

Eavesdropping as Normative Behavior in a Cardiac Intensive Care Unit

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*"Our ears are about THIS big."
(Cardiac intensive care unit nurse)*

Excellent care of critically ill patients depends on coordination of multiple complex processes in a system in which "everything, it seems, is connected to everything else" (Cook, 2000, p. 791). Developing and maintaining these connections requires effective and efficient communication and a balancing of the need to share information and coordinate activities to facilitate care across the unit while not interfering with or detracting from the attention required for the care of individual patients. Although much communication and coordination of care takes place through explicit, formal mechanisms, such as nursing reports and physicians' rounds, informal mechanisms of sharing information also play an important role.

Studies of communicative practices in hospital settings have been conducted from various perspectives, recently with increased emphasis on the effects of communication practices on patient safety. One important observation is that at least half of the information transactions that occur in clinical settings—even in hospitals with computer-based information systems—happens via face-to-face communication (Covell, Uman, & Manning, 1985; Safran, Sands, & Rind, 1999). In examination of the load on individual interlocutors, clinical communication has been described as interruption-driven, and these interruptions are seen as contributing to medical error (Coiera, 2000; Coiera & Tombs, 1998). Other studies have noted that communication during transitions is a crucial factor for ensuring patient safety (Anderson & Helms, 2000; Coleman, 2003; Forster, Murff, Peterson, Gandi, & Bates, 2003), and breakdowns in communication among physicians and between physicians and nurses have been strongly associated with adverse events

This article describes an informal communication system observed during an ethnographic study of practices that contribute to safe patient care in a cardiac intensive care unit (CICU). This system, defined by informants as "eavesdropping," occurs when CICU nurses, physicians, and staff "listen in" on conversations about patient care occurring within the physical space of the nurses' station. Eavesdropping and its benefits for patient care identified by staff include the following: increased awareness, improved staff ability to anticipate needs, maintenance of professional competence, and quality monitoring of knowledge and skills. These functions must be considered in any re-engineering of healthcare processes, settings, and policies.

(Benner, Sheets, Uris, Malloch, Schwed, & Jamison, 2002; Blythe, Baumann, & Giovannetti, 2001; Knaus, Draper, Wagner, & Zimmerman, 1986; Leape, 1994; Leape et al., 1995; Parker & Coiera, 2000; Williams, 1998).

The majority of these studies of communication in clinical settings have focused on explicit and formal communication processes between individuals; less attention has been paid to the complex communication mechanisms of clinical groups. One such study, an ethnographic study of communication on a nursing unit, described the importance of "unofficial channels," which are the "undocumented discourses" of nursing care (Ames, 1993, p. 227). Other examples are two recent studies of official and unofficial team communication in an operating room (Lingard, 2002) and intensive care unit (Hawryluck, Espin, Garwood, Evan, & Lingard, 2002), describing the effect of communication patterns on the socialization and education of trainees. These studies suggest that informal communication in healthcare settings contributes to the continuity and quality of care.

Key Words

communication
intensive care unit
patient safety
teams

This article describes an informal communication practice observed during an ethnographic study of a cardiac intensive care unit (CICU) in a metropolitan hospital. The authors explore from the perspective of the informants how “eavesdropping” (as CICU staff refer to this behavior) occurs and the multiple functions it serves for staff on the unit. The authors hypothesize that eavesdropping may improve patient care and facilitate management of the nursing unit.

Methods

The Making Sure project,* an ethnographic study of a CICU, investigated working conditions and the formal and informal practices and systems employed by health professionals to ensure safe and effective patient care. Ethnography is a research approach that involves researcher immersion in a setting or “culture” to observe and analyze behavior of individuals with reference to their set of shared norms, codes of behavior, values, assumptions, concepts, beliefs, and principles of action and organization (Creswell, 1998). The product of ethnographic research is a comprehensive portrait that describes events and processes from the perspective of the players involved in them (Pelto & Pelto, 1978). The strength of ethnography is its ability to document the complex links between different systems, individuals, and forces at play in a defined context and to describe real-life phenomena in depth, such as informal communication (Patton, 1990). Rather than providing conclusions, ethnography is intended to generate hypotheses that may be tested using other research designs (Sofaer, 1999). The purpose of this study was to generate hypotheses; later it would be possible to design future studies to test these hypotheses.

Data collection during the 2 years of the Making Sure project included nonparticipant observation of staff activity during all shifts over multiple days, collection of artifacts such as procedure manuals and informal staff notes, and individual and focus group interviews with CICU physicians, nurses, and staff. Interviews took place after several months of observation and were used to gain additional information about behaviors and events

observed. Data include field notes describing observations of individual CICU staff and the unit as a collective, photographs of artifacts (e.g., training posters) and events, and transcripts from individual and focus group interviews conducted with staff. All study procedures were approved by the institutional review boards of Oregon Health and Science University and the participating hospital. ML, a nurse, conducted the majority of on-site observations with support from the other authors. NV, a medical anthropologist, conducted group and individual interviews. All authors were actively involved in coding of field notes and transcripts.

Analysis of field notes and transcripts began with repeated readings of these texts by each author. Transcripts and field notes were annotated by the authors to identify general observations about the environment, flow of work, and interactions between members (Holloway & Wheeler, 1996). Following discussions about individual observations, the authors developed a broad coding scheme to mark text that exemplified the systems, activities, events, and practices that supported or detracted from “making sure” (Cresswell, 1998; Mason, 2002). The research documented all systems and procedures relating to patient care.

Results

Although the Making Sure project did not focus exclusively on communication, communication systems were an important activity on the CICU and often documented in field notes and discussed at project meetings. While reviewing fieldnotes, the authors observed that nurses and physicians on the unit appeared to listen in on others’ conversations. A field note entry provides an example:

Charge nurse answers the phone. It’s Phlebotomy. She asks aloud ‘Did someone page Phlebotomy?’ The respiratory therapist (who happened to be standing at the unit) knew that nurse E had.

This type of information transfer was distinct from deliberate handing off of information, such as that described in this field note entry:

E showed another nurse the printout of a rhythm strip and said she was going to lunch. ‘If Dr. H comes back tell him I didn’t give the drug because of this [pointing to the strip].’

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This “listening in” behavior was also evidenced by the expectation that members of the culture (i.e., patient care professionals on the unit) should participate in it. For example, during observations on the unit, one of the authors (NV) was approached by a staff member and asked, “Do you know if nurse A placed that order?” Nurse A had called in the order at the nurses’ station, but she had gone to a patient’s bedside. As one not yet socialized to the unit, NV did not know that she should have been listening in for this information.

Verifying Observations with Staff

After observing the unit for several months, the authors went to key informants—nurses, physicians, and other hospital personnel who regularly interact with the CICU staff—to discuss their observations with them. The observation about “listening in” was only one of several topics discussed in these interviews. When observations about communications on the unit were described, they were not described as “eavesdropping,” because of the potentially negative connotation of the term. Instead, the authors asked broadly about communication on the unit, then described in general terms our observations about listening in. Nurses and doctors immediately acknowledged the behavior and independently labeled it as “eavesdropping.” According to staff members, eavesdropping contributed to better patient care. Comments included the following: “If we couldn’t talk, you know, nothing would get done and we wouldn’t learn and we wouldn’t be providing good care.” “Oh yeah, you have to eavesdrop. It’s just like a given.”

It was learned that eavesdropping was accepted and even encouraged among staff. The eavesdropping rules dictated that any patient care information talked about at the desk of the nursing unit could be listened to by others involved in patient care. Any private conversations—about performance, complaints, or personal matters—took place in offices or staff rooms. Likewise, private conversations with patients and/or their families took place outside the physical space of the nurses’ station. Nurses and doctors were discrete about information sharing and, to the extent possible, referred to patients by room number rather than by name. Furthermore, conversations taking place at the nurses’ station could not be heard in patient rooms.

As nurses, doctors, and hospital staff described their experiences of eavesdropping, it was clear that as participants in this communication system, they believed eavesdropping contributed to better patient care in a number of ways. Common themes emerged identifying why informants engaged in eavesdropping and what was derived from the practice: Eavesdropping contributes to *distributed awareness* of events, helps staff *anticipate needs*, provides opportunities for *continuing education* and socialization, and even helps supervisors *monitor quality*. A discussion of these themes follows and includes representative quotes illustrating themes.

Distributed Awareness

Eavesdropping distributes awareness about an event or piece of information beyond the individual or individuals directly involved with the patient. By distributing awareness, eavesdropping creates a safety net, so even if those directly involved are not present, others know what has transpired and can, by proxy, contribute information. This field note entry provides another example of how this process occurs.

N. took over the desk and tried to relieve B. so she could go to lunch.
B. told N. she didn’t know if Dr. B. had called the cardiologist about the new patient admitted from his office. G. (a unit RN) came by; he did know the cardiologist had been contacted.

Eavesdropping also allowed staff to become aware of information, such as the family dynamics of a patient, which may not be written down in an explicit, formalized fashion, but may contribute to better patient care.

Anticipation of Needs

Much of the work of “making sure” in the CICU is anticipatory. Administratively, this includes managing the mix of expertise needed on the next shift, setting up the room in a particular way to admit a new heart patient, and moving patients through the unit to make room for new patients. Eavesdropping assisted those in charge to anticipate needs for physical space and staffing.

To get the whole big picture of the unit, eavesdropping is a must....I stand behind physicians all the time

and listen in on their conversations. 'Cause I learn a lot about what's coming, what can move out, what their idea is for plan of care. I have to deal with the in and out thing. So you have to rely on what they think they know, or what they ought to know or what they heard or what someone has overheard.

Other nurses on the unit who were not in supervisory positions used eavesdropping to know when and how to help their fellow nurses if problems arose. By eavesdropping, nurses could anticipate those patients who might develop problems and focus their attention on alarms or requests coming from those rooms. Eavesdropping also helped nurses to know where to jump in when those problems arose.

Well I know that I try and eavesdrop to make sure. If someone's doing a lab or someone's putting in an order, anything that I can do, then I go ahead and do it before they even need to ask, so that it flows. It gets done.

Continuing Education

Nurses reported that eavesdropping provided continuing education about how others (more expert than themselves) cared for patients, so they could apply that knowledge to their own future patients.

We like to know what's going on, especially an interesting case.... And it's part of the learning process. I can name a half dozen nurses that I really look up to, and I enjoy hearing the way they think about certain things. And I've learned a bunch. Same thing with physicians, you know. I eavesdrop on them all the time.... That's one of the fun things about our job.... It's part of learning. It's part of being a proficient nurse...

Quality Monitoring

Nurse administrators reported listening in on conversations among new nurses and other staff members to assess the skills and thought processes of these staff members. The practice also provided real-time opportunities for mentoring.

When you can overhear a conversation and you kind of hear them put that thought into words, you really

can assess their critical thinking. 'OK, I heard you say this, but that's not quite how I see the picture and let's talk a little more in depth,' or 'I heard you ask the physician for this, but is that really what you wanted?'

Socialization

Nurses believe that new staff members must learn that eavesdropping is an appropriate and even expected behavior. New nurses or nurses who have worked on other units may not have experienced this behavior before and do not know when and where it is appropriate. Individuals who are not part of the unit or do not yet know how to act according to its rules stand out for their lack of participation in eavesdropping. (The authors' fieldwork experience is an example of lack of socialization to the CICU practice.)

New nurses and nurses new to the unit are encouraged by their mentors to listen in on conversations to observe how more experienced nurses interact with physicians and to learn the preferences and communication styles of physicians and other nursing staff.

I was training a new charge nurse the other day and there was a physician on the phone talking to another physician, and I stopped her and I said 'You have to eavesdrop on this conversation,' I said 'because we can learn a lot from this.'

Physical Space Contributes to Practice

The authors observed that there were few private areas on the unit for staff, with the exception of meeting rooms and head and charge nurse offices. The desk at the nurses' station occupies the center of the unit, flanked on three sides by patient rooms. The nurses' station is defined on four sides in high and low counters that provide working space for physicians and staff and storage space for monitors, telephones, charts, forms, and staff reference materials. Except for direct patient care and meetings (including report), staff members are close to each other and certainly within hearing distance.

Eavesdropping on this particular CICU is aided—made almost inevitable—by the physical space of the unit. The physical space of the unit constituted a "theatre" in which telephone and person-to-person conversations become public speech events. It was the

“communication space” in which conversations could—and should—be overheard.

Discussion

This article describes “eavesdropping” as an informal communication practice that improves patient care by increasing situation awareness, improving anticipation of patient and unit needs, facilitating coordination of unit activities, maintaining professional competence, and enabling quality monitoring of staff knowledge and skills.

As normative behavior in the CICU, eavesdropping or “listening in” is an efficient means of distributing information among group members, thereby increasing individual and collective situation awareness while reducing the need for (and resource requirements of) more formal, explicit updating. Distribution of awareness across unit staff provides redundancy. This awareness operates as a safety net to catch errors and reduces inefficiencies that result when an individual with needed information is unavailable. This sharing of information enhances coordination of activities on the unit and allows for better anticipation of patient care, staffing, and equipment needs.

Eavesdropping contributes to more efficient management of attention, a critical and highly constrained resource in the dynamic, complex, and information-rich environment of the CICU. First, it allows individuals to informally monitor others’ activities, allowing them to refocus attention where and when help might be needed. Second, it can reduce disruptiveness by limiting the need for interruptions to update others or be updated by them and by providing information to help individuals improve the timing of necessary interruptions.

Patterson, Watts-Perott, and Woods (1999) described similar “listening in” behavior as a formal practice in space shuttle mission control, using a technology called “voice loops.” In their study, engineers collaborating on the dynamic, complex, multidisciplinary process of managing the space shuttle in flight face analogous problems of achieving effective sharing of information and efficient management of attention while avoiding unnecessary interruptions and information overload. To accomplish this, they listen in on multiple conversations over “voice loops,” in a manner similar to the eavesdropping behavior observed in the CICU.

In another setting in which effective collaboration must be accomplished while avoiding interruption and minimizing information overload, Mackay (1999) describes the way in which teams of air traffic controllers “listen in” on each other both aurally and visually to monitor each other’s activities while working independently. Individuals on the team may have primary responsibility for input from radar, radio communication with pilots, or telephone communication with other controllers; they listen in on these activities and work together using paper flight strips to track and modify information about flight plans and aircraft. As engineers proposed technologies to replace the paper methods to accommodate the increase in air traffic while maintaining air safety, their conceptualization of the work differed from that of the controllers. The resulting designs did not provide support for the cooperative, overlapping activities, including “listening in” behaviors, and were rejected by those doing the work.

This study used ethnographic methods to describe the practices and procedures taking place within a CICU and how these practices affect patient care. The study was intended to generate hypotheses about the features, relationships, and behaviors that contributed to better patient care and the avoidance of errors. These hypotheses are specific to the unit studied and have not been tested for their transferability to critical care units in other facilities or to non-intensive care units. In addition, the study did not collect data, such as documentation of errors or patient outcomes, which could be directly related to specific behaviors or hypotheses. These findings do, however, support the fact that informal but normative communication systems such as eavesdropping should be considered when information flow and patient safety are examined or when the effect of changes in physical environment or work environments is being evaluated such as redesign of a unit or introduction of computer-based communication.

The ethnographic approach taken in this research deliberately examined how systems were constituted and how parts of that system were interrelated. From this perspective, communication systems encompass not only the individuals directly speaking to each other, but also others who become party to that communication. Examined in this way, the effects of

communication must be assessed from the loss or gain to the entire system, rather than to the individual interlocutors. The roles of eavesdropping as described by CICU nurses, doctors, and staff is that eavesdropping directly contributes to better patient care by distributing knowledge of what is being done or needs to be done for patients and by helping staff anticipate needs of patients and co-workers. The education, surveillance, and socialization functions of eavesdropping, although less directly related to patient care, nevertheless serve to improve staff caliber and camaraderie. Rather than creating interruptions that impede workflow and patient safety, conversations that occur at the nurses' station and are heard by others create a net information gain at the group level, which contributes to safer patient care.

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