AF Pharmacy Optimization Project - An Update

Lt Col Scott A. Sprenger, Pharm.D., BCPS

As military pharmacy has struggled with increased prescriptions and slowly decreasing staffing in recent years, the need for optimizing MTF pharmacy resources was apparent. With the primary goal of improving patient safety while increasing the efficiency of the medication dispensing process, a $25M AF Pharmacy Optimization Project was approved by OSD in Dec 01. This optimization plan included use of laser bar code printers, a standardized medication error reporting system, automated dispensing and checking system, centralized refill processing center and technician automation education. This article outlines the implementation progress and status regarding each component of the optimization plan. For a more detailed description and background of each component of the optimization plan, please see the pharmacy optimization white paper on the AFMLO website (https://afml.ft-detrick.af.mil/AFMLO/fom-e/HTMindex.cfm).

Laser Printers

All AF pharmacies are now equipped with high-speed Lexmark laser printers. These printers have provided significant advantages as compared to their older dot matrix counterparts. Superior label legibility, bar code capability and standardized patient information are key improvements. Additionally, the standardized bar coded label is essential to ensure compatibility with the new PharmASSIST® prescription dispensing and checking system equipment currently being implemented. We have received a number of requests for the development of label sheets for processing refills which would have multiple labels without the medication information part attached to the sheet. Increased potential for bagging related errors and adhering to what are now national standards of providing medication information with each prescription (including refills) prompted the Tri-Service Pharmacy Board of Directors to abandon the development of multi-label sheets. The concept of smaller single sheet labels without information sheets attached is still being considered. These labels would minimize the bulk of wasted labels/information sheets associated with label reprints and edits.

Medication Error Reporting System

MedMARx is a web-based medication error reporting system by United States Pharmacopeia (USP) and is currently being utilized by all three armed services. The optimization project funded a one-year subscription for all AF MTFs in FY03 and a centrally funded subscription renewal for FY04 is being coordinated by DoD Patient Safety. All MTFs should now be reporting medication errors through this system. An on line training tutorial is available. For renewal information you may contact Robin Stoner from USP at (301) 818-8313, 1-800-227-8772 x8546,

or rds@usp.org. DoD and AF are now able to track and trend medication errors through a MedMARx program call the multi-facility module. DoD Patient Safety and AF Pharmacy leadership are currently working to develop standardized monitoring and error definition guidance for MTFs. Standardized error reporting can lead to quicker problem detection and resolution and ultimately lead to a safer pharmacy service.

Standardized Automation Equipment

The PharmASSIST® automation by Innovation Associates is outpatient prescription checking and dispensing equipment that is being implemented AF-wide. The implementation schedule was initially established with a geographic plan of North to South, West to East and CONUS to OCONUS to minimize travel time loss for the implementation team(s). Additionally, the schedule was modified to accommodate sites with renovation plans as much as possible. Sites with existing automation were prioritized lower than sites with minimal to no automation. The DoD information technology security certification and accreditation process (DITSCAP), certificate of networthiness (CoN) and certificate to operate (CtO) requirements took much longer than expected, but with the standup of the second and third Innovation installation teams, the schedule is now in full swing. The schedule however, still remains somewhat fluid to accommodate for renovation delays and remaining AF Form 601 package processing. Nearly all CONUS sites have completed the required 601 packages. If your site has not already submitted this package, it is very important to complete this paperwork. For instructions on completing the 601 package, see the AFMLO website https://afml.ft-detrick.af.mil/AFMLO/fom-e/HTMindex.cfm (see Pharmacy Automation). Of note, the sole source letter is no longer required as the equipment is now listed on the Federal Supply Schedule. For those sites still requiring a site visit, Jeff Castille from Innovation will contact you to coordinate a time and will provide an equipment proposal for your pharmacy. This proposal must accompany the 601 package. OCONUS site visits are currently being coordinated. The AF 601 packages must be coordinated locally with medical logistics, then through the MAJCOM to AFMLO. AFMLO will coordinate with Col Meier for approval. Once approved, the funds can be obligated and the purchase order is generated by DSCP. The process usually takes approximately 8 weeks to complete before equipment can be shipped to the site.

The success of an installation is directly related to the level of advanced site preparation. Each site receives a pre-installation guide, installation checklist, and an outline of the typical installation process. These documents are all available on the Society of Air Force Pharmacists website, www.af-pharmacists.org (see news: Pharmacy Automation Project). Each site also receives a post installation survey with data recorded for the 2-week, 4-week, and 8-week post installation time frames. These surveys have provided valuable feedback to identify problems and potential areas for improvement on future installations. The survey

summary including site-specific **lessons learned**, is also available on the society (Pharmacy Automation Project) website. Please visit the website and start the preparation process early. These documents can help prevent sites from having to learn the same lessons (the hard way) at each and every install.

A number of improvements to the automation software/system have been made as a result of feedback from the field. The latest software version gives more functional versatility with less hardware. It is now possible to for multiple systems within one location (example: A Satellite Pharmacy that processes New Civilian and Refill prescriptions) to communicate with each other, providing the flexibility to move an order from one filling line to the other if necessary. Another upgrade is the consolidation of signature capture for various operations, which allows dispensing out of any window regardless of where the prescription was filled. Also, the system will now allow the capability of having one workstation dedicated to narcotics instead of one per filling line. Other improvements in the software are allowing integration of the filling, checking and dispensing process between ScriptPro® and PharmASSIST®. ScriptPro® has developed a new vial label which contains a bar coded NDC. This makes it possible to process prescriptions filled by a ScriptPro to be integrated into the entire PharmASSIST Enterprise workflow.

In addition to dispensing accountability, the signature capture devices can also be used to document HIPAA compliance. The signature capture screen can be modified to include a HIPAA statement of which the patient can acknowledge receipt when signing for a prescription. Instructions for modifying the signature capture device for HIPAA compliance can also be found on the society web page (Pharmacy Automation Project). The use of signature capture is important, not only for accountability and HIPAA documentation, but the lack of it's use can actually affect the functionality of the system. Once signature capture is turned on, prescriptions will accumulate in the system que if they are not signed for when picked up by the patient. Large numbers of "unsigned" prescriptions in the que can significantly slow the system down and cause unnecessary delays in the process as a whole.

As with all projects funded with optimization dollars, there is a reporting requirement for the progress of the program. Since the main project goals were to improve safety and efficiency of the outpatient prescription dispensing process, the corresponding metrics of outpatient prescription errors and outpatient prescription workload are currently being monitored and reported. Preliminary review of the workload for sites with installed PharmASSIST® equipment indicates that 77% of these sites have had an increase in workload as compared to the same period of time the previous FY. Additionally, 86% of the sites, that have reported their error data, have seen a decrease in the number of errors since equipment installation. Monitoring of these metrics will continue through project completion.

In addition to the automated prescription filling, checking, and dispensing equipment, a number of sites were selected as potential candidates for robotic automation. Innovation Associates has developed an end to end automated prescription processing system that augments their existing dispensing technology and workflow software with robotic handling and tote delivery system. This system will serve as a key component for the Regionalized Refill Center concept to be piloted at the USAF Academy. Production of the first system is near completion and installation is scheduled for at the USAF Academy later this fall. The Academy pilot will evaluate the feasibility of a regionalized refill center by taking on the prescription refill workload for Peterson AFB and Fort Carson. If this pilot test proves successful, the refill center concept could be expanded to other potential sites. Robot placement may occur regardless of the refill center pilot outcome.

The final component to the pharmacy optimization plan included incorporation of automation equipment training for pharmacy technicians. The PharmASSIST® Enterprise System has been installed at the Sheppard School House, and standardized training is now being development for the pharmacy technician school curriculum. New pharmacy technicians will come to their first duty assignment with an understanding and familiarity with the automation equipment. This program will help to minimize local training requirements and allow technicians to be more efficiently utilized upon arrival.

We are well on our way to optimizing AF Pharmacy through standardized automation for the outpatient dispensing process. Many components of the Pharmacy Optimization Plan are already completed, while others are just beginning. Implementation of the new automation equipment can help us meet the goals of the optimization plan. Improving the safety of the dispensing process should always be our number one priority. Careful planning and commitment can help to ensure implementation of equipment that may also improve the efficiency of the medication dispensing process.

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