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Health Information Technology use in Iowa Pharmacies: A Study for Iowa e-Health

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Health Information Technology use in Iowa Pharmacies

A study for Iowa e-Health

Background

Iowa e-Health is a public and private collaboration that seeks to improve health care quality, safety and efficiency through the use of health information technology (HIT). This includes electronic health records (EHRs) to collect and store patient health information, and a statewide health information exchange (HIE) to share health records across the boundaries of individual care settings.

To better understand HIT use by a variety of health care provider types, Iowa e-Health, in collaboration with the University of Iowa Public Policy Center (UI PPC), conducted an assessment of HIT issues

facing health care providers in Iowa.

The current effort included five health provider settings: 1) home health, 2) long-term care, 3) pharmacies, 4) laboratories, and 5) radiology centers. This Brief presents information about the Pharmacy Assessment.

The assessments were intended to gather information about a range of health IT topics including: 1) provider health IT capabilities and preparedness to participate in a statewide HIE; 2) preferences for types of high value clinical data exchange or HIE services; and 3) benefits and barriers to health IT adoption.

Methodology

An on-line survey assessment was used to evaluate the use of HIT in Iowa pharmacies. The survey instrument was developed in collaboration with pharmacy content experts from the e-Health Assessment Subcommittee then pilot tested with several Iowa pharmacies. A comprehensive list of Iowa pharmacies was compiled based on a list provided by the Iowa Pharmacy Association, who obtained it from the Iowa Board of Pharmacy. On-line resources were then used to identify contact information for the pharmacies and to obtain the email address for the person most knowledgeable about HIT in the pharmacies.

The on-line survey process itself included:

- 1) An e-vite from IDPH Director Tom Newton requesting participation in the assessment survey (including a link to the website for completion of the survey),
- 2) A follow-up email from UI PPC requesting participation

3) Telephone follow-up calls to non-respondents from the UI Social Science Research Center to identify that the email reached the most appropriate person

4) Closing of the survey process after about 6 weeks. The data were then cleaned and the analyses began

Participation Rates

Of the 941 pharmacies identified in Iowa (523 independent, 418 chain/group), 70 completed a usable survey (41 indep, 29 ch/grp). Three of the chn/grp responses were completed by the headquarters representing all their pharmacies, so these responses were weighted. While the participating facilities were well distributed around the state, they are likely to be biased toward those more interested in the topic of HIT (not necessarily more likely to have electronic systems). Thus, we suggest the results from this assessment be used to evaluate potential trends rather than focusing on the exact percentages for any particular questions.

Content experts indicated that ALL Iowa pharmacies have some form of EHR in order to process their prescriptions



Alerts (drug-drug interactions), medication histories and patient diagnoses were among the types of information deemed most valuable for sharing by Iowa pharmacies

Pharmacies and EHRs

The content experts on the e-Health Assessment Subcommittee indicated that all pharmacies have some form of an electronic health record (EHR) in order to process their prescriptions. The electronic functions of their EHRs varied by type of pharmacy however and are shown in Table 1. Group pharmacies had EHRs that had more functions than Independent pharmacies.

Table 1. Functions of the EHRs

	Percentage of respondents		
	Independent	Group	Total
Received prescription electronically	76%	98%	95%
Transfer prescription electronically	17%	84%	74%
Send provider refill request electronically	61%	96%	91%
Relay clinical information taken by pharmacists to patient's physician or other care providers	15%	30%	27%
None of the above	24%	<1%	4%

The way that the EHRs connected technologically also varied by type of pharmacy. Independent pharmacies were more likely to utilize the Internet, while group pharmacies were more likely to utilize an Intranet (Table 2).

Table 2. Connection via an Internet and Intranet

	Percentage of respondents		
	Independent (n=36)	Group (n=144)	Total (n=180)
Internet	94%	61%	66%
Intranet	6%	39%	35%

Clinical services provided by Iowa pharmacies

Independent pharmacies were more likely to provide:

- Medical device education,
- Adherence to prescription regimes,
- Vital sign monitoring,
- Lab tests, and
- Home health services

Group pharmacies were more likely to provide:

- Organization of patient medical histories,
- Immunizations, and
- Adherence to prescription regimes

Storage of new clinical data by Iowa pharmacies

Almost all group pharmacies and about ¾ of Independent pharmacies stored new clinical data from patients in their EHR. Independents were more likely to also store it in a paper record (Table 3).

Table 3. Storage of new clinical data

Method of storing NEW clinical information	Percentage of respondents		
	Independent (n=40)	Group (n=111)	Total (n=151)
Within our prescription software	78%	92%	88%
A different clinical management software system	13%	5%	7%
Hard copy/paper records	50%	15%	25%

About ¾ of independent pharmacies stored new clinical data from patients in their EHR

Functions of EHRs for Iowa pharmacies

Among Group pharmacies:

- Patient medical history,
- MTM services,
- Vaccination records and
- Ability to communicate with external providers or PBMs

Among Independent pharmacies:

- Eligibility information,
- Clinical notes for non-billable services, and
- Fill status notification

Perceived benefits of EHRs in Iowa pharmacies

Most common potential benefits*:

- Timely availability of clinical information
- Patient safety
- Quality of patient care
- Disease management practices
- Provider workflow; efficiencies
- Communication with providers
- Patient monitoring and follow-up

*These were generally viewed more positively by group pharmacies

Most valuable information for sharing with other providers via an EHR:

- Alerts (drug-drug interaction),
- Medication Therapy Management (MTM)
- Medication histories and patient diagnoses

Group pharmacies were more likely to value:

- Ability to request consultation for clinical advice
- Progress reports
- Immunization status

Profitability, initial cost of installation and data security were among barriers preventing pharmacies without to an EHR from installing one within the next two years

Future uses of an EHR in Iowa pharmacies

Among those without an EHR

- Most were not planning to invest in an EHR in the next two years
- The main reasons were:
 - Profitability
 - Initial cost of installation, and operational costs
 - Data security

Among those with an EHR

- Over half were 'very likely' to invest in their system in next two years
 - Costs and product selection were of most concern
 - Slightly more likely to be concerned among Independent pharmacies

Health Information Exchange and Iowa pharmacies

Interest in participating in a Health Information Exchange (HIE)

- Over half were *very interested* (26%) or *somewhat interested* (29%) in participating in a HIE
 - Group pharmacies more interested than Independents

Major concerns with participating in a HIE

- Possible need to change their system
- Initial and operational cost of EHR system (more concern among Independents)
- Potential liability
- Client privacy

Summary

Virtually all pharmacies in Iowa have some form of electronic system for processing prescriptions. Group/chain pharmacies, however, were more likely to receive and transfer prescriptions and send refill requests electronically compared to independents. Currently, almost all group/chain and most independent pharmacies stored new clinical data electronically. Improved quality, efficiency, communications and accuracy were deemed as the benefits of electronic systems. Costs (initial and operational) were the biggest concerns among both those with and without an EHR. Most without an EHR were not planning to invest, while over half of those with an EHR were likely to invest in their system in the near future. Over half of the pharmacies had interest in participating in a HIE with potential costs, need to change systems, liabilities and client privacy the greatest concerns if they were to move in this direction.

Iowa e-Health

Iowa e-Health is a public/private collaboration designed to improve health care quality and efficiency through the use of HIT.

For more information, contact:

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