Pharmacists' familiarity, utilization, and beliefs about Health Information Exchange: A survey of pharmacists in an Indiana pharmacy organization

Allison D. Held, Lacie J. Woodall, and John B. Hertig

Abstract

Objective: To gauge pharmacists' familiarity, utilization, and beliefs about Health Information Exchange (HIE).

Methods: A survey questionnaire was developed by the authors in Qualtrics (Provo, UT) and administered to 358 Indiana Pharmacists Alliance (IPA) members via e-mail listserv in May and August 2013. The questionnaire consisted of 18 questions on familiarity, utilization, and beliefs about HIE.

Results: The response rate was 19% (67/358). Pharmacy practice experience of respondents ranged from 0 to 5 years (18%, n = 12) to more than 20 years (61%, n = 41). More than one-half (70%) of respondents practiced in hospital settings. Many respondents (75%) were familiar with the concept of HIE; 54% currently use some type of HIE technology. Nearly all respondents felt that data in electronic health records (EHRs) should be shared between pharmacists and other health care providers. Respondents identified improved coordination of care as the greatest potential benefit, and difficulty implementing and maintaining technology as the greatest barrier of HIE.

Conclusion: Many respondents were familiar with HIE and in favor of sharing patient records between providers. Respondents agreed that HIE has the potential to improve coordination of care but were concerned about implementing and maintaining technology. Larger pharmacy samples should be studied to determine how the results of this study compare to pharmacy populations at state and national levels.

Keywords: Health Information Exchange, technology, electronic health records, pharmacists, meaningful use.

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The Office of the National Coordinator for Health Information Technology (ONC) was developed in an effort to combat rising health care costs and improve the safety and efficiency of health care in the United States.[1] In 2009, the Health Information Technology for Economic and Clinical Health (HITECH) Act incentivized providers to implement health information technology and adopt electronic health records (EHRs) in many practice settings. Among various funding areas is health information exchange (HIE), defined by the Agency for Healthcare Research and Quality (AHRQ) as "the process of sharing health care data among individuals, institutions and health care service providers in order to improve the process, quality, cost, and safety of health care."[2] Goals of expanding HIE include standardizing interoperability of data exchange at local, state, and national levels, promoting patients' involvement in their own health care, reducing medical and medication errors through provider communication and information sharing, reducing health care costs through avoiding duplication of services, and improving automation of administrative functions.[1]

To encourage the development of statewide HIE networks, ONC created the State HIE Cooperative Agreement Program in 2010. Among HIE state leaders, Indiana sustains the largest and most established HIE organization in the United States.[3] Indiana Health Information Exchange (IHIE) connects 94 hospitals and 25,000 participating physicians to serve 10 million patients. One example of an IHIE system is the Indiana Network for Patient Care, which provides physicians with patient information from more than 90% of hos-

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pital care in the Indianapolis area, including radiology, operative notes, pathology reports, medication records, and discharge summaries.

Physicians' beliefs about HIE have been assessed within several statewide HIE networks. A survey of physicians in Massachusetts regarding their use and attitudes toward HIE found that more than 70% of physicians had a positive attitude about HIE and believed it could reduce health care costs, improve quality of patient care, and save time.[4] However, physicians were concerned about patient privacy and cost of HIE technology. A survey assessing behavioral health providers' beliefs about HIE in Nebraska showed that most providers are supportive of HIE and believe it will improve care and communication but are concerned about the cost and time burden of implementing the technology.[5,6]

While physicians' beliefs about HIE have been explored, pharmacists' beliefs about HIE are not well-defined in the literature. One study that assessed EHR adoption by Nebraska pharmacists demonstrated that pharmacists were not widely using EHRs in 2008, and the ones who were, practiced primarily in hospital settings.[7] Very few pharmacists had access to EHRs for their patients created by other providers, but many felt they should have access to these records. The study demonstrated low uptake of EHRs, but the authors discussed the importance of pharmacist knowledge and participation in HIE networks as physicians continue to adopt these technologies.

In the development of a statewide HIE/EHR system in Arizona, a pharmacy focus group identified e-prescribing as an important feature because it would likely reduce medication errors and improve communication with physicians.[8] In addition, the Pharmacy Health Information Technology Collaborative provides a national platform for collaboration and representation of all pharmacy practice areas in the implementation and growth of HIE.[9]

In an era of mandated health care technology growth, pharmacists' involvement in HIE is imperative to all areas of health care delivery. As the medication use experts, pharmacists serve a major role in the exchange of patient information to nearly all settings. The impact of HIE on pharmacy practice offers opportunities for pharmacists to expand their clinical services and build relationships with providers, but pharmacists' current involvement in HIE may be limited by their type of practice setting or the perceived barriers of HIE in pharmacy.

Objective

The objective of this cross-sectional study was to gauge pharmacists' familiarity, utilization, and beliefs about HIE among members of an Indiana pharmacy organization.

Methods

A survey questionnaire was developed by the authors in Qualtrics (Provo, UT). Questions were derived from previously validated physician surveys[4–6] and one pharmacist survey.[7] A pilot survey instrument was reviewed by a panel of five pharmacists representing academia, community practice, hospital practice, and one pharmacy student. Reviewers provided feedback to improve clarity and applicability of questions.

The questionnaire consisted of 18 questions assessing respondents' demographics, familiarity with and use of HIE supporting technology, and beliefs about HIE. The study received exempt status through Purdue University Institutional Review Board. Survey respondents were provided with the AHRQ definition[2] of HIE on each page of the questionnaire and asked to consider this definition of HIE as well as any personal experiences with HIE as they answered the questions.

The survey was administered two times (May and August 2013) to Indiana Pharmacists Alliance (IPA) members via e-mail and a listserv containing 358 active e-mail addresses as of May 2013. IPA active membership information, including member e-mail addresses, is updated annually when membership is renewed. No incentives were provided to survey respondents. Data collection ended September 30, 2013. Post hoc analysis of subgroups, such as early versus late responders, was not performed. Student IPA members were excluded from data analysis because of the small number of student respondents (n = 16). No statistical tests were performed on collected data.

Results

The response rate was 19% (67/358). Respondents represented a range of pharmacy practice settings and years of experience (Table 1). Many were familiar with the concept of HIE before this survey, and more than one-half currently use HIE-supporting technology in practice.

All respondents believed the benefits of HIE outweigh or potentially outweigh the barriers. A majority of respondents identified improved coordination of care as the greatest potential benefit of HIE and difficulty implementing and maintaining technology as the greatest potential barrier (Table 2).

Discussion

Most respondents were familiar with HIE, suggesting implementation of HIE-supporting technology is in progress in many settings. However, 25% of respondents were not familiar with HIE before the survey. Unfamiliarity may be due to implementation of EHRs as a rate-limiting step in the development of HIE networks. This study highlights the issue that some practice settings have not adopted an EHR system and are still using some paper records. However, the growth of EHRs