Capturing Pharmacy Interventions Without the Use of External Documentation

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Primary Intended Outcomes
1. To improve the capture rate of clinical interventions by pharmacy personnel,
2. Reduce workload by pharmacy personnel related to documenting interventions, and
3. To avoid use of an external database for tracking interventions, which can be cumbersome to staff and end users and often not complete.

Relevant PPMI Recommendations
C2n. Automatic capture of information for pharmacist interventions.
C2o. Systems that efficiently capture and report pharmacy metrics, outcomes data, and pharmacists’ value.

C9. Technology in medication-use systems should be designed to demonstrate the impact of pharmacy services on patient outcomes.

Situation Analysis
By selecting dedicated fields of electronic health record (EHR) progress notes to document and monitor for interventions, the department of pharmacy at TIRR Memorial Hermann Hospital significantly increased the capture rate of pharmacist intervention. This process also allowed for more clinical time for patient-care activities.

Pharmacist interventions ensure patient-specific medication therapy and drug safety, augment clinical services, and reduce length of stay. At the same time, interventions help document cost savings facilitated by pharmacy services. Documenting interventions typically involves reporting activities in external databases or documenting services provided in multiple places, which can be cumbersome and time-consuming for pharmacy personnel. Utilizing an external database requires verification of information entered from clinical notes as well. So, when documentation services are not part of the EHR, it presents a challenge to verify all activities reported by pharmacists. Further, underreporting of services provided is common in scenarios where time to report and ease of reporting become barriers for pharmacy staff.
• Through recording interventions directly in the EHR, the department experienced a monthly intervention capture rate increase from 676 in 2011 to over 3,000 in 2012. Interventions per 100 patients increased from 30 in 2011 to 137 in 2012.
• Cost savings from the program for 2012 were over $790,000.
• Time to record interventions decreased by 75 percent from 2011 to 2012 for pharmacy personnel.

Extracting interventions from pharmacy progress notes and order entry reports from the EHRs was more effective at capturing the full scope of pharmacists’ interventions and reduced the pharmacist’s time devoted to documenting interventions.

Service Description

By selecting specific documentation fields within the EHR to monitor for interventions and removing the need to verify interventions recorded in an external database, the intervention capture rate was significantly increased.

The team utilized two methods to collect data. The first required manually pulling information from physician-verified pharmacy notes in specified fields, including medication reconciliation, discharge medication counseling, pharmacy rounding notes, warfarin management and counseling, and physician consults. A second method involved pulling intervention reports directly from the EHR from pharmacy order entry (e.g. e-verbals).

Capturing both staff and clinical pharmacist interventions supports the importance of all pharmacy services and allowed all pharmacists more time for patient-centered care.

Key Elements for Success

1. Ability of pharmacy personnel to focus and excel in patient-centered care and to record interventions for department metrics
2. Facilitated capturing of pharmacists interventions made available through the EHR
3. Scheduled staff time to appropriately document interventions within the EHR

Resource Utilization

Personnel: Three members of the pharmacy and patient safety team were involved in the development of the program. The pharmacy department operates under an integrated practice model. All pharmacists in the pharmacy participate in clinical and staffing activities and the documentation in the EHR.

IT and other infrastructure: IT was asked to help generate reports that included verbal orders and therapeutic substitutions. Reports provided a listing of patients in the hospital for a given month to track interventions.

Supply Expense: Not applicable beyond pharmacist salaries.

Return on Investment: The captured intervention rates increased 4.5 fold and yielded cost savings of over $790,000 in 2012 (accounted for the activity of four FTEs).

PHARMACY PRACTICE MODEL INITIATIVE
Recognized Intangible Benefits
EHR documentation supports the professional initiative to advance pharmacists as legitimate healthcare providers. Also, because students are involved in the documentation of interventions and retrieval from the EHR, they are exposed to appropriate documentation methods in the patient’s medical record.

Outcome Measures
1. Average monthly intervention capture rate increased from 676 in 2011 to over 3,000 in 2012. Interventions per 100 patients increased from 30 in 2011 to 137 in 2012.
2. Cost savings from the program for 2012 were $792,184, compared to $93,011 in 2011.
3. The time that pharmacy personnel spent recording interventions decreased by 75 percent from 2011 to 2012.

Lessons Learned
1. Sound and comprehensive documentation in the EHR is essential to capturing pharmacists’ contributions to patient care.
2. Currently, there are few commercial technology options for extracting interventions from EHR clinical notes. Although a few choices do exist, they are typically targeted to specific interventions. These programs often don’t allow for the full scope of pharmacy interventions that occur in rounds, including discussions about treatment options and the risk vs. benefit analysis that is often done for patients on complex medication regimens. Having the option to include pharmacy notes in the EHR allows the pharmacist to document all services that are provided vs. targeted interventions, such as IV to PO or related to targeted high-dollar medications.

Other Considerations
The department will review intervention data annually to assess and perhaps re-establish a new baseline intervention rate and to compare this data with other acute rehabilitation facilities.

Suggestions for Other Hospitals/Health Systems
Recording interventions within the EHR is a reasonable and necessary justification of pharmacy services. Medication-use systems should be designed to demonstrate the impact of pharmacy services on patient outcomes. The team at TIRR Memorial Hermann Hospital recommends collaboration between pharmacy and IT personnel to create and improve information pathways and facilitate ease of use in documenting pharmacy services provided.
Percent of time spent by pharmacists in a 40-hour work week.

C A S E S T U D Y