Evidence Based Library and Information Practice

Critical Care Nurses on Duty: Information-Rich but Time-Poor

A review of:

McKnight, Michelynn. "The Information Seeking of On-Duty Critical Care Nurses: Evidence from Participant Observation and In-Context Interviews." Journal of the Medical Library Association 94.2 (Apr. 2006): 145-51.

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Abstract

Objective – To describe critical care nurses' on-duty information-seeking behavior.

Design – Participatory action research using ethnographic methods.

Setting – A twenty-bed critical care unit in a 275-bed community (non-teaching) hospital.

Subjects – A purposive sample of six registered nurses (RNs) working shifts in the critical care unit.

Methods – The researcher accompanied six RNs on various shifts (weekdays and weekends, day and night shifts) in the critical care unit and used participant observation and in-context interviews to record fifty hours of the subjects' information-seeking behavior. Transcripts were written up and checked by the subjects for accuracy and validity. The resulting rich data was analyzed using open coding (concepts which emerged during data gathering, for example "nurse's personal notes"); in vivo coding (participant-supplied concepts, for example "reading on duty"); and axial coding (hierarchical, researcher-developed concepts such as "information behaviors, information sources, information uses, and information kinds") (147).

Main results – The critical care nurses constantly sought information from people (patients, family members, other health care workers), patient records, monitors, and other computer systems and noticeboards, but very rarely from published sources such as books or online databases. Barriers to information acquisition included equipment failure, illegible handwriting, unavailable people, social protocols (for example

physician – nurse interaction), difficult navigation of computer systems, and mistakes caused by simultaneously using multiple complex systems.

Conclusion – Critical care nurses' information behavior is strongly patient-centric. Knowledge-based information sources are rarely consulted on duty due to time constraints and the perception that this would take time away from patient care. In seeking to meet the knowledge-based information needs of this group, librarians should be wary of traditional, academic models of information delivery. Instead, they should consider a tailored ready reference service incorporating quality and quantity filtering.

Commentary

Hospital librarians are often frustrated that their information literacy training programs and library marketing strategies fail to bring nurses into the library, either physically or online. Instead of sending out yet another survey to clinical staff to find out why they did not use the library or its resources, the author of this article spent time in the critical care unit of a community hospital observing the information-seeking behavior of nursing staff. The answer was obvious: nurses do not have time to search for, retrieve, or review health literature while on duty.

Knowledge-based information with which librarians are mainly concerned is only one small part of the information spectrum for the subjects of this study. The on-duty critical care nurses' observed information behavior was patient-centric and sought information from patients, patients' families, charts, computer systems, monitoring equipment and other health workers. Information sought was also patient-specific (blood tests, vital signs, medications administered), social, and logistic. Only

once, during the fifty hours of observation, did the researcher see one of the subjects seeking knowledge-based information from the reference books and Internet access available in the unit.

The author has chosen a focused ethnographic methodology which is appropriate to the aim of the research. Ethnography has been defined as "a set of research methods and an associated conceptual stance developed and used by anthropologists for investigating uncontrolled real-world settings" (Forsythe, 402). Focused ethnography is usually conducted with a cultural sub-group (in this case critical care nurses in a community hospital) and is used to obtain information on a specific topic (information-seeking behavior). The ethnographic researcher is often regarded as a participant observer, conducting research *with* the subjects rather than *on* the subjects. This is certainly the case here where the author often helped the nurses with small tasks and has, appropriately, written the report in the first person. However, the article's voice is highly subjective and would have benefited from a more objective tone and omission of phrases such as "my experience" and "surprised by this."

Strategies used to ensure reliability of the recorded data included transcription within 24 hours, review of transcripts by the participants, and coding of the data by the researcher herself to preserve in-context understanding. Using participant observation as well as unstructured interviews offsets the potential unreliability of self-reported data alone. It would have been helpful to have the codes used to analyze the data included in an appendix. The software used in the study is identified as Non-numerical Unstructured Data Indexing Searching and Theorizing (NUDIST) qualitative research software and its later version N6.

Possible sources of bias affecting the validity of the study derive from both the researcher and the subjects. The researcher declares her conceptual stance – "a belief in the importance of published literature for health care providers" (147). The fact that she is not a nurse was both a limitation of the study (a nurse may have had more insight into other nurses' behavior) and a strength, as she was not distracted by issues of patient care. The sample size was small (only six subjects) and was purposive, that is, selected by the investigator herself. The sample was additionally biased due to self-selection, with at least one nurse volunteering for the study after seeing the researcher observing another nurse. The researcher was initially aware of some "performance" behavior due to the presence of an observer. However this behavior was not sustainable because of the intense and demanding workload of the nurses.

The ethnographic research methodology used in this study highlights the importance of context for understanding the information needs of particular groups of potential or actual library patrons. In the sense that this study describes the behavior of one group of people at one time in one setting, the results cannot be widely applied. However the study's value lies partly in the fact that the researcher has chosen nurses as subjects and a community hospital as the setting rather than following previous studies identified in the literature review, which tend to focus on the information-seeking behavior of doctors or students in an academic (teaching hospital) setting. This article is thus likely to be of interest to health librarians in smaller, community (non-teaching) hospitals and health centers.

This study demonstrates that "no one can retrieve reliable literature and systematically review it while watching monitors, checking on patients, administering and verifying therapies, and answering telephone calls"

(150). It is a reminder to all librarians that the reason their patrons (or potential patrons) are not using the library may be that they are just too busy, and that traditional models of information delivery may not "fit" real-life conditions.

The author suggests a few strategies to deliver information in clinical settings but the discussion could usefully have expanded on two points mentioned briefly in the article. The first is the finding that "the critical care nurses' information seeking often did not take the form of a syntactic question or an articulated query" (148). This suggests a role for librarians in training nurses to formulate answerable clinical questions. The second is the observation that nurses' "typical conversations with doctors of pharmacy were longer than their conversations with doctors and doctors of osteopathy" (148). More detailed information on these particular information-seeking interactions would have been valuable in light of the author's claim that librarians are better able to provide the knowledge-based information services that hospital-based pharmacists are already providing (150).

Nevertheless, this study is valuable in highlighting the challenge facing many health librarians to develop innovative strategies for delivery of focused, filtered, high quality information to their time-poor patrons.

Works Cited

Forsythe, Diana E. "Using Ethnography to Investigate Life Scientists' Information Needs." <u>Bulletin of the Medical Library Association</u> 86.3 (Jul. 1998): 402-9.