Pharmacist-led admission medication reconciliation: Does electronic medication management help?

Aims

To investigate the impact of the introduction of an electronic medication management system (eMMSs) on the proportion of patients with recorded MedRec on admission to hospital.

The time from admission to when MedRec was recorded.

The characteristics of patients with admission MedRec documented pre- and post-eMMSs implementation.

Methods

An eMMS was implemented in an Australian hospital from May to July 2015. A retrospective observational study was conducted in three wards across two phases; pre- and post-eMMS implementation (August 2014/2015).

The study sample included every second patient admitted to these wards.

Baseline characteristics

Name and number of pre-admission and newly charted medications

Risk categorisation according to risk factors:
- ≥ 65 years old
- ≥ 5 pre-admission medication
- ≥ 1 high-risk medication

Low Risk
0 risk factors

Medium Risk
1 risk factor

High Risk
≥ 2 risk factors

Identification of patients who received admission medication reconciliation

Phase 1: NIMC
Medication history and reconciliation report form completed
Same information recorded on the NIMC

Phase 2: eMMSs
Initial medication history recorded by medical officer and prescribed on admission
AND
Complete ‘Medic’s History’ conducted and reconciled by another HCP

Results

A total of 370 patients were included, 179 pre- and 191 post-eMMSs implementation.

The proportion of patients with MedRec records on admission significantly increased post-eMMSs implementation in all study wards (p<0.05).

A pharmacist recorded admission MedRec for 100% and 73% of the total number of MedRecs in phase 1 and 2, respectively. Medical staff conducted the remaining MedRecs in phase 2.

The proportion of patients with a recorded MedRec within 24 hours of weekday admissions (median 1.0 day pre- and post-implementation), or 48-72 hours of weekend admissions (median 3.5 and 1.5 days pre- and post-implementation, respectively), increased by 47% pre-eMMSs to 84% post-eMMSs.

Overall, patients at a higher risk of medication related problems were targeted for admission MedRec both before and after the implementation of eMMSs. This finding is consistent with published literature.

Conclusion

Implementing an eMMS facilitates the MedRec process leading to more patients at a high risk of medication related problems to receive this service on admission to hospital and in a more timely manner.

Prioritisation of high-risk patients requires further development to direct the deployment of clinical pharmacy services in an eMMS environment in concordance with SHPA and Australian Commission Guidelines.

References

2. Unroe et al. Am J Geriatr Pharmacother 2010
4. Becerra-Carrasco et al. BMC Health Serv Res 2015
7. WHO high 5s project: interim report 2014