INTERNATIONAL JOURNAL OF MEDICAL INFORMATICS 76S (2007) S222–S228

journal homepage: www.intl.elsevierhealth.com/journals/ijmi

Remembering the basics: Administrative technology and nursing care in a hospital emergency department

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ARTICLE INFO

Article history:
Received 6 March 2006
Accepted 11 May 2006

Keywords:
Nursing care
Hospital information systems
Emergency medical services

ABSTRACT

This article discusses findings from qualitative research conducted with nurses in a hospital Emergency Department. It explores nurses' attitudes towards a patient care information system (PCIS) installed by hospital management in an effort to improve patient care through more effective "data sharing". Nurses' definitions of care are examined vis-à-vis their perceptions of administrative tasks and technologies like the PCIS. Efforts are made to link the system with wider patterns of administrative technology acquisition in health care and users' everyday/night experiences of using these technologies. The article also presents key themes from a literature review of recent case studies about information technology implementation in nursing.

Results show that nurses choose to define care in a way that highlights relationship building and physical/emotional connectedness between nurse and patient. The article contends that nurses' refusal to incorporate technology-enabled "data sharing" into their definitions of care is indicative of efforts to make visible their caring work, often rendered invisible by the feminization of care. The article concludes by reaffirming the importance of 'remembering the basics', i.e., patient care is rooted in the skilled practice of individual caregivers, not in data sharing.

1. Introduction

The idea that improved information flow will lead to better patient care has widespread currency in today's health care environment: "data sharing" is supposed to lead to "patient caring". This article examines the relationship between data sharing and patient care through a discussion of findings from qualitative research about the relationships among gender, technology and nurses' caring work. Research was conducted in the Emergency Department (ED) at Vancouver General Hospital (VGH) in British Columbia, Canada. In an attempt to improve data sharing, hospital management installed a patient care information system (PCIS). The PCIS is a hospital-wide computer system used by nurses, admitting clerks and other staff to enter and track patient information (e.g., name, address, complaint, lab results, etc.).[1] Staff access the system at computer terminals located throughout the hospital. Nurses in the ED routinely use the PCIS in their work practice, as hospital policy requires that they enter certain information about every patient under their care. Nurses also use the system for information retrieval (e.g., to locate patients on different wards) and management of care (e.g., to allocate beds to patients on the basis of acuity).

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[1] The hospital also maintains paper-based records for all patients because the PCIS does not function as a standalone electronic medical record.

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doi:10.1016/j.ijmedinf.2006.05.012

When initially implemented, the promotional slogan for the PCIS was "data sharing leads to patient caring". This article questions the relationship between data sharing and patient care by situating the PCIS as a site of tension and resistance. The system is a site of tension between contrasting perceptions of technology's role in care: on the one hand, the assumption (implicit in the promotional slogan) that administrative technologies like the PCIS improve the quality of care; on the other, nurses' belief that quality of care depends on human relationships, not on technology. Simply put, nurses do not associate data sharing with patient care. The PCIS is therefore a site of resistance by nurses against a representation of technology's role in care that threatens their professional identity as skilled caregivers.

This article explores nurses' attitudes towards the PCIS, as well as their more general perceptions of administrative tasks and technologies. It argues that nurses' refusal to incorporate "data sharing" into their definitions of care is indicative of efforts to make visible their hands-on caring work. The article begins with an overview of the context into which the PCIS was introduced. Here, efforts are made to link the system with wider patterns of technology acquisition, as well as users' everyday/night experiences of using these technologies. Particular attention is paid to the controversial status of administrative tasks and technologies in nursing. Recent case studies of information technology (IT) implementation in nursing are then reviewed and key themes in this literature are identified. This is followed by a description of the study and methods employed for data collection and analysis. Research findings are presented and discussed, with emphasis on the opposition between nursing care and administrative tasks and technologies. The article concludes by reaffirming the importance of 'remembering the basics', i.e., patient care is rooted in the skilled practice of individual caregivers, not in data sharing.

2. Contextualizing the discussion: health care's"tech-fix"

In an article chronicling the system's development, Balka [1] contends that this PCIS can be understood as an organizational response to federal and provincial efforts at health care cost reduction. The PCIS emerged in a Canadian context of health care funding and delivery increasingly centred on the application of technological solutions to health care problems. Funding constraints place an increased burden on staff and resources, yet the Canadian federal government has invested over $1.5 billion in health information technology since 1997 [2]. Health policy decisions reflect a vision of technology as a solution to the challenge of delivering advanced health care to more patients at consistent or reduced levels of funding. It is a perspective dependent on faith in the "tech-fix", the implicit assumption "that health, like other aspects of our lives, benefits from the latest, most efficient technologies" [3].

Researchers working in disparate contexts describe similar patterns of structural change occurring in the delivery of health care [e.g., 4–6]. While the contexts and modes of health service delivery differ among jurisdictions, it is possible to observe common tendencies such as efforts at cost reduction through incorporation of strategies from manufacturing and other sectors, as well as an increased emphasis on standardization, administrative data collection, and the use of information technology [5]. These changes are a partial consequence of broader political and economic patterns characteristic of neo-liberal globalization [7], a discussion of which is beyond the scope of this article. My concern is with how these changes affect the day-to-day (and night-to-night) work practice of nurses in the ED at a Canadian hospital. As frontline caregivers, nurses are tangibly affected by changes to health service delivery (e.g., implementation of new technology, work redesign). Malone [4] argues that recent changes to the delivery of health care have resulted in the emergence of two contrasting paradigms of nursing care: (1) "distal" nursing, which represents hospitals as institutional spaces and places of business, and conceives of nurses as technical managers; and (2) "proximal" nursing, which represents hospitals as places of care and nurses as healers. In an era of health care reform, nurses are increasingly being called upon to adapt to a distal model of nursing care [4]. Adaptation necessitates the taking on of a greater burden of administrative work, which detracts from nurses' capacity to engage in direct patient care. This scenario is further complicated by the profession's complex relationship to the administrative tasks and technologies characteristic of distal nursing, as discussed further in Section 2.1.

2.1. *Administrative technology*

Administrative technologies like the PCIS are aligned with efforts to standardize the delivery of care [8]. They embody a vision of health care premised on speed, innovation, and the precise surveillance of and accounting for care and caregivers [9]. One goal of such technologies is to expose the intricacies of patient care, to make concrete the intangible [4,10,11]. Information gathered and transmitted by newer, faster and extensively networked technologies is perceived to be a means of adding value to a cash-strapped health care system. "Data sharing leads to patient caring" is therefore no empty slogan. It is a managerial dictate borne of the same political and economic context, and steeped in the same faith in health information technology, that motivated the PCIS' initial purchase.

Health information systems rarely live up to their promise despite extensive investment in their development, implementation and ongoing upkeep [12–14]. While the disincentives to reporting failure and a lack of standardized reporting mechanisms make it difficult to accurately calculate the rate of health information system failure, failure rate estimates range from 30 to 50% [14] to 75% [13]. Why do these technologies continue to proliferate despite the lack of evidence to demonstrate their effectiveness? Wagner [15] suggests it is because computers act as "powerful images of efficiency", a representation that obscures the invisible and articulation work performed by health professionals doing their best to pick up where information system design falls short [16–18].

2.2. *Case studies of IT implementation in nursing*

Some nurse researchers highlight the potential of IT to streamline procedures, increase efficiency, and improve patient safety [e.g., 19]. In this view, the efficiencies afforded by technologies such as clinical information systems enable nurses