IMMUNIZATION ERROR QUALITY IMPROVEMENT STUDY

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4. EVIDENCE OF DATA COLLECTION

Initial data collection consisted of a patient chart review by the quality coordinator. Charts were reviewed for errors including immunizations administered but not documented, immunizations documented as administered but not administered, a correlation of immunizations with state compliance and immunizations administered outside of accordance with standing orders.

See Table 1.

5. ANALYZING THE DATA

Data analysis revealed 30 errors in the 26 reviewed charts. The percent of immunization error was calculated by dividing the sum of errors by the sum of immunizations given.

Performance data indicates a 0.06% immunization error rate at the onset of the study. This was calculated by dividing the known 30 errors by the 4,579 immunizations administered for said timeframe.

Data analysis also revealed additional concerns because of failing to document immunizations appropriately. Because of the concerns for patient safety and the discovery of potential financial loss, an in-depth data review of all patient records in the department was substantiated.

6. CURRENT PERFORMANCE VERSUS GOAL

The findings from the retrospective data collection indicate that the Allergy and Immunization Department has a 0.06% error rate and the goal is to reduce to 0.33% or by half.

7. IMPLEMENTING CORRECTIVE ACTION

To obtain a better understanding of the true error rate in this department, the quality coordinator began a 10% chart review November 2017. This audit validated the need to continue the study as multiple causative factors were identified leading to multiple immunization errors.

The following corrective actions were implemented with a re-measurement set for the end of the fiscal year.

- Process changes implemented to combat the source problems included transitioning visual reminders of immunization schedules at check-in, competency evaluation to the eight rights of medication administration, consistent process flow and transitioning chart audits to department staff. Research proves that barcode scanning reduces medication documentation errors, and PUSH began the process to implement barcode scanning in the department.
- See chart of data collected from July 2018-September 2019, the busiest months in the department. PUSH continued to show improvements with error rate reductions to an average of 0.04% per month or a 94% improvement from the initial data review.
- At the conclusion of this quality improvement study in September 2019, the identified problems and corrective actions were effective in decreasing the department’s error rate. To follow the LEAN concept of process change, it was decided to continue to monitor the process and results for additional 30, 60 and 90 days.

8. RE-MEASURING

Re-measurement verified that the corrective actions put into place were effective. The new average monthly error rate of 0.17% is a 74% reduction. This reliable information to validate that our process changes were effective as the new error rate met the goal of error reduction by 50%. After collecting data through June 2019, the study continued in an effort to ensure patient safety and maintained potential during the months of highest patient volume August-October.

9. IMPLEMENTING ADDITIONAL CORRECTIVE ACTION AND RE-MEASURING

A few additional source problems were identified and corrective actions implemented. The source problems included a lack of following: double check process for vaccine schedule, scheduled education for staff working in the area, consistent process ownership by frontline staff and use of evidence-based practice for documentation of medication administration.

10. COMMUNICATING THE FINDINGS

The results of this study were shared with the governing body of the quality management committee, department managers and frontline staff.

The study was published on the PUSH organization-shared website. Daily information continues to be shared with frontline staff in the department for awareness and ownership.