



Full Length Research Article

HEALTH RECORDS MANAGEMENT PRACTICES IN GHANA: AN EXPLORATORY STUDY

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ABSTRACT

Managing health records well is essential to improving health service delivery in less developed countries such as Ghana. However, these countries do not necessarily have the right infrastructure to allow the adoption of advanced techniques to manage health records. In this exploratory study, we examine whether Ghana might be ready to adopt electronic health records (EHRs) by interviewing physicians and patients. We conducted a survey with 30 managers working for different health organizations in Ghana. Our results show that these managers generally had a positive perception of EHRs. Yet, their organizations had not fully adopted EHRs in practice. The more advanced organizations had combined paper-based health records (PHRs) with EHRs. The existing infrastructure appears to lead our respondents to believe that combining PHRs and EHRs, instead of using EHRs alone, was the best approach in health records management. We also identified specific perceived advantages of EHRs over PHRs among our respondents. Most interestingly, more than 90% of our respondents viewed easy retrieval of health records as a major relative advantage of EHRs over PHRs. After reporting this and other results, we discuss limitations and further research opportunities in this paper.

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INTRODUCTION

Health records are essential to health service delivery because they document the health provider's diagnosis, and the treatment prescribed to the patient. As the patient's medical condition progresses, the health records could serve as an important resource for both the health provider and the patient in various ways. For example, they could utilize health records to assess whether the initial diagnosis was appropriate, and find out whether or not the treatment had been effective. Advances in information technology have made it convenient for health providers and organizations to store, retrieve, and analyze medical records. In both developed and less developed countries, an increasing number of health organizations has adopted Electronic Health Records (EHRs) to better utilize the health records of patients. However, research suggests that health records must be managed well to improve service delivery.

Poor management of health records can be shown to negatively affect the accomplishment of organizational goals in health service. There have been a number of interesting case studies for both developed and less developed countries in the literature. For example, in a Canadian emergency department, researchers observed that about 32% of the patients in a study visited the emergency department (ED) due to significant "information gaps" (i.e. they had missed providing some required information in a previous visit). Importantly, 80% of the information gaps were regarded as important to health outcomes by the health provider. In Pakistan, a research team has shown that 50% of patients were unlikely to receive timely care in selected hospitals. It was because 48% of their records could not be retrieved within an hour, which is critical to providing timely care (Aziz and Rao, 2002). To better utilize health records, the United States (US) have introduced the Health Information Technology for Economic and Clinical Health (HITECH) Act to drive acceptable or "meaningful use" of EHRs. Unfortunately, policy guidelines such as HITECH are either lacking or very weak in most developing countries such as Ghana.

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It is not uncommon to observe that different government health centers have used a different system to manage patient records, which have to align with medical practices within a region. To facilitate EHRs adoption in Ghana, this short paper explores the nature of existing medical practices, and how the use of EHRs might exert an impact on service delivery in existing practices. For this purpose, this study examines the perception of managers of existing health organizations with health records management. The research will find out how these organizations manage their health records at present—paper-based or electronic—and whether different health records management might be associated with any benefits and/or negative impact on patients' clinical outcomes.

METHODS

This exploratory study develops a cross-sectional survey with 30 questions. Quantitative data collected were analyzed with version 18 of Statistical Package for the Social Sciences (SPSS). Open-ended responses were analyzed through the processes of comprehending, synthesizing, theorizing and recontextualizing. Variables measuring concepts under study were organized under “nature and preferences”, “benefits” and “impact on health outcomes”. With a 5-point Likert scale, effects of practices on patient's attendance, easiness of records retrieval, patient-time at health care facility, speed of service delivery and confidentiality were measured. Respondents were also asked to share their thoughts on other benefits of both paper-based health records (PHRs) and EHRs in service delivery. Improved health status, survival rate, readmission and death rates were used to assess impact of their practices on health outcomes. As an exploratory study, responses were sought from personnel with management positions because they are best positioned to provide better insights into the research theme.

In all, 30 respondents with 15 serving in government facilities were randomly selected from Wa municipality in Ghana. The rest of the respondents were selected from Islamic Hospital and Al-Ahzar Clinic to represent non-governmental facilities in the same municipality. Busa Health Center and the Regional Hospital were those under the management of the government of Ghana through Ghana Health Service. The choice of Wa municipality was based on the fact that it is the administrative center for a region known for high burden of disease and low economic development. The municipality is located in northwestern part of Ghana, a region noted for inadequate qualified health professionals. The 2010 Population and Housing Census in Ghana estimated that Wa had 107,214 residents. In terms of health care delivery, Wa included 20 minor and 10 major health centers.

RESULTS

Background characteristics of survey respondents are worth mentioning before discussing the results. Although all respondents occupied management positions, about 70% of them had not attained at least Bachelor's degree during the data collection period. Additionally, 10 of the 30 respondents worked solely with paper-based records and the nature of services provided in their facility did not provide them the capacity to assess the impact of their practices on survival and death rates. As illustrated in Figure 1, the majority of respondents preferred combining EHRs and PHRs. About 83% of the respondents either agreed (20%) or strongly agreed (63%) that they prefer working environment, which combines both EHRs and PHRs. Nonetheless, when offered the option of choosing EHRs over PHRs, 70% either agreed (36.7%) or strongly agreed (33.3%) to that. Figure 1 also shows that relatively fewer respondents either opted for working solely with EHRs (30%) or PHRs (13%), when compared to those (70%) who prefer combining both practices. As shown in Figure 2, our findings suggest that most of the respondents were still doubtful about the utility of PHRs in improving service delivery.

Eighty-three percent of the managers surveyed either disagree (63%) or strongly disagree (20%) that PHRs increases patient's attendance to health centers. Regarding the ease of retrieving records, 85%, at least disagree that it improves this aspect of service delivery. Additionally, it may be observed that about 57%, 63%, and 67% of the respondents agreed that PHRs slows down the rate of service delivery, results in poor client's confidentiality, and leads to unacceptable rate of missing records, respectively. Figure 3 presents several specific benefits of EHRs as perceived by respondents. About 57% of the respondents either agreed (37%) or strongly agreed (20%) that EHRs increases patient's attendance while 96% either agreed (33%) or strongly agreed (63%) that it permits easy records retrieval. Regarding EHRs resulting in slowing down service delivery, poor clients' confidentiality, and missing records, 83% disagreed respectively to these. Table 1 summarizes additional benefits perceived by respondents in the survey's open section. These responses showed that respondents generally easily identified more benefits of EHRs than PHRs. However, it is worth mentioning that respondents in some study sites (10) were working solely with PHRs. As a result, they could not respond to the impact of EHR on readmission and death rates. One of these ten respondents pointed out that PHRs decreases health status while the rest agreed that it improves health status. Interestingly, none of the 20 respondents using both PHRs and EHRs indicated that it decreases improved health status of clients.

Table 1. Additional Benefits of PHRs and EHRs

Benefits of PHRs	Benefits of EHRs
<ul style="list-style-type: none"> • Additional information can easily be added and stored in the original form; • Data is always available without any system failure and virus attack; • Permits easy retrieval and cheap management practices; and • Its user friendly and does not need highly skilled personnel to manage it. 	<ul style="list-style-type: none"> • Data is easily accessible; • Requires little space for data storage; • Permits good back-up storage system • Data lasts longer; • Provides quicker reference for viewing and auditing data; • Enhances the ease of sharing information among service providers; • Provides better client's confidentiality; and • Ensures best clinical outcomes of clients.

With regard to survival rate as a clinical outcome, Figure 4 shows that all the 10 “PHR-only” users agreed that good health records management improves this clinical outcome. Among those combining EHRs and PHRs, 24% did not have a clear preference whether their practices improve or decrease survival rate. In addition, 75% and 56% of users of PHRs and EHRs agreed that their choice of health records management practices has no (neutral) effect on readmission and death rates, respectively.

DISCUSSION

In Wa municipality, health providers either used PHRs only, or combined PHRs and EHRs in service delivery. This is very common in the entire Ghana. All health care providers in Ghana still rely on some form of PHRs in service delivery. Thus, we are only able to gain limited insights from practitioners who had actual experience with EHR.

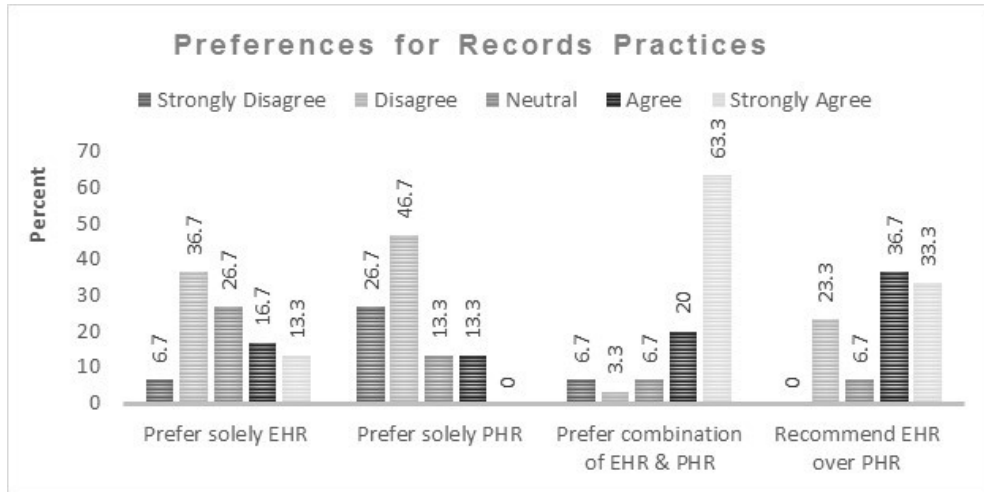


Figure 1. Preferences for records management practices

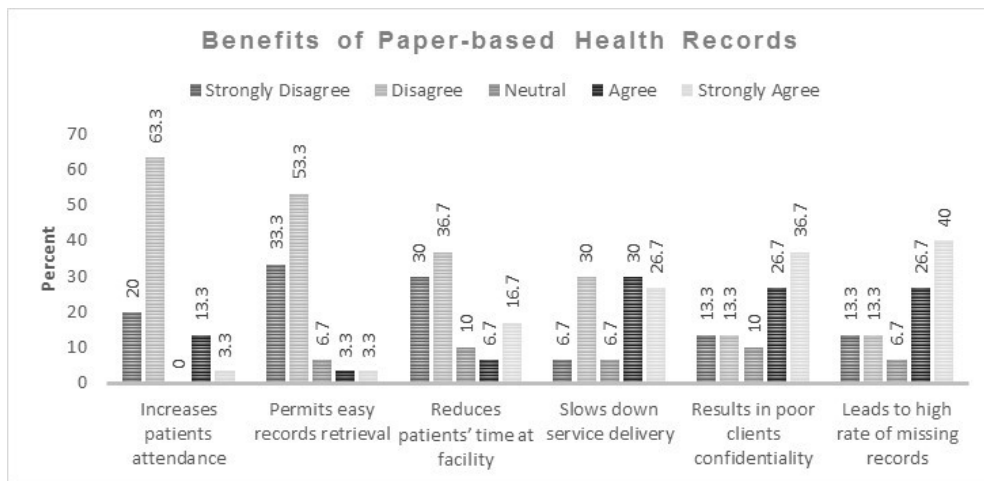


Figure 2. Benefits of paper-based health records management practices

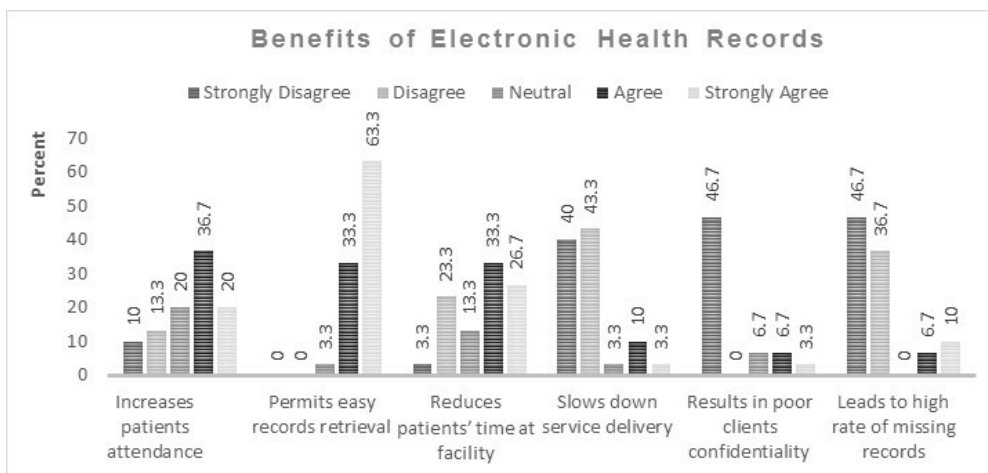


Figure 3. Benefits of electronic health records management practices

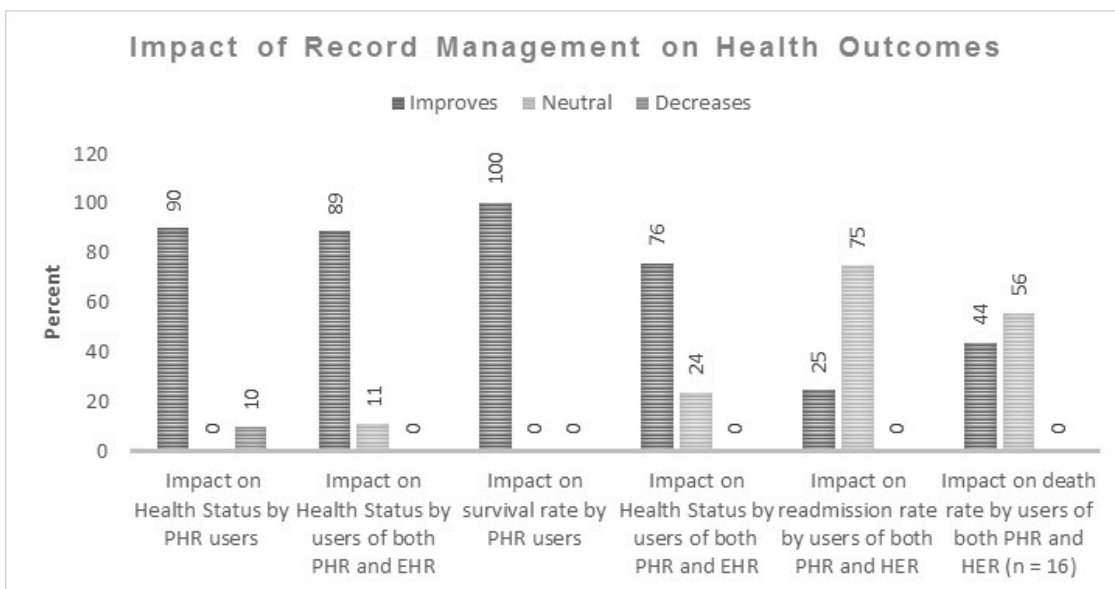


Figure 4. Impact of records management practices on health outcomes

Still, based on our observations, health practitioners in Ghana favored the adoption of EHRs. Unfortunately policy guidelines that incentivize acceptable or “meaningful use” of health information technologies to foster the transition to EHRs practices was still unavailable at this time in Ghana. Unlike the developed world where policies such as HITECH Act in US existed to facilitate the adoption of EHRs, Ghana’s policy guidelines on EHRs found in the Electronic Communication Act, 2008 (Act 775) has been very limited in achieving this end. That is, policy guidelines on EHRs in Ghana did not extend beyond confidentiality and disclosure of information to incentivize its adoption. As captured in Article 79 of Act 775, the guidelines state that:

“A person who intentionally (a) discloses communication which that person knows was obtained in contravention of this Act, or (b) uses or discloses personal information in contravention of this Act, commits an offence and is liable on summary conviction to a fine of not more than one thousand five hundred penalty units or to a term of imprisonment of not more than four years or both (Government of Ghana, 2009).”

These guidelines were very limited and therefore, were rather inadequate in covering the scope of health technologies, except for protecting privacy of patients in Ghana. It is to this end that Norman et al (2011) call for new legislation to address the deficiencies. Our findings support the call for programs and policies extending beyond privacy concerns to incentivize the adoption of EHRs in the developing world. Despite the desire of adopting EHRs in Ghana, a complete transition from paper-based to electronic records would require clarifying the contextual needs of specific health organizations. In particular, when implementing new policies, practitioners need to pay attention to preferred record management practices, cost-effective health technologies, and readiness of the landscape would foster evidence-based policy-making. Our research suggests that the Ghanaian context may not necessarily favor using EHRs as the only way to manage health records in service delivery at present. As we observed in Wa, the majority of participants (85%) preferred an environment that combines EHRs and PHRs in service delivery. To foster future adoption, our findings point out several important issues: First, consistent with the experience in more developed countries

where the use of EHRs has been associated with improved service delivery, about 97% of the managers in Wa had a positive perception of EHRs: They reported that it is easier to retrieve records through EHRs. Additionally, it was easier for them to identify advantages of EHRs compared to PHRs. Nonetheless, respondents were accustomed to PHRs, so they still saw significant advantages of PHRs. This underscores why most of the participants prefer working in a health organization that combines PHRs and EHRs.

Long years of working with PHRs in Wa have another implication. Based on Figure 4, all managers working solely with PHRs reported that good management of health records increases survival rate of patients. Besides, with the exception of one respondent, the health workers using solely PHRs reported that their practices improve health status of patients. This suggests that while managers of “PHR-only” organizations recognized the advantages of EHRs, they did not necessarily believe that PHRs were so problematic that they would reduce survival rate and health status of patients. In those organizations, the adoption of EHRs may not be justified by increased survival rate and health status, because PHRs could “do the job” just as well. This also partly explains why the transition to EHRs remains slow in Ghana. Further studies are necessary to compare whether PHRs or EHRs are more useful to improve the survival rate and health status of patients.

Limitations

This study has the following limitations. While many health organizations were in under-developed region in Ghana—where Wa is located—other parts of Ghana might have other contextual needs and challenges for adopting EHRs. We need additional studies to understand more diverse contextual needs. With respect to research design, our survey was cross-sectional. This means that we cannot establish causal effects between variables conclusively. Our goal is to explore perceptions of the health care managers on records management practices in a typical municipality to inform further research. By reaching diverse leaders from a broad spectrum of provider organizations, further research may become generalizable to the entire Ghana.

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