

Development of Pharmacy Technician Pocket Medicines Reference Cards (PMRCs)

Jayne Black¹, Linda Robinson¹, Sheila McCann¹.

1. Western Health and Social Care Trust (WHST), Pharmacy Department, Altnagelvin Area Hospital

Introduction

- In March 2016, the Northern Ireland Medicines Optimisation Quality Framework¹ outlined how we can support patients to gain the best outcomes from their medicines through the safe and effective use of medicines at important transitions of care.
- Soon after admission and initiation of new treatments, pharmacy technicians are often the first member of the pharmacy team to see an inpatient kardex and have the appropriate medicines knowledge and focus to deliver Medicines Optimisation as part of routine care.

Aims & Objectives

- To equip and focus all pharmacy technicians (new or established) with up to date and succinct medicines information which identifies high risk patients for timely review by a pharmacist.
- To identify key medicines discrepancies/medicines information across different specialities.
- To produce and test the usability and effectiveness of quick pocket medicine reference cards (PMRC) to improve patient safety and quality of care.

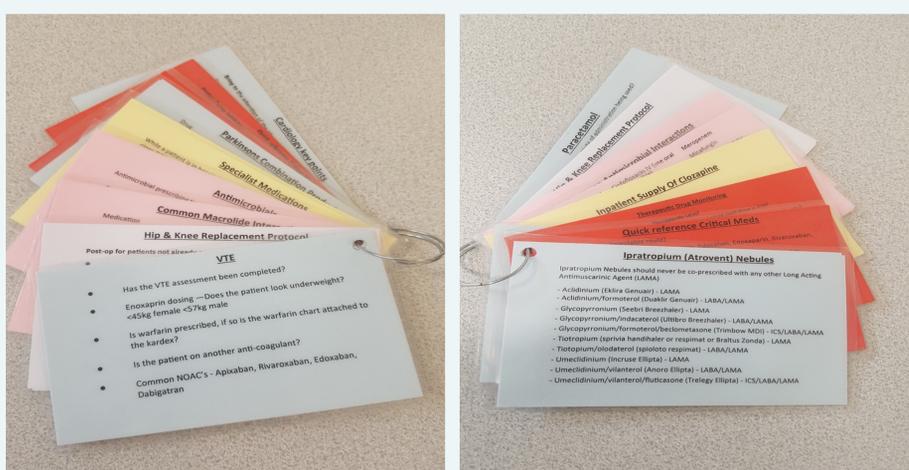
Method

- Over a four month period across several in-patient wards within a large acute teaching hospital pharmacy technicians reviewed in-patient kardexes daily and identified common medicine discrepancies e.g. incomplete VTE assessment.
- Discrepancies were grouped within Categories (Table 1) to inform the content development of PMRCs (Figure 1) using local guidance and BNF 74², they were then reviewed and quality assured by specialist clinical pharmacists.
- The number, type, and clinical significance (using the EADON Grade² (Table 2) of referrals made to the pharmacist were then measured pre and post introduction of the PMRCs over a 2 week period within two surgical wards.

Table 1: Categories of Pocket Medicines Review Card

Pocket Medicines Reference Card (PMRC) Categories	
VTE	Specialist medications
Paracetamol - Doses & co-prescribing	Inpatient supply of Clozapine
Hip & Knee Replacement Medication Protocol	Parkinson's Combination product
Common Antimicrobial Interactions	Therapeutic drug monitoring
Common Macrolide Interactions	Critical medications
Antimicrobials	Cardiology Key points
Common restricted Antimicrobials	Ipratropium (Co-prescribing)

Figure 1: Completed PMRC's keyrings



Results

From Sep-Dec 2017 approximately 60 discrepancies were identified from technician kardex reviews which were then themed into fourteen categories (Table 1) which informed the content development of the PMRCs.

A four-fold increase (pre intervention n=7; post intervention n=28) in the number of referrals made by the technician for a pharmacist review was seen post introduction of the use of PMRCs. Table 3 outlines examples of the most common referring categories made by the technician to the pharmacist. Seventy-five percent (n=21) of referrals were clinically significant (Chart 1) and resulted in an improvement in the standard of patient care (EADON grade ≥ 4).

Table 2 : Eadon Grade Scale

Intervention	Score
Intervention which is detrimental to patient's well-being	1
Intervention is of no significance to patient care	2
Intervention is significant but does not lead to an improvement in patient care	3
Intervention is significant and results in an improvement in the standard of care	4
Intervention is very significant and prevents major organ failure or adverse reaction of similar importance	5
Intervention is potentially life saving	6

Chart 1: Eadon grading of referrals

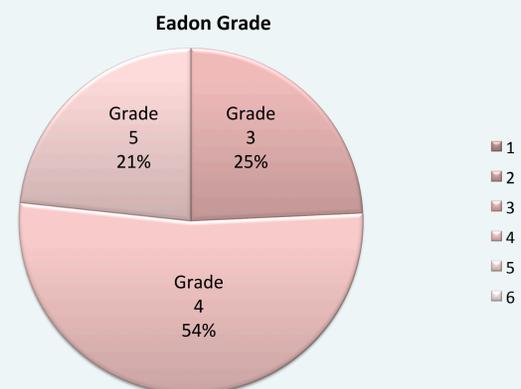


Table 3: Most common referral categories

PMRC Category	Example of referrals	Clinical significance (Eadon grade)
VTE	VTE assessment not completed	4
Paracetamol	Paracetamol e.g. PO prn & IV regular	5
Cardiology	Clopidogrel & Omeprazole co-prescribed	4
Critical Medications	Anti-Epileptic medications – missed doses	5
Specialist Medications	Highlighted patient on red list medicines for M.S. to pharmacist	3
Antibiotic	Administered to patient after stop date	4

Conclusion

Since the introduction of the PMRCs, although the number of referrals to the pharmacist has increased, it can be seen from the clinical significance of these that they have helped to improve patient safety and overall quality of care.

The results from this initial test will be used to inform the development of new PMRCs and their applicability within the remaining surgical and medical wards. PMRCs were initially intended to be used by newly appointed ward pharmacy technicians and to support technicians working across a range of specialities, but it has been decided that they could also be used to support junior clinical pharmacists.

References

- Health-ni.gov.uk. Medicines Optimisation Quality Framework 2018 [cited 5 April 2018]. Available from: <https://www.health-ni.gov.uk/sites/default/files/consultations/dhssps/medicines-optimisation-quality-framework.pdf>
- BNF British National Formulary - NICE [Internet]. Bnf.nice.org.uk. 2018 [cited 5 April 2018]. Available from: <https://bnf.nice.org.uk/>
- EADON H. Assessing the quality of ward pharmacists' interventions. International Journal of Pharmacy Practice. 1992; 1(3):145-147.