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Brief Notes on Digital Health Record

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Abstract

Physician burnout is at epidemic levels, and the electronic health record (EHR) is frequently identified as a contributing factor. We looked into the connections between physicians' distress and the EHR to improve current understanding of the relationship between burnout and the EHR.

Keywords: Digital Health; Physicians; Medical trainees

Introduction

Physician burnout has been on the rise, despite the fact that healthcare administrators and doctors share the same aim of providing excellent patient care while maintaining the stability and wellbeing of the healthcare team. Theorized predisposing elements in earlier work include interference with professional autonomy, an imbalance between institutional and professional ideals, moral anguish, and moral harm. Additionally, previous studies have shown links between exhaustion and inappropriate behaviour. Electronic health record (EHR) use is a significant cause of physician distress, according to surveys. These surveys [1] have offered some useful information, but it is still difficult to fully comprehend and address physician anxiety brought on by EHRs. The relationships between physician distress and the adoption of EHRs may be best understood through qualitative research. The contextual causes of physicians' discomfort, the ensuing feelings, and how distress affects their attitudes and behaviours can all be explored through a qualitative method. Such investigations are uncommon. Burnout was found to be influenced by professional conflict and feeling underappreciated, according to a qualitative study done in a primary care context. Emotional response research has demonstrated a [2] substantial correlation between EHR and unpleasant feelings. But has left room for more research into the ways in which this connection is made. Understanding these deeper links could result in practical solutions to enhance the healthcare delivery system and career fulfillment. In order to determine how the EHR affects physicians' professional activities and how it causes discomfort in them, we conducted in-depth qualitative interviews in two different contexts for this study. We looked at the reported effects on professional actions in relation to the basic competencies of the Accreditation Council for Graduate Medical Education (ACGME). We chose this framework because the ACGME standards are ingrained in the American system of medical school and represent the expected behaviours of physicians. They also mirror examples of professional values in the actual world. According to our hypothesis, institutional EHR regulations might restrict professional behaviour linked to these [3] competences and be at odds with professional standards, which would be upsetting to physicians.

Methods

In Northern California, we conducted our research at an academic medical facility and a community hospital. Both offer residency programmes, so we spoke with faculty and trainees at each location. We sought candidates from a range of medical and surgical disciplines in order to represent the broadest perspective of physician unhappiness. Over the course of a year and a half, interviews were conducted mostly over the phone (nin-person = 1; nphone = 49); Site A interviews were gathered between March 2017 and October 2017, while Site B interviews were gathered between November 2018 and September 2019. The Stanford University School of Medicine and Stanford Health Care provided financial assistance for the experiment, which received the local institutional review boards' authorization. In this qualitative study, physicians [4] and graduate medical trainees from two healthcare organizations in California were interviewed about EHR-related distressing events and the impact on their emotions and actions. We analyzed physician responses to identify themes regarding the negative impact of the EHR on physician experience and actions. EHR "distressing events" were categorized using the Accreditation Council for Graduate Medical Education (ACGME) Physician Professional Competencies. In this qualitative study, doctors and graduate medical trainees from two healthcare organisations in California were questioned about upsetting occurrences connected to the electronic health record (EHR) and how they affected their feelings and behaviour. To find themes reflecting the detrimental effects of the EHR on physician experience and behaviour, we studied physician replies. The Accreditation Council for Graduate Medical Education's (ACGME) Physician Professional Competencies were used to classify "distressing occurrences" in EHRs.

Participant eligibility And recruitment

At each of the participating organizations, participants were drawn from five different provider groups: outpatient primary care faculty, internal medicine hospitalists, doctors, residents, and chief residents. In order to get a diverse spectrum of viewpoints, we took a sample from these physician groups. Each organization sent about five participants for each group. By maintaining participant anonymity throughout recruitment, leaders had the chance to promote engagement. Specifically, the study's goal—to learn more about doctors' perspectives on difficult components of the EHR—was stated in the [5-14] introductory email addressed to prospective participants by leaders of each physician group. The email instructed interested parties to get in touch with the project interviewer directly in order to protect their anonymity. To help with recruiting, once the initial bulk e-mail was issued, we also made direct contact with prospective participants in

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each group (arbitrarily every fifth person on the list). We did not record or keep any personally identifiable information from participants in order to protect data collecting. Our research team's two qualitative researchers planned and conducted the interviews.

Data Collection

In semi-structured interviews, we asked participants to name upsetting EHR-related incidents that occurred in the previous two weeks. The EHR trigger, the emotional pain it caused, and the professional behaviours, competences, and values that were being questioned were the main subjects of the data gathering. The beneficial effects of the EHR and the participants' favourite aspects of being doctors were also covered in the interviews. A personal health information-compliant transcription service anonymously transcribed the interviews; after transcription, participant identifying was removed. The goal of anonymity was to increase responses' sincerity and reduce hazards.

Data Analysis

Our analysis specifically looked for upsetting situations because the main objective of the study was to better understand the causes and effects of distress, even though the interviews revealed favourable EHR effects on physician work and professional behaviour. Grounded [14, 15] theory methods were first used to guide the data analysis, which involved having two qualitative researchers open-code five transcripts after data collection in order to uncover emerging themes, which were then further developed by the research team. Utilizing constant comparison analysis, consensus validation, and query interpretation across coders, three qualitative researchers carried out qualitative coding for the entire sample. Transcripts of interviews were coded using Nvivo.

Discussion

Principal Findings

Each responding doctor reported that their professional responsibilities were being hampered by EHR-related stress. Our investigation revealed five key themes: system barriers to patient care, inadequate EHR implementation, design, and functionality, billing priorities that contradict with optimum workflow and best-practice care, inefficiency, and subpar teamwork performance. Physician anxiety was typically caused by circumstances where doctors prioritised systems-based practise over other desired professional actions [11] and behaviours when mapped to the ACGME competencies. Additionally, doctors described a culture of silence in which doctors were reluctant to discuss issues for fear of retaliation or a lack of faith that the issues would be resolved. Every participating doctor reported that their professional responsibilities were being hampered by EHR-related stress. Our investigation revealed five key themes: system barriers to patient care, inadequate EHR implementation, design, and functionality, billing priorities that contradict with optimum workflow and best-practice care, inefficiency, and subpar teamwork performance. Physician distress was frequently caused by circumstances where doctors prioritised systems-based practise over other desired professional actions and behaviours when mapped to the ACGME competencies. Physicians also described a culture of silence in which they were reluctant to discuss issues for fear of retaliation or a lack of faith that the issues would be resolved.

Practical Applications

Physicians and administrators need to address the hierarchy of values that prioritizes system requirements such as those required by the EHR above physicians' other desired professional actions and behaviors. Balancing the importance of competing competencies may help to address rising burnout. We also recommend that administrators consider qualitative anonymous interviews as an effective method to uncover and understand physician distress in light of physicians' reported climate of silence. The hierarchy of values that puts system requirements—like those for the EHR—above physicians' other desirable professional actions and behaviours needs to be addressed by physicians and administrators. Keeping conflicting competencies in check can assist combat developing burnout. In light of the reported atmosphere of silence among physicians, we also advise administrators to take qualitative anonymous interviews into consideration as a useful [12] way to identify and comprehend physician suffering. Occurrences of physician burnout have reached epidemic numbers, and the electronic health record (EHR) is a commonly cited cause of the distress. To enhance [15] current understanding of the relationship between burnout and the EHR, we explored the connections between physicians' distress and the EHR.

Results

25 doctors from each of the two healthcare organisations' 50 physicians were interviewed. Applying our deliberate sampling technique, we selected professors in outpatient primary care (n = 10), inpatient medicine (n = 10), and surgery (n = 10), as well as chief residents (n = 9) and residents (n = 11) from various specialties.

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Conflict of Interest

The authors declared no potential conflicts of interest for the research, authorship, and/or publication of this article.

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