



ASHP Section of Pharmacy Informatics Section Advisory Group on Clinical Informatics Systems: Assessment of the Role of Pharmacy Technicians in Informatics - 2010

Executive Summary

Informatics is a core component of pharmacy technology and medication management. Pharmacists have been involved in the development and evolution of informatics relative to the electronic health record. ASHP recognizes pharmacy informatics as a critical subset of medical informatics focusing on the use of information technology to optimize medication use. Medical informatics includes order-entry systems, automated dispensing devices, bar-code packaging devices, bar-code medication administration (BCMA) systems, smart pump technology, clinical integrated systems and system/application maintenance.

The clinical informatics systems segment of pharmacy informatics and technology created a survey to obtain information relative to the role of pharmacy technicians in informatics. The survey was distributed to 4371 primary members of the ASHP Section of Pharmacy Informatics and Technology and Section of Pharmacy Practice Managers. The team received 509 responses yielding a response rate of 12%.

The results are presented beginning with the number of pharmacy technicians in an informatics role and ending with the support roles pharmacy technicians fill relative to informatics. 74% of the respondents were from a health system or community hospital and greater than 50% were pharmacy directors or assistant directors. Overall 57% of the hospitals identified a pharmacy technician in an informatics role. Pharmacy technician responsibilities encompass pharmacy dispensing systems, automated dispensing cabinets, smart pump technology, BCMA and electronic intervention systems.

Pharmacy technicians are assuming informatics responsibilities which do not require clinical decision support or clinical knowledge. They are allocated roles in system management relative to automated dispensing devices, pharmacy automation maintenance, automation training/educating and bar-code processes. They work in conjunction with the informatics pharmacist assisting in software and hardware system/application maintenance. The survey revealed pharmacy technicians are assuming support roles in informatics such as data collection, report preparation and management of pharmacy information networks.

The survey results indicated the importance of the informatics pharmacist in medical informatics and the support role pharmacy technicians can provide. Pharmacy technicians can assume the automation















support and distribution roles allowing the informatics pharmacist to concentrate on the clinical decision support functions.

Methodology



- Administered via an email invitation, linking participants to an online survey instrument
- Sent to 4371 primary members of the Section of Pharmacy Informatics and Technology (SOPIT) and Section of Pharmacy Practice Managers (SPPM) with email addresses on record.
- Launched October 21, 2010; closed November 5, 2010 (one reminder email to nonresponders sent)
- 509 responses received yielding a response rate of 12%

Margin of error is \pm 4% at the 95% confidence level (higher when data is disaggregated)

Top-line Results

1. Which of the following technologies have been implemented at your organization: (please select all that apply)			
Answer		Response	%
Automated dispensing cabinets		475	94%
Inpatient pharmacy system		449	89%
Smart pumps		359	71%
eMAR		358	71%
TPN compounders		287	57%
Automated packager		272	54%
CPOE		269	53%
Outpatient pharmacy system		263	52%
BCMA		209	41%
Carousels		175	35%
Electronic intervention system		170	34%
Robotics		149	30%
Clinical surveillance system		120	24%
Other (Please specify)		19	4%

Other (Please specify)
ADR electronic reporting
Academia
bar code order filling and checking and shipping; oral Rx fill robot to be installed by EOY 2010
Claims processing & analysis
Oncology system, L&D system, ED System
electronic medical records interfaced with a lot of other systems like pharmacy
CPOE 1/2011 and Carousels to replace robot 10/2011
Standardized IV concentrations and pre-packaged narcotics
PARx
controlled substance cabinet
bar coded content verification
DoseEdge
Automated Narc Vault
IV robotics, UD robotics
DoseEdge
docuTrac
EPIC implementation/build
educational institution
EHR





2. Do you have one or more pharmacy technicians in an informatics role at your organization?			
Answer		Response	%
Yes		292	57%
No		217	43%
Total		509	100%

3. How many pharmacy technician(s) are in an informatics role?				
#	Answer		Response	%
1	One		133	46%
2	Two		76	26%
3	Three		25	9%
4	Four		18	6%
5	More than Four		36	13%
	Total		288	100%






4. The pharmacy technician role relative to informatics should include.....? (Please select all that apply):			
Answer		Response	%
Troubleshooting hardware and software issues		250	87%
System maintenance		235	82%
Application maintenance		230	80%
Reporting and data mining		210	73%
Drug database maintenance		202	70%
Security access management		193	67%
Billing file management		192	67%
Workstation support		189	66%
Software upgrades		182	63%
Management of system integration		127	44%
Clinic decision rule writing		32	11%

5. Please indicate the pharmacy automation responsibilities of pharmacy technicians at your organization: (please select all that apply)			
Answer		Response	%
Provides oversight on automated equipment operations and maintenance		241	86%
Provides staff training		238	85%
Serves as primary contact for automated equipment issues		223	80%
Coordinates installation of automated equipment with vendor and other services		216	77%
Assists in selection of automated equipment		119	43%
Other (Please specify)		14	5%

Other (Please specify)
oversees billing from automation
Drug database maintenance
project management
use of application
Primary contact for automation reporting questions
Refilling Machines
implementing as primary contact. In training now
works closely with Pharmacy Buyer (backorders, product changes, etc.)
drug database maintenance, running reports, software upgrades, troubleshooting
see above
little other than assisting other techs to learn
Report generation
EHR medication order-build and orderset build along
academia

6. Please indicate the educational support provided by the informatics pharmacy technician at your organization: (please select all that apply)			
Answer		Response	%
Train staff on automated equipment		242	90%
Provide data support on all pharmacy software programs		153	57%
Train staff on all information technology systems		135	50%
Other (Please specify)		13	5%



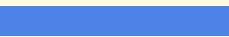






Other (Please specify)
train staff on most it systems
basic on-the-job training
Billing
real-time end user troubleshoot/educate/review
supports pharmacy in cpoe
technical programming web development and other classes
in training to support all software
test upgrades
Help set up equipment for continuing professional competence mandatory meetings of the staff
see question #2 above.
Data recovery when systems fails

7. Please indicate the pharmacy technician information technology support roles at your organization: (please select all that apply)			
Answer		Response	%
Gather data and prepare reports for informatics pharmacist/management		218	81%
Knowledgeable in Excel and Access software		177	66%
Responsible for development and management of pharmacy databases		170	63%
Responsible for development and management of pharmacy information networks		89	33%
Other (Please specify)		21	8%

Other (Please specify)
knowlegable in report writing application
hardware maint.
knowledgeable in Excel
Diversion/Usage deviation
ADC maintenance and installation
project management
Knowledgeable in Excel, Assist in managing pharmacy databases
barcode maintenance only
ADM maintenance
Correct Billing Errors
Billing review and resolution
applications consultation
see question #2 above. our tech does all that as 1FTE
Plan and execute test schedule for every upgrade
management of pharmacy databases on automatic dispensing machines
all support roles listed in question 2
hardware
Project management
troubleshooting and system support

8. Does the informatics pharmacy technician have on-call responsibilities?			
#	Answer	Response	%
1	Yes	119	42%
2	No	167	58%
	Total	286	100%

9. Please indicate the training received by the informatics pharmacy technicians(s) at your organization: (please select all that apply)

Answer		Response	%
Vendor training		209	75%
CPhT		183	65%
Spreadsheet management		137	49%
Database set up and management		105	38%
Report writing		87	31%
Project management		53	19%
SQL		38	14%
Programming languages (HTML, JAVA)		35	13%
Other (Please specify)		15	5%

Other (Please specify)
On the job training
no formal training, all ad hoc
OJT
OTJ
OJT
holds IT related degree
BS - Information Systems
Based on the Tch's responsibility, they receive training
Pyxis training
I am not certain of all training
BS Computer Science
Super user training
OTJ
academia

10. Which of the following best describes your work setting?

Answer	Response	%
Health system/ Hospital	200	40%
Community (not for-profit) hospital	172	34%
University hospital	52	10%
For-profit hospital	19	4%
Government agency	15	3%
Critical access hospital	11	2%
College or university	10	2%
Other practice/work setting (Please specify)	7	1%
Ambulatory facility	5	1%
Community pharmacy	2	0%
Managed care/ HMO	2	0%
Medical office/ clinic	2	0%
Specialty pharmacy	2	0%
Consultant	1	0%
Home infusion pharmacy	1	0%
Industry setting	1	0%
Long-term care facility	1	0%
Pharmaceutical industry	1	0%
Home care organization	0	0%
Pharmacy benefit management (PBM)	0	0%
Technology-based industry	0	0%
Total	504	100%

Other practice/work setting (Please specify)

Pediatrics Hospital
Pediatric hospital
Rehab hospital
Rehab hospital-inpatient/outpatient, teaching education
Rehabilitation hospital
retail

11. Please indicate the number of licensed beds at your facility:				
#	Answer		Response	%
1	Less than 100 beds		63	13%
2	100 to 299 beds		111	22%
3	300 to 499 beds		119	24%
4	500 beds and over		181	36%
5	Not applicable		25	5%
	Total		499	100%

12. Please indicate your current role: (please select all that apply)			
Answer		Response	%
Director of Pharmacy		202	40%
Associate or Assistant Director of Pharmacy		88	17%
Informatics Pharmacist		81	16%
Other primary position (Please specify)		48	10%
Other supervisory position		43	9%
Technician Supervisor		18	4%
Informatics Technician		17	3%
Informatics/technology specialist		17	3%
Staff pharmacist		17	3%
Medication safety coordinator		15	3%
Clinical pharmacist – specialist		8	2%
Technician		8	2%
Clinical Coordinator		7	1%
Faculty		7	1%
Clinical pharmacist - generalist		5	1%
Resident		5	1%
Student		0	0%

Other primary position (Please specify)
System Director of Pharmacy
V (responsible for Pharmacy
VP
Chief Pharmacy Officer
Manager Pharmacy Information Systems
Pharmacy Manager
Quality Coordinator
Technology Manager
CLinical Pharmacy Manager
Operations Coordinator
Operations manager
VP Ops
Business Manager
Operations Specialist
Senior Manager of Pharmacy Technology Services
Part-time
Pharmacy IT Manager
Pharmacy buyer
Director IT Program Management
Systems Administrator
Director Pharmacy Informatics
formulary management, system pharmacist, IS liaison
Manager, Pharmacy Automation
manager
Director Pharmacy Informatics
Professor
part time
VP Pharmacy SVCS
IS Clinical Manager
Director, Pharmacy Informatics
Pharmacist Consultant
Pharmacy Consultant
Clinical Pharmacy manager
Technical Support Manager-technician
pharmacy systems analyst
consultant

Director - clinical information systems manager
Coordinator
Professor
Pharmacy Information Systems Coordinator - Pharmacist
Pharmacy Systems Administrator
Pharmacy Manager
Practice Specialist - Finance
Pharmacy Operations manager
Admin Resident
Director of Technology and Process Optimization
Pharmacy Director, retired

13. Please provide any additional comments below:

Text Response

postmarketing safety electronic reporting coordinator for FDA

One technician employed and reports to Pharmacy. Three technicians employed by IT department with no reporting relationship to Pharmacy-other duties in addition to Pharmacy.

Most answers are for our entire health system not just my facility.

We have techs that play a role in systems management in the course of their day to day activities including barcode scanning during order receiving in the warehouse, ADM management of new users, charge processing of ADM transactions and technicians that run the robot but they are not a division of information management.

We employ Pharmacy Techs in Informatics roles at the system level, but not within my facilities.

technicians are corporate positions that service four hospitals

Technicians do handle all Pyxis issues and run our packaging machine. We don't designate them as informatics positions.

providing support in our application of barcode technology for med safety

Have had technicians in the IT role previously. Look forward to that again.

There have been increased activities for IT department to move the pharmacy informatic staffs to work under IT. Taking the expertise out of pharmacy will result in a tip of balance. Pharmacy informatic staff using their knowledge to ensure the system is clinically sound. Now that they are working for IT, they are under the pressure to let things go because it is too difficult to program. The watch dog function is lost. ASHP should address this concern.

There is a strong need for both a pharmacist and pharmacy technician in Informatics. Much of the work that does not require clinical decision support or clinical knowledge can be accomplished by a well-trained technician.

A skilled and motivated pharmacy technician dedicated to informatics makes so many more things possible.

I would be interested in obtaining a copy of a job description for an Informatics Technician if one is available. Thank you.

We don't have pharm. techs in official informatics roles, but our lead tech assumes responsibilities w/ Cardinal Assist / ParX. We have 2 RNs in informaticist roles and my Operations Supervisor spends approx. 30% of his time in

an informatics role
informatics techs are a critical resource; we are fortunate we have been able to expand the number of positions as our technology needs have grown!
Clearly defined roles and guidance are necessity as this role will continue to grow. Thank you for taking interest in this
While we are a part of a health system, my survey responses are limited to the pharmacy technicians used in informatics roles in the Ambulatory areas only.
Currently, as a pharmacist, I manage our pharmacy systems in addition to our nutrition and radiology systems. In addition, I over see our interfaces and write medical logic modules for clinical decision support.
We have a variety of technicians with specialized skill sets that can assist us in many aspects of informatic management, testing, implementation, and support.
We are too small to allow either pharmacist or technician to specialize -all have to know the job because we are open 7 days a week and any shift might have to address an issue. We have 1 Director, 4 pharmacists and 4 techs and 1 buyer. All techs are cross-trained, but we have one super user pharmacist and tech
We have a lot of technical help in our area, their responsibilities vary based on their area of expertise, from help desk, managing servers, managing databases, managing pharmacy systems, testing, writing System Change requests, helping with SOX requirement for data pull or data comparison, and many other
We also have a PT Research assistant with a LPN back ground
We have an IT resource that devotes time to pharmacy projects and issues. He has been a great asset to taking updates and working through ADC issues, Robot issues, etc.... The clinical updates, etc... are managed by a few pharmacists and management.
Our informatic's team (which includes a tech) focuses their efforts on our EHR. The team may be involved with the integration side of the autmated technology to the EHR, but they do not handle the day to day responsibilities and trouble shooting.
All of our technicians operate the pharmacy software for data entry, and take major role in Robot maintenance
Technician is deeply involved in day-to-day trouble shooting and problem solving.
We are implementing a Pharmacy tech Infomatics position and training in various databases. Currently proficient in Pyxis cabinets carousels and Intellifill Robot.Plan on expanding over the next year. Carousel data management shared by Operations mangers (pharmD) and Purchasing Coordinator (Pharm Tech).Looking for ways to increase tech involvement and relieve Operations coordinator for supporting new information system and CPOE.
my system is supporting the addition of an informatics techs to the individual hospitals staff as we expect BCMA, CPOE in the next year. My administration is not supportive currently of adding any additional staff.
We have a Pharmacy system analyst position that is a non-RPH and a IT Pharmacist (PHarmD) position that coordinate responsibilities for the technology we have. The Pharmacy system analyst is a home grown person who has gained a vast knowledge of the charge master and technology systems we use to create medication safety. A technician with the right technology aptitude could be grown this way as well. A systematic and consist approach as well as QA of databases are key to success.
It is important to note that our informatics pharmacy techs (called Sr Applications Analystsin our HR system) report to a pharmacist who has a pharm D and is the Pharmacy Informatics Administrator for our system. For the clinical decision making pathway development, a matrix of informatics analyst, informatics pharmacist and clinical pharmacy director develop the pathway and then vet it with the management team and a representative group of pharmacists that we call the IT Design Team.
We are kinda different. Admin wanted a dedicated (1FTE) RN for the role of clinical informatics. However no RN wanted it & one of our highly qualified techs applied & impressed admin enough that they hired her & paid her RN

wages. She has performed quite well at this job & the RNs love her help & it frees us RPhs up from constant interruptions & computer issue problems.
Tech helps with Omni & implementing Epic bar coding
Our Pharmacy Technician has done an excellent job. We are looking at adding an additional 1/2 pharmacy technician position to the team as we migrate the current staff members role to include CPOE and EMAR. A pharmacy technician should be part of every pharmacy IS team!!
I need at least 2 automation technicians for operations support....working on proposal/justification currently! Our Pharmacy IT Team (corporate level) has 1 technician, but she is not in operations.
The technicians do not perform tasks that require pharmacist oversight (set up new drugs), but they do perform price changes, create alert with the direction of a pharmacist, training, security access to computer, resolve billing issues (wrong encounters or service dates), Pyxis issues, and robot issues.
There is an additional pharmacy technician that handles automation support, but that role is part of distribution not informatics.
We are about to add EMAR, CPOE, and BCMA. It is very difficult to convince the C-Suite that they need to invest in training beyond the couple of hours provided by the software vendor. I see a lot of really bad errors in the future as smaller institutions are forced to comply with carrot and stick regulations for which they have no resources that can provide safe, effective and timely support, let alone train an aging workforce in truly obscure technology (these systems are not i-Phones).
We use a full time informatics Pharmacist employed by the hospital. The CPOE vendor has a staff including a full time pharmacist and pharmacy technician employed by the CPOE vendor and billed back to the hospital.
Technician provides automated cabinet support and data associated with the operations of the cabinets only including user reports and no other automation in the pharmacy at this time.
There is a tremendous need to upgrade the roles of our technicians who support our automation and information service areas. The comparable roles for individuals in our corporate IT departments have stronger job requirements, higher levels of pay, but not any more important roles.
We do now have a corporate informatics pharmacist and two IT members are former pharmacy technicians.
We are part of a larger health system which employs pharmacy informatics resources [pharmacist, technician, other] from the corporate office.
Technicians are capable of many things. My primary informatics tech is an educator who takes responsibility for ADUs (drug content and reports), bar code mapping, narcotic storage vault, Baxa TPN compounding pump.
Involved in textbook reviewing and updating curriculum. Would love to hear how other technician educators add informatics into their curriculum.
The primary IS support system began as a pharmacy technician, however the roles evolved as we implemented more systems. The primary technician was promoted to "Field Engineer" and given a pay increase and additional responsibility. There are other technicians who assist in basic IS functions and are still classified as pharmacy technicians.