
The Roles and Impacts of Informal Communication on ED Patient Care

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Abstract

In this literature review, I explore Feldman's analysis on performative routine and Gong's study on improvisation to see how these lenses can be used to examine informal communication in time-critical medical setting, such as an Emergency Department (ED). Then I suggest research gap and solution in analyzing the roles and impacts of informal communication in an ED. I propose that, in addition to how a new work procedure emerges through informal communication activities, how newly developed and previously established work procedures coexist and are used in medical collaboration should be studied.

Keywords

Communication, CSCW, Healthcare.

ACM Classification Keywords

HJ.3 Life and Medical Sciences: Medical information systems. H.5.3. Group and Organisation Interfaces: Computer-supported cooperative work.

Introduction

Informal communication, which was often perceived as an insignificant category in organizational theory [6], has been attracting research attention in various contexts including office, educational environments, and multi-national corporations [3, 5, 6, 7]. In these

studies, informal communication has been defined as communication activities that take place spontaneously usually for a brief period of time without pre-planned place or time of encounter. As informal communication is characterized by a lack of pre-specifications, the topic and objective of communication can change anytime over the course of the encounter. Thus, informal communication is said to be truly interactive since it simultaneously reflects the needs, objectives, and interests of people in the conversation [6].

These studies demonstrate that informal communication serves as an integral part of effective collaboration. For instance, organizations utilize varying levels of formality in communication methods to match the degree of uncertainty of collaborative tasks that result in high quality organizational outcomes [6]. Other advantageous aspects of informal communication support its essential contribution in managing collaborative work: its functionality as lightweight and casual collaborative means; opportunistic or spontaneous opportunities to expedite work process resulting from physical or artificial proximity; and its contribution to both the social relations and productivity of the collaborative group [5, 6, 7].

As mentioned above, the importance of informal communication, especially in dynamic collaborative work, has been demonstrated in many fields of study [6, 7]. However, emergency medicine whose collaborative work is known as a highly mobile and dynamic work environment has a handful of studies in this domain. Among these few studies, Bradram *et al.*, has deployed collaborative systems, such as a mobile IM system [1], and an asynchronous messaging system [2]. In these studies, a sense of close proximity among

colleagues was created through real-time information on their whereabouts and working status. Use of these systems promoted more frequent interactions among collaborators. Meija *et al.* has presented architecture to assist informal and transient collocated collaboration by encouraging ad-hoc interactions among collaborators [7].

These technology-driven studies can be informative in developing design suggestions for collaborative tools. However, to obtain a thorough understanding of informal communication in time-critical medical collaboration, a more structured analytical approach is necessary. Due to the lack of such efforts in medical informatics, I will explore other disciplines with extensive studies on informal communication. This effort is to see how different analytical frameworks of informal communication can be applicable to the medical domain.

Literature Review

In the literature review, I look at two approaches examining informal communication in organizational work practice: improvisation and performative routine.

Informal communication as a means to improvise

Gong examines the impact of unplanned improvisation and demonstrates improvisation may be used to develop long-term organizational capabilities [4]. Gong defines improvisation as “deliberately and materially fusing the design and execution of a novel production.” As an organization improvises to fulfill unexpected needs or to innovate its performance, it pays close attention to the quality of these activities’ outcomes. If outcomes are satisfactory, an organization may backfill with routinized work. Thus, From Gong’s perspective,

improvisation may serve as a long-term method to develop and enrich organizations' performance [4].

Informal communication as a means to change routines

In Feldman's study, she investigates how deviated way of work practice appears from pre-established work pattern. To do so, stability in organizational routines, an essential building component of an organization's work practice, is re-examined to explore how change in routines appears. Feldman demonstrates that organizational members can seek for stability in the performance of routines as they consistently try to make sense of their work context [3]. In this process, organizational members' understanding of how the organization operates and actual performance, such as accepted work behaviors, affect each other recursively to establish routines. Sequentially, routine execution influences the establishment of actual performance that are, then, used to construct an understanding of how the organization operates. Thus, how routines achieve stability in such a recursive interaction can explain why some changes take place but others do not.

From this perspective, there are two types of change happening in an organization's routine: intended and unintended. According to Feldman, "routines consist of both the idea of the routine and the performance of it [3]." Changes emerged during actual performance may lead people to alter the idea of the routine resulting in overall routine change. However, if intended changes within an organization are based on a new conception of routine and inconsistent with the performance or understanding of the organization's work practice, it will less likely bring overall routine change. Feldman's analysis argues that despite the deliberateness in

changing a routine, such intended change will be challenging to enact.

Discussion

Informal communication in the time-critical medical work context can be defined in several different ways. First, this can be communication to support work outside pre-specified work procedure to fulfill unexpected needs, such as time constraints. Second, this may mean communication activities to build and maintain social relationships. Third, this can refer to communication that transfers patient information that is not formally documented. In this discussion, the first definition of informal communication will be examined.

Let us give an example of communication practice in an ED, a typical setting for time-critical medical work. According to official work procedure of the ED in a teaching hospital in Irvine, CA, a resident is responsible for checking an electronic patient board for a new patient's arrival and signing up for an incoming patient. In the actual ED work practice, it is not difficult to see an attending physician informing the group of residents on a new patient and asking which resident can take this patient. An attending physician's involvement in a resident's signing up for an incoming patient is not formally routinized or required as part of work practice. However, due to urgency in delivering patient care, an attending physician seeks for a way to facilitate medical work informally.

Gong's interpretation of organizational improvisation explains the role of informal communication in ED work practice. As shown in an example above, an attending physician plans to inform of a new patient to residents and carries out his plan by talking to them

simultaneously. The part of ED work practice that announces an incoming patient is improvised due to the urgency in delivering patient care. In doing so, real-time information can be distributed and shared in a timely manner. Ad hoc coordination on who takes new patients can update attending physicians and residents on the status of patient distribution among them. If these benefits are acknowledged, other attending physicians may follow this communication activity. The repetition of improvised work practice emerged through informal communication can eventually help introducing a new work procedure.

Feldman's analysis of performative routine can be used to assess the impact of such informal communication in ED work practice. According to Feldman's interpretation, informal communication activities can be a means to bring changes in routines since these activities take place during the performance of routine rather than in the idea of routine. If the change contributes in successful execution of medical work, medical staff can start making sense out of the change in their work context, leading to the change in the idea of routine and eventually routine as a whole.

Identified Research Gap & Solution

As discussed above, both perspectives from Gong and Feldman provide analyses on the roles and impacts of informal communication in an ED. However, their analyses are focused on a single evolution of non-formalized activity within organizational work practice. In an ED, although there are formal protocols, ED medical staff often informally communicates and interacts with others in their medical work. By doing so, many workarounds are developed for various objectives including coping with unexpected constraints and

expediting workflow. These workaround tactics do not necessarily supersede the previous work procedure. The new and old ways of working coexist. Thus, an analytical approach examining the ED's informal communication should not only study how an alternative work procedure emerges but also how the new and old procedures evolve together.

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