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Joint Federal Pharmacy Seminar 2016 Abstracts of Contributed Papers

The Joint Federal Pharmacy Seminar (JFPS), developed by APhA, is a national, education-based conference for all federal pharmacists and pharmacy technicians who are uniformed members of the U.S. Public Health Service and U.S. Department of Defense, civilian pharmacists and technicians assigned to federal agencies, and retired or reserve members of the U.S. Army, Navy, Air Force, Coast Guard, and Public Health Service.

The JFPS Contributed Papers Program is designed to challenge federal pharmacy practitioners and researchers by providing a forum to share practice information, disseminate research findings, and educate colleagues. Conference registrants were invited to submit abstracts in 4 categories:

- Contributed Research Papers—presenting findings of original research on issues relevant to practicing pharmacists and pharmacy technicians
- Innovative Practice Reports—presenting new ideas or strategies for the delivery of patient care or creative applications of existing techniques and services
- Reports on Projects in Progress—presenting research papers or innovative practice reports in initial stages of outcomes reporting
- Encore Presentations—presenting posters previously included at other local, state, or national meetings

Posters were accepted in 4 topic areas: automation/technology, clinical pharmacy, hospital inpatient services, and pharmacy operations. The views expressed herein are those of the authors and do not reflect the official policy of the U.S. Department of the Air Force, Department of the Army, Department of the Navy, Coast Guard, Department of Defense, Department of Veterans Affairs, or the U.S. Government.

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Automation/Technology

1 - Advancing Patient Queuing Through ID Barcode Scanning and Single-Point Check-In.

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Objective: Air Force pharmacies have queuing systems where patients interact with pharmacy staff to activate their prescriptions. New features of queuing technologies have advanced kiosks to allow identification (ID) barcode scanning and pharmacies to collect the data. This study will explain the value of establishing a kiosk where patients can process prescriptions without interaction with pharmacy staff.
Methods: Prescription processing time was obtained from the queuing software and retrospectively reviewed in the 3 months prior to installation and 3 months afterward. The difference in processing time was evaluated using a paired *t* test ($P < 0.5$) to determine statistical significance. The following information was collected: allergy, pregnancy, flying, personal reliability program, and disability statuses. All information obtained through the kiosk was identical to the initial encounter. Hard stops where patients had to be called to a window to collect additional information were instituted. A technician was stationed in the lobby for 90 days to direct patients on how to use the kiosk. Customer service surveys were retrospectively reviewed from the date of installation to present.
Results: The average baseline prescription processing time was 16.75 ± 2.08 minutes for active duty and 23.42 ± 3.32 minutes for others with the previous system compared with 11.23 ± 1.15 minutes and 14.08 ± 1.65 minutes after implementation. Processing time improved 33% ($P < 0.0001$) for active duty and 40% ($P < 0.0001$) for others. Fifty-one customer service surveys were identified as being specific to the kiosk of which 41 (90%) were positive.
Conclusion: ID barcode scanning improved speed of service and was well received by patients. Current project exists for integration with other ancillary services. There are implications for patient queuing throughout the medical treatment facility if queuing technologies are authorized to connect to the electronic health record.

2 - Increasing Offline Replenishment Efficiency at a Highly Automated Mail Order Pharmacy.

Lavinghousez W, Burgess M, Wolforth D, Charleston Consolidated Mail Outpatient Pharmacy, Milosevic G, Ralph H. Johnson Veterans Affairs Medical Center, E-mail: Gordana.Milosevic@va.gov

Objective: The objective is to increase the average hoppers (large volume drug canisters for automation) filled per hour per station (hr/station) completed in the offline replenishment area at a large federal mail order pharmacy to 8.671 hoppers hr/station thus increasing prescription fulfillment.
Methods: Baseline data were collected for hopper replenishment during a 4-month period from June 2015 to September 2015. The average hopper hr/station rate was 5.57 and this was 44.3% below the entitlement rate of 10 hoppers hr/station determined by a Six Sigma breakthrough improvement calculation. While evaluating the hopper replenishment data, the potential reasons for replenishment inefficiency were also examined. In order to identify any deviations, a baseline process sigma was calculated. Along with collecting baseline data, the current process for hopper replenishment was assessed for each shift. Through the use of a fish-bone diagram, elements within the areas of method, man, material, machine, and measurement were identified as common factors that can be influenced to improve replenishment efficiency. The recurring themes, which were identified by the fish-bone diagram, were productivity standards, process sequencing, inventory retrieval, staff training, multiple hopper sizes, package size limitations, and maintenance issues. From this analysis, a baseline sigma of 1.86 was calculated and improvement strategies were implemented in May 2016. Final hopper replenishment data were collected for appropriate comparison with baseline data.
Results: Research in Progress. Implementing a new replenishment process is key because this change can improve the overall efficiency of medication dispensing from the tablet capsule automation. To effectively implement change, certain initiatives must be met, such as continuing to routinely monitor data reports and ensure consistency with productivity standards, maintaining updated training resources, and ensuring the use of new equipment and/or processes post implementation.

3 - Clinical Decision Support Data Analysis of Medication Order Checks.

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Objective: Computerized practitioner order entry using electronic health records with clinical decision support has the potential to increase patient safety of medication orders by warning the practitioner of orders and order combinations that represent potentially harmful clinical situations. Practitioners can be overwhelmed by an alert system that provides an unnecessarily large number of order checks, including those with marginally low clinical utility. The objective is to analyze medication order check data to increase patient safety and decrease prescriber order check fatigue.
Methods: Data from a large health care system were analyzed. Data points include order check instances from medication order check alerts for both inpatient medication orders and outpatient prescriptions with details for the type and severity of order check and the text reason for override. The results of analysis to date have resulted in software change requests to the order check system. The system's current state captures medication order check information, including free text override reasons and justifications. The future state will include a standard list of override reasons for prescribers to select, along with an audit trail of "abandoned" orders or those orders cancelled during and as a result of the order check. Future data analysis will be performed by pharmacist subject matter expert software analysts devising custom reports using Structured Query Language (SQL) across an enterprise-wide corporate data warehouse. Medication order check data points will be reviewed at the individual drug and order level to determine system or support file changes that can be implemented to increase patient safety and/or decrease practitioner order check fatigue.
Results: Research in progress.