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Medication Reconciliation in the Elderly

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Medication Reconciliation and the Elderly Benchmark Study

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Executive Summary

Medication reconciliation is a practice that is underutilized in hospitals and primary care settings, and as a result the geriatric population is experiencing frequent ER visits and hospital readmissions. The geriatric population is subject to injury due to medication errors more than any other group. Medication reconciliation is an important part of safely caring for the geriatric population and can decrease the number of inappropriate medications that are prescribed. Transitions of care, such as hospital admission and discharge, place hospital in-patients at risk of errors in medication from poor communication or loss of information. (Moro, 2016)

Medication reconciliation is defined as “the process of identifying the most accurate list of a patient’s current medicines—including the name, dosage, frequency, and route—and comparing them to the current list, recognizing discrepancies, and documenting any changes, thus resulting in a complete list of medications, accurately communicated.” (Redmond, 2020) During discharge, it is essential that their medications are reconciled correctly to prevent repeated ER visits and hospital readmissions. Polypharmacy continues to be problematic in the elderly, so any drug omission or error has the potential to cause harm to them. Approximately 27 % of the medication errors that take place in hospitals are due to incomplete medical records at admission. (Moro,2016) An estimated 20% of Medicare beneficiaries experience a planned or unplanned hospital readmission within 30 days after discharge, and unplanned readmissions have an estimated annual cost of \$17 billion in the United States. (Morabet, 2018)

Rationale for the project

Older people are frequently exposed to polypharmacy, inappropriate prescribing, and adverse drug events. Two clinical processes can help geriatricians to optimize and increase the safety of drug prescriptions for older adults: medication reconciliation and medication review. Medication reconciliation provides the best possible medication history and identifies and resolves discrepancies in drug prescriptions. Medication reconciliation and medication review have proven to be effective, but their broad implementation remains difficult. (Beuscart et al., 2021)

Geriatric patients often receive new medications or have changes made to their existing medications at times of transitions in care—upon hospital admission, transfer from one unit to another during hospitalization, or discharge from the hospital to home or another facility. Although most of these changes are intentional, unintended changes occur frequently for a variety of reasons. For example, hospital-based clinicians might not be able to easily access patients' complete pre-admission medication lists or may be unaware of recent medication changes. As a result, the new medication regimen prescribed at the time of discharge may inadvertently omit needed medications, unnecessarily duplicate existing therapies, or contain incorrect dosages. These discrepancies place patients at risk for adverse drug events (ADEs), which have been shown to be one of the most common types of adverse events after hospital discharge. (Liu, 2018)

Literature Discussion to support project

During a review of the literature, there were several studies that supported the importance of reconciling geriatric patient's medications before discharge or transfer of care. According to Tong, transitions of care, such as discharge from the hospital, have been identified as points of

increased risk for errors in medication management that may contribute to adverse events and affect continuity of care. Sub-optimal medication management during or immediately after hospitalization is a risk factor in 28% of potentially avoidable re-admissions within 30 days of discharge. According to one report examining transitions of care medication-related problems in the elderly, 49.2% of medication discrepancies identified within 72 hours of a hospital discharge were a result of inadequate discharge instructions to the patient. Patients 65 years and older represent nearly 40 percent of hospitalized adults and, in 2008, accounted for nearly half of all health care dollars spent on hospitalization, but comprised less than 13 percent of the population in the United States (Mattison, n.d.).

A particularly high-risk time for preventable ADEs is when patients transition from one health care setting to another. Prior studies have found that more than half of general internal medicine patients and patients admitted to acute care services have ≥ 1 unintended medication discrepancy on admission. Other studies have reported that medication discrepancies, including those more likely to cause potential ADEs, were more common at discharge than on admission. One prospective study of 180 general medicine patients found that 75% of preventable ADEs occurred at discharge. A study evaluating the effectiveness of a multidisciplinary medication reconciliation process found that, before the intervention, there was a mean of 0.5 admission medication discrepancy and 3.3 discharge medication discrepancies per patient. (Unroe, 2010)

Improper medication reconciliations can cause negative outcomes for the elderly as well as create a financial burden on hospitals due to re-admissions and frequent ER visits. In the year 2000, there were 35 million geriatric persons in the United States. This number is projected to grow to 53.7 million by the year 2020 and reach 70.3 million by 2030. (Santell & Hicks, 2005)

According to Liu (2018), adverse drug events may lead a patient to seek additional medical care in the clinic or ER or may even cause safety issues requiring hospitalization. (Liu, 2018)

Communication between hospital pharmacists, community pharmacists, and primary care settings are often lacking or nonexistent. When used, communication can improve the accuracy of medication reconciliation and prevent unintentional medication errors, thereby ensuring continuity of care and allowing problems to be found and resolved before a patient is harmed (Urban, 2013). The World Health Organization has ensured implementation of medication reconciliation in several countries, whereas patient safety organizations (including the Institute for Health-care improvement and the Joint Commission, USA) have listed medication reconciliation as a key patient safety goal. (Sacco, 2018) The results of a study conducted by Knez (2011) urges the implementation of medication reconciliation practices to improve patient safety; admission and discharge from hospitals were shown to produce many discrepancies in patients' drug therapy, many of which represent MEs with important implications for patient care. Evidence suggests that medication reconciliation can reduce ADEs associated with transitions within and between healthcare settings, especially for patients who are at higher risk because of older age, multiple chronic conditions, or use of many medications. (Hailemariam et al., 2019)

Project Stakeholders

The stakeholders that will be affected by this project are hospital/community pharmacists, and admission/discharge nurses. The pharmacists will have an opportunity to collaborate and improve the continuity of care of patients by ensuring that the discharge medication list is accurate. The admissions and discharge nurses will also be able to develop a patient-centered

relationship with the pharmacists to aid in the decrease of medication errors. The CEO and DON's interest in the project will be germane to its success and with a shared mental framework which serves as a catalyst for the project, it can inspire others to participate and take interest in the medication reconciliation project. (Melnik & Overholt, 2019)

Proposed Outcomes

Individual hospital studies and a number of large-scale initiatives in the USA and Canada have shown that medication reconciliation significantly reduces medication errors and adverse events. Errors prevented by medication reconciliation include inadvertent omission of therapy, prescribing a previously ceased medicine, the wrong drug, dose or frequency, failure to recommence withheld medicines and duplication of therapy after discharge. Implementing formalized medication reconciliation at admission, transfer and discharge reduces medication errors by 50–94% and reduces those with the potential to cause harm by over 50%. The process is also associated with improved patient outcomes and a tendency for reduced readmissions. (Duguid ,2012)

Evaluation Design

To evaluate the effectiveness of medication reconciliation project, stakeholders would attend a pre-implementation in-service to make sure that they understood the purpose and importance of the project. Then patients aged 65 years old or older would randomly be selected and followed through the admission, discharge or transfer process and their medication list in the medication record would be compared against their home medications if available, if not a medication list would be requested from their community pharmacist. This review would reveal if the

medications had been reconciled accurately. Once the medications have been reconciled, data would be collected and shared during a post-implementation inservice.

Timetable/Flowchart

The timeline for implementing the project prior to Covid-19 would have been as follows:

(Melnik & Holt, 2019)

- Evaluate and analyze current data – 2 weeks
- Choose to stakeholders/develop clinical tool – 1 week
- Gain support of executive team – 2 weeks
- Engage staff – 1 week
- Assess and eliminate barriers – 2 weeks
- Implement practice change – 2 weeks
- Measure clinical outcomes – 1 week
- Share results of change with staff/stakeholders/executive team – 1 week

But due to Covid, this project was not able to be implemented this year but hopefully it can get approved and implemented by Spring 2022.

Data Collection Methods

Comprehensive research on medication reconciliation as it relates to the geriatric population in preventing adverse events was obtained by performing multiple database searches such as CINAHL, PUBMED, and COCHRANE. The studies in this literature review consisted of randomized control trials, quasi-experimental studies, case studies, descriptive studies, case studies, and systematic

reviews. When this project can be safely implemented, data will be collected through patient and staff interviews, inservices, EMR reviews, and stakeholder meetings.

Discussion of Evaluation

Due to the postponement of this benchmark project, there will be no formal discussion regarding the evaluation of the outcomes. This project has garnered positive feedback from faculty as well as some nurse managers who thought that it was a project worth implementing.

Costs and Benefits

The biggest resource needed for this project would have been time. The software and the personnel are already in place, it will just be a matter of shifting how reconciliations are currently being done to decrease medication errors. Fortunately, there will be no additional costs to make this change due to staff already being in place. The benefit of this project would be potentially yielding fewer re-hospitalizations and ER visits of the geriatric population due to adverse drug events.

Conclusions/Recommendations

With the ageing population, the average patient has multiple diseases and is treated with multiple medications, predisposing patients to a higher risk for adverse drug events (Knez, 2011).

Medication reconciliation can be important in keeping the geriatric population safe by reducing adverse medication events as well as hospitalizations. All the studies agreed that communication between the hospital pharmacists and the community pharmacist is an integral part of the medication reconciliation process. Many of the studies indicated that medication reconciliation

would be beneficial to the well-being of the geriatric population, however, due to the increased amount of time that the selected staff would need to perform them, the feasibility of interjecting this task into the daily admission and discharge routines of hospitals is questionable.

Communication processes between hospitals, primary care providers, and community pharmacies must be strengthened, standardized, and become everyday practice. There is a need for future research to help discover ways to decrease the time component of medication reconciliations.

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MEDICATION RECONCILIATION FORM

Drug Allergies/ Describe Reaction:

LIST BELOW ALL OF THE PATIENT'S MEDICATIONS PRIOR TO ADMISSION INCLUDING OVER-THE-COUNTER AND HERBAL MEDS

[illegible]

NEW MEDICATIONS ADDED

[illegible]

- ☐ Patient Medication List
- ☐ Patient/Family Recall
- ☐ Pharmacy: _____
- ☐ Primary Care Physician List
- ☐ Previous Discharge Paperwork

Date: _____ By: _____
Date: _____ By: _____
Date: _____ By: _____
Date: _____ By: _____

THIS IS AN ADDENDUM TO OR REVISION OF PREVIOUSLY COMPLETED MED LIST

Medication Reconciliation Rev 5/9/2008

William Erber, M.D., P.C.

Appendix B

Medication reconciliation:

4 simple steps to improve patient safety

1	Obtain a best possible medication history	➔	2	Confirm the accuracy of the history
<p>Using information from patient interviews, GP referrals and other sources, compile a comprehensive list of the patient's current medicines. Include prescription, over the counter and complementary medicines and information about the medicine's name, dose, frequency and route.</p> <p>This medication history, sometimes referred to as a <i>Best Possible Medication History</i> (BPMH), should involve a patient medication interview, where possible. The BPMH is different and more comprehensive than a routine primary medication history, which is often a quick medication history.</p>		<p>Use a second source to confirm the information obtained, and ensure you have the best possible medication history. Verification of medication information can include:</p> <ul style="list-style-type: none">✓ Reviewing patient's medicines list.✓ Inspection of medicine containers.✓ Contacting community pharmacists and GPs, with the patient's consent.✓ Communicating with carers or the patient's family members.✓ Reviewing previous patient health records.		
3	Reconcile the history with prescribed medicines	➔	4	Supply accurate medicines information
<p>Compare the patient's medication history with their prescribed inpatient treatment. Check that these match, or that any changes are clinically appropriate.</p> <p>Where there are discrepancies, discuss these with the prescriber and ensure that the reasons for changes to therapy are documented eg. atenolol ceased prior to surgery.</p>		<p>When patients are transferred between wards, hospitals or to their home or residential care facility, ensure that the person taking over their care is supplied with an accurate and complete list of the patient's medicines.</p> <p>Ensure that the care provider, patient and/or their carer are also provided with information about any changes that have been made to medicines.</p>		