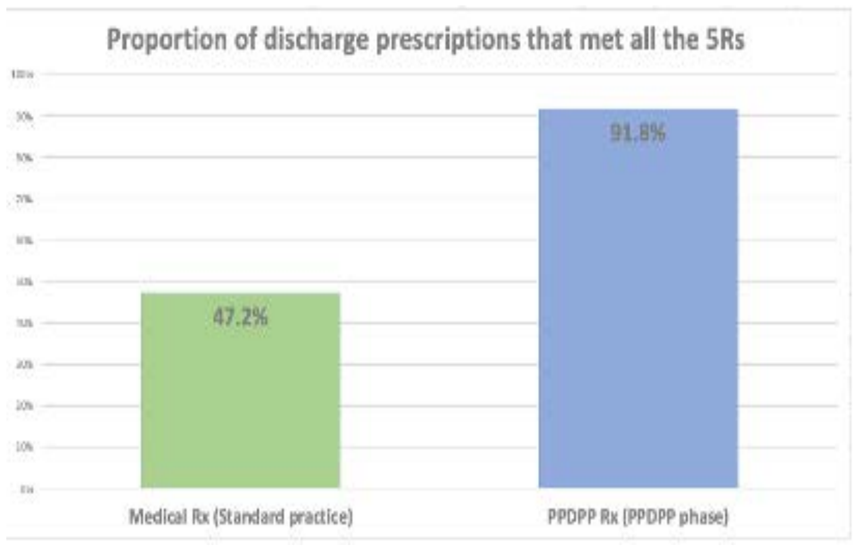
Study data collection times were weekdays from 8am to 4.30pm to coincide with the peak discharge period in ED SSU. All adult patients (age ≥ 18years) discharged from ED SSU with a prescription, regardless of the diagnosis, discharge destinations were included. Paediatric patients and adult patients discharged outside the study period or discharged from ED were excluded.



Outcome – The Five Rights (5Rs)

The Five Rights (5Rs) method (**R**ight patient, **R**ight medication, **R**ight dose/formulation, **R**ight duration and **R**ight indication) was modified from the traditional Six Rights for medication administration to define and quantify medication errors for the purpose of this study. EM pharmacists used the standardised discharge prescription assessment form to assess each medication on prescriptions.

Results



Medical Rx: 47.2% (77/163)
PPDPP Rx: 91.8% (135/147)

The total number of prescriptions collected during pre- and post-intervention phases were 163 and 147, respectively. The proportion of discharge prescriptions that met all the 5Rs increased from 47.2% (77/163) to 91.8% (135/147), ($p<0.001$) with the PPDPP model.

The total number of medications prescribed were 269 and 297 during pre- and post-intervention phases respectively. The proportion of opioids prescribed reduced from 23.8% (64/269) to 16.2% (48/297), ($p=0.023$) during PPDPP phase and the proportion of best possible medication history (BPMH) completed by EM pharmacists during PPDPP phase increased from 4.3% (7/163) to 21.1% (31/147), ($p<0.001$).

Discussion

The study demonstrated that the PPDPP model doubled the number of prescriptions that met all the ”Rights” for prescribed medicines. The significant improvement in medications that met all the Rights enhanced medication safety for patients transitioning from ED SSU to community, known to be high risk of medication misadventure. PPDPP model also allowed more patients to be reviewed by pharmacists and the completed medication reconciliation were utilised for decision-making between the pharmacists and medical officers.

References

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