Differences in Electronic Medical Record Implementation and Use According to Geographical Location and Organizational Characteristics of US Federally Qualified Health Centers

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ABSTRACT

Electronic medical records (EMRs) are at the forefront of the national healthcare agenda and this paper examines EMR implementation and usage based on data from the 2009 Commonwealth Fund National Survey of Federally Qualified Health Centers (FQHC). Chi-square analysis was used to examine differences in EMR implementation and usage. Logistic regression analysis was used to understand the adjusted associations between EMR implementation and usage. A significant finding of this study was that simple EMRs were implemented in more than half of FQHCs in the Northeast, Southern, and Western regions of the United States and EMRs in more than half of the FQHCs in the Southern and Western regions are not even utilized. These findings indicate simple EMR usage and full EMR implementation need improvement to meet the requirements of the American Recovery and Reinvestment Act by 2014, or face reduction in Medicare and Medicaid reimbursements.

Keywords: Community Health Center, Electronic Medical Record (EMR), Health Information Technology, Healthcare, Information Systems

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INTRODUCTION

The electronic medical record (EMR) is a technology that allows physician practices to improve clinical efficiency and pursue more powerful quality improvement programs than is possible with paper-based records (Miller & Sim, 2004). Studies have shown that there are pros and cons to implementing an EMR system in a federally qualified health center (FQHC). A FQHC is a community health center designated by the federal government to provide comprehensive primary and preventive care, including health, oral, and mental health services to persons of all ages, regardless of their ability to pay or health insurance status. FQHCs charge for services on a sliding-fee scale that is based on patients’ family income and size. In return for serving all patients regardless of ability to pay, FQHCs receive consideration from the Federal government in the form of a cash grant, cost-based reimbursement for their Medicaid patients, and free malpractice coverage (HRSA, 2012).

McAlearney et al. (2010) showed that implementing an EMR system in a FQHC improved efficiency in clinical processes, but created barriers and challenges (e.g., high startup and training costs, compliance issues related to reporting, insufficient technical support over the lifetime of an EMR system, and system interface issues) (McAlearney, Robbins, Hirsch, Jorina, & Harrop, 2010). Miller and West (2007) acknowledge that the high startup cost is the primary barrier to full EMR adoption in healthcare organizations. According to the first national survey of federally funded community health centers (CHCs), few CHCs have implemented full EMR systems because startup costs are too high. This survey reported that 26% of CHCs have EMR capacity, however only 13% have implemented a functional full EMR system (Shields, Shin, Leu, Levy, Betancourt, Hawkins, & Proser, 2007). Miller and White (2007) advocate for the establishment of more policies to offset startup costs in order to accelerate widespread adoption of EMRs in the United States.

Low rates of full EMR adoption have also been associated with a multitude of other factors such as loss of productivity, lack of support in securing investments to support EMR adoption, and an undeveloped EMR software market (Ash & Bates, 2005). Data from a national survey in 2002 revealed that only 5-10% of physicians have adopted EMRs in their practices (Loomis, 2002). More recent data from a study conducted by Reardon and Davidson (2007) revealed that EMR adoption has increased from 105,000 physician practices to 130,000 physician practices since 2003. However, this increase in EMR adoption represents only 20% of the physician population in the United States. Moreover, the National Ambulatory Medical Care Survey of 2005 revealed that only 17.6% of physicians reported using EMRs in their practices (Burt and Sisk, 2005). This represented a 3% decrease in EMR adoption from 2003 to 2005, as well as a major concern for health care organizations in the United States.

EMR adoption is a major concern for health care organizations because of the American Recovery and Reinvestment Act that was signed into law by President Barack Obama in 2009. A primary objective of this statute is to modernize the nation’s infrastructure by requiring all health care organizations to adopt EMRs by the year 2014. In order to encourage EMR adoption, the U.S. government has set aside $19 billion in funds for health care organizations to incorporate EMRs into their practice. Each organization can receive up to $44,000 over a period of five years, with a bulk of the payments distributed in the first two years (Fishman, 2011). Health care organizations, such as FQHCs, are under pressure to either meet the 2014 deadline or face reductions in their Medicaid and Medicare reimbursements (Hutagalung, 2011). For example, in 2007, the Center for Studying Health System Change conducted site visits to FQHCs in twelve metropolitan communities and found that FQHCs were struggling to meet the demands for care in the medical, dental, and mental health specialties, due to the lack of EMR system implementation. Over the course of two years, these FQHCs were able to implement
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