Pharmacy and primary care perspectives on e-prescribing in a rural community: A focused ethnography

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Abstract

Background: Electronic prescribing (ERx) is the ability for prescriber to send a digital prescription directly to a pharmacist through a dedicated secure network. A number of federally funded incentives such as the health information technology for economic and clinical health (HITECH) and Meaningful Use standards have led to ERx implementation. ERx is an integral part of primary care practice and today most community pharmacies are enabled to accept e-prescriptions. Little is known about the experience of rural pharmacists, primary care providers and patients regarding e-prescribing. This paper reports on the results of ERx from their perspectives. The findings are a portion of a larger qualitative descriptive study focused on the meaning of Meaningful Use in remote rural communities. One remote rural community in the Pacific Northwest was used for this research endeavor.

Objectives: Explore understandings of e-prescribing from both pharmacist and primary care provider perspective.

Explore patients’ understandings and experiences of e-prescribing.

Methods: The conceptual model for this research was the Ecological Transactional Model. This model informed the research design, interview questions and analysis. A qualitative descriptive methodology – focused ethnography was used for this study. Six key informant interviews, 14 patient interviews and 15 hours of participant observation provided the data. Data analysis occurred collectively between a social pharmacy researcher, a primary care nurse practitioner–researcher and pharmacy graduate students. The research qualitatively identified contextual understandings and dimensions of ERx in this setting.

Results: Based on a focused ethnographic methodology, contextual understandings of rurality and role identity, both pharmacist and primary care provider, were explored. Perspectives on ERx of patients, clinic manager and RN staff were also elicited. Three dimensions of ERx were identified – technological, structural and communication.

Discussion: The structural, technological and communication dimensions are essential in understanding e-prescribing across settings and addressing digital divides in our health care system. Implications for interprofessional pharmacy education were addressed. Understanding the rural context and the need for
role adaptability has implications for health care policy. Additional research is needed on the role of the rural pharmacist and how best to interact with primary care providers and patients.

Keywords: Electronic prescribing; Pharmacist; Primary health care; Rural population; Digital divide

Introduction

E-prescribing (ERx) is the ability of a prescriber to send an accurate, error-free and understandable prescription directly to a pharmacy through a dedicated secure network. ERx and, in general, most prescribing occurs in an ambulatory care setting where prescribing errors occur frequently. ERx is believed to make the prescribing process safer and easier.1

Health policy and e-prescribing

Initially, ERx was promoted through the Medicare Prescription Drug, Improvement and Modernization Act (MMA) of 2003 and further refined with the implementation of Medicare Part D prescription drug plan in 2006. MMA and Medicare Part D drug plan allowed providers and pharmacists to voluntarily e-prescribe. In 2008, the Medicare Improvements for Patients and Providers ACT (MIPPA), also known as the “ERx” incentive program, accelerated e-prescribing for Medicare recipients by offering financial incentives for physician providers and pharmacists. For ambulatory care settings, the Health Information Technology for Economic and Clinical Health (HITECH) Act and Meaningful Use standards set by Centers for Medicare and Medicaid incentivized higher levels of electronic health record (EHR) implementation by primary care and other ambulatory care providers.1,2

As of April 2014, 70% of physicians and other primary care providers were e-prescribing using an EHR on the Surescripts™ network. In the same year, 96% of community pharmacies were enabled to accept e-prescriptions.2,5 Enabling the Surescripts™ network in community pharmacies and the impetus of Meaningful Use standards in primary care have resulted in ERx being fully embedded in community based pharmacy settings.

Rural primary care/pharmacy settings

Research on the ERx process was conducted in New Jersey in five exemplar primary care practices. These practices all used a “super user” – a provider champion. To assure ERx was successful, both internal IT support as well as vendor support was available to the practice.2 For rural primary care practice, however, challenges exist with this model as there are usually no more than four providers per site and it is difficult to have internal IT support with smaller practices. In addition, the concept of super users might not be meaningful in a smaller practice setting. Local vendor support may not exist or may be limited in rural areas.

In rural primary care, additional challenges exist with EHR implementation and ERx. Only 14% of practices had implemented a commercial EHR and used the full range of EHR capabilities which included ERx in 2011. The range of basic EHR functions are to identify and maintain a patient record; manage patient demographics, manage problems and medication lists, clinical documents and notes, capture external documents, manage guidelines, protocols and patient specific care plans and generate and record patient-specific instructions.2 This basic range of capabilities was used by 46% of practices and 40% of practices used less than the basic range.6 For rural primary care practices, a number of barriers exist in implementation of ERx, including fewer financial resources, less human capacity and work longer hours for providers and larger patient loads. Primary care practices in rural communities often lack the necessary technical expertise and infrastructure to successfully implement EHRs and e-prescribing capabilities.7

Little is known about concerns and difficulties in e-prescribing for pharmacists in rural communities. One study in 2011 in Nebraska found 85% of rural community pharmacies accepted ERx compared to nationally, 95% of all pharmacies accept ERx. Those researchers found rural pharmacies cited concerns about transaction fees and maintenance costs as reasons for implementation delay. Rural pharmacies were challenged by work flow changes required in ERx. The researchers concluded that fees negotiated by larger chain pharmacies...
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