Review of a pharmacist medication management plan referral program for a small private regional hospital

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Background

A small regional private hospital, with 86 overnight beds, introduced the Medication Management Plan (MMP) to improve medicines management. Recognising the value of pharmacist involvement, resources were allocated to implement a limited clinical pharmacy service focused on medicines reconciliation on admission, prioritised for high risk patients.

Description

MMP referral criteria, illustrated in Figure 1, were created incorporating elements from the SHPA Fact Sheet: Risk factors for medication-related problems[1] and National Prescribing Centre: A Guide to Medication Review 2008[2] to identify higher risk patients on admission and prioritise pharmacist time for these patients. Admission medication history, medicines reconciliation, and ongoing clinical review outcomes (e.g. interventions) are documented on the MMP by the pharmacist for use by the multidisciplinary team.

The initial pilot program resulted in the allocation of 30 minutes of pharmacist time to complete each MMP for high risk patients.

An audit found that MMP's were not being completed by nursing staff for non-referred patients, prompting consideration of extending the scope of referral to pharmacists.

Figure 1. **Sample MMP Referral Form**

StVincent's LISMORE

(Affix patient identification label here)
URN:
Family Name:
Given Names:
Date of Birth: Gender: M ❒ F ❒

MEDICATION MANAGEMENT PLAN REFERRAL

(Not required for patients transferred from another facility where an MMP has already been completed)

Admission Date ...../...../.....
Ward .....

Assess patient using the criteria below [tick all that apply]:

❑ Length of stay greater than 48 hrs

AND

❑ 5 or more regular medications [polypharmacy]

❑ Co-morbidities [eg. diabetes, cardiac patient, cancer]

❑ Patient prescribed high risk medication [APINCH]

❑ Patient deemed at high risk of falling [as per assessment]

List all high risk medication[s]:

.....

.....

.....

If LOS > 48 hours and patient meets two or more of the remaining criteria please forward form to NUM (or HCM after hours)

MANAGER:

Please scan and email form to: ***mmp@svh.org.au***

NUM / HCM Signature: .....

NUM / HCM Name: .....

Date emailed: ..... / ...../.....

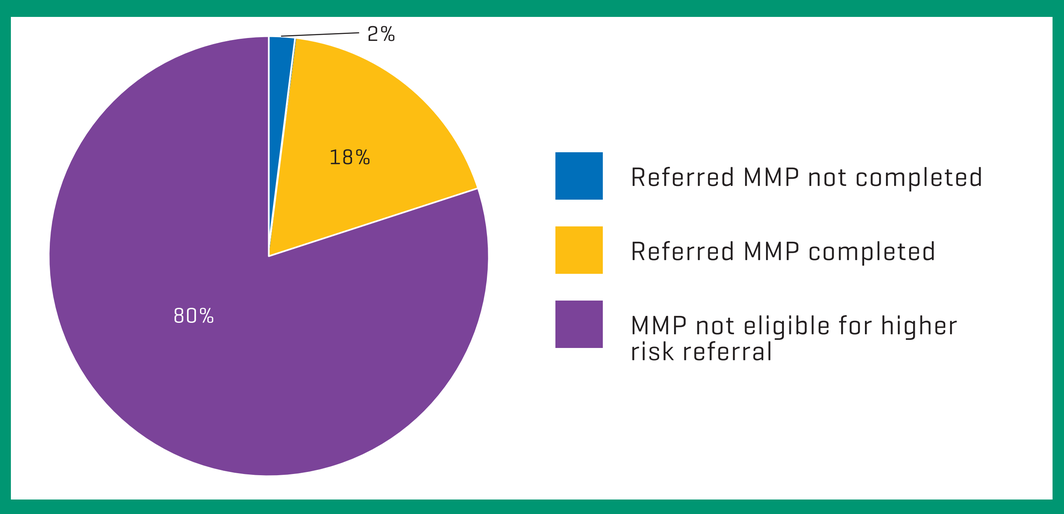
Actions

The pharmacist referral program was evaluated two years after implementation to determine the percentage of total overnight patients referred, pharmacist time required to perform admission medication reconciliation and medication review, and the number and significance of clinical interventions reported, with consideration of future expansion of the program.

Evaluation

A retrospective analysis of patients admitted over a 3 month period was conducted to calculate the average time taken per MMP and resulting interventions. The results were compared to resource estimates based on the initial pilot program and also extrapolated to the total number of overnight admissions during the 3 months to build a business case model for expansion of the service. The referral criteria was previously validated with reasonable confidence to confirm the 80% of non-referred patients were of a lower risk cohort.

Figure 2. **MMP Activity for all Overnight Admissions**



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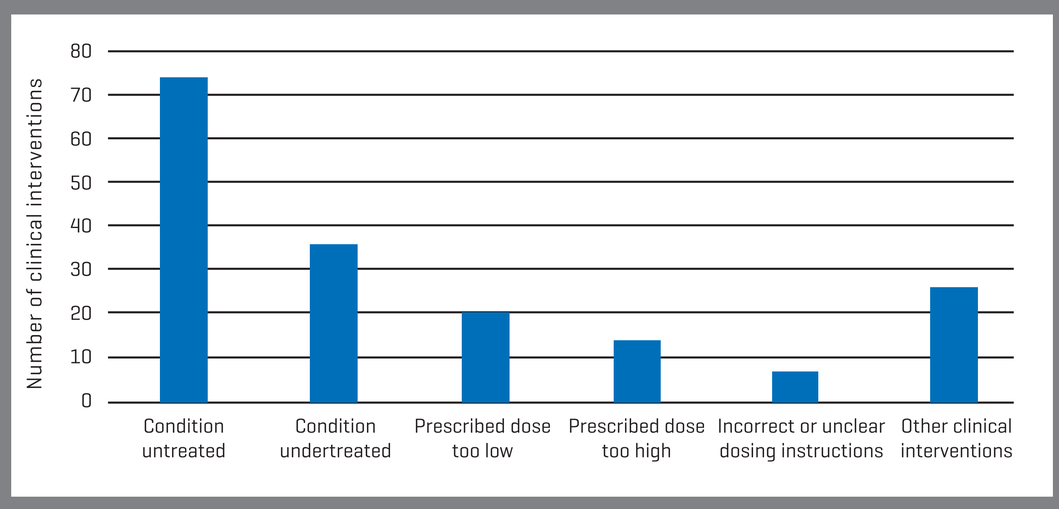
Results

High risk patients referred for an MMP represented 20% of total hospital admissions with 90% of referred MMPs completed. Pharmacist referrals not completed were largely due to insufficient timeframe between receiving the referral and discharge, or referrals to end-of-life pathway.

An average of 1.2 clinical interventions per MMP were completed. Clinical interventions were recorded using the D.O.C.U.M.E.N.T classification system for medication related problems, in line with SHPA Clinical Pharmacy Standards (See Table 1).[3]

Average time for the pharmacist to perform the service

Table 1. **Clinical Interventions**



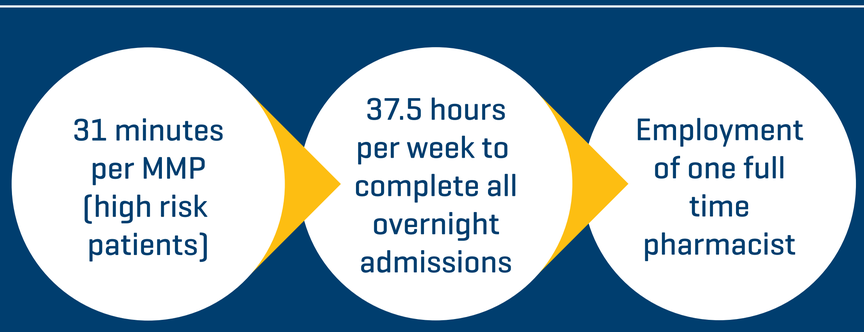
Evaluation of the clinical interventions revealed a significant number of untreated and undertreated conditions; not an unexpected finding when performing admission medication reconciliation. Examples of clinically significant interventions involving high risk medicines included under-dosing apixaban, dabigitran not restarted post-operatively, enoxaparin charted for the wrong patient, and under-dosing of gliclazide with subsequent high blood glucose levels. Other examples included disposal and replacement of expired patient medicines and correcting poor inhaler technique.

Implications

The results validate the initial allowance for 30 minutes of pharmacist time per high risk patient's MMP. By quantifying the pharmacist time required for 18% of overnight admissions, the approximate pharmacist hours required for expansion of this program is one full-time pharmacist. As the 18% of patients receiving pharmacist MMP services were high risk and thus more complex, it is forecast that expanding the program would encapsulate a cohort of lower risk patients requiring less time per case, allowing pharmacists to complete other clinical activities such as medication counselling and medication review.

Support for extending the clinical pharmacy service to all admissions will require a business case proposal quantifying the benefits achieved through increased pharmacist interventions reducing medication misadventure: increased treatment costs, extended length of stay and avoidable readmissions.

Forecasting Resources for Expanding this Service



References

1. The Society of Hospital Pharmacists of Australia. SHPA Fact Sheet: Risk factors for medication-related problems. 2015.
2. Clyne W, Blenkinsopp A, Seal R. National Prescribing Centre. A Guide to Medication Review 2008.
3. Standards of Practice for Clinical Pharmacy Services. Chapter 13 – Documenting Clinical Activities. Journal of Pharmacy Practice and Research Volume 43, No 2 (suppl), 2013.