Impact of pharmacist interventions on clinical outcomes and cost avoidance in home infusion pharmacy

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BACKGROUND

- Clinical pharmacists provide significant impact in improving patient care through pharmacist interventions.
- Pharmacists interventions (PIs) can be defined as “any action taken by a pharmacist that directly results in a change of patient management or therapy” and can include:
  - Adverse event screening
  - Drug-drug interactions
  - Adherence/administration issues
- PIs can lead to cost savings to both patients and health systems, including preventing need for additional services such as:
  - Primary care provider appointments
  - Specialist appointments
  - Emergency Department visits
  - Hospital admissions/readmission
- Accurate documentation of PIs and cost savings can provide data to highlight the importance of the role of a clinical pharmacist in a home infusion setting.
- This home infusion organization currently lacks a systemic method of documenting and reporting the interventions of the clinical pharmacists.

OBJECTIVES

- The aim of this quality assurance study is to create a standard assessment tool to use for all pharmacist interventions within the organization and to assess the clinical impact and potential cost savings of the interventions.
- **Primary Objective:**
  - Evaluate clinical impact of home infusion pharmacist interventions on patient outcomes
- **Secondary Objective:**
  - Evaluate the potential cost avoidance resulting from the pharmacist interventions

METHODS

- This is a single center, home infusion pharmacy, quality assurance study.
- 14 home infusion pharmacists document each PI they make while performing routine pharmacist assessments that are completed upon each fill of medication.
- The PIs will be categorized based on type of intervention, including:
  - Dose change recommendations
  - Addition of pharmacotherapy
  - Addition of non-pharmacotherapy
  - Discontinuation of drug
  - Side effect management
  - Adherence tool provided
  - Other
  - No intervention
- The PIs will be quantified using Hatoum Clinical Impact Scale:

Hatoum Clinical Impact Scale

Level	Description
0	No impact on patient The intervention has an economic goal, is done after the event, without consequence to the patient
I	Significant impact The PI increases treatment’s efficacy and/or patient’s safety and/or patient’s quality of life
II	Very Significant Impact The PI avoids an organic dysfunction, an intensive care survey, or a non-reversible sequel
III	Vital Impact The PI avoids a potentially fatal accident

- Pharmacists document if PI prevents the need for a higher form of health care.
- PI’s will be assessed by counting the number of PI’s completed by pharmacist team, pharmacy department, intervention type, and level of impact.
  - Data normalized for pharmacy team based on patient load and number of pharmacists on team
- Cost savings will be estimated based on the average cost for that level of care in the state of Minnesota and totaled per pharmacists team and by whole pharmacy on a periodic basis.
  - Average savings totaled for pharmacy team and department will be reported
- Documentation process includes filling in prompts that have been added to standard pharmacist assessment documentation tool completed for every patient encounter in the patient’s electronic health record.
- Documentation will also include the length of time the intervention took and the result of the intervention, if known at time of documentation.

NEXT STEPS

Integrate	Integrate pharmacist intervention evaluation questions into existing documents used for pharmacist assessments in home infusion electronic health record.
Provide	Provide education tool to home infusion pharmacists on how to appropriately complete additional document components.
Perform	Perform a one-week trial phase to assure pharmacists are correctly completing additional documentation piece and no errors occur in electronic health record during documentation process.
Collect	Collect and analyze data after 3 months of documenting pharmacist interventions.
Assess	Assess clinical impact of home infusion pharmacist interventions on patient outcomes and cost avoidances.

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