BRIEF COMMUNICATIONS

Assessing nurses' information needs in the work environment*

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Nurses, the largest group of health professionals, are not information literate. They visit libraries infrequently and rarely subscribe to research journals. It is a challenge for librarians to identify nurses' information needs and to determine how to satisfy them. The authors undertook a qualitative study on a medical/hematology unit in a teaching hospital to ascertain the information resources and methods of information seeking now in use and any additional, unmet information needs.

LITERATURE REVIEW

During the 1980s, the number of journals reporting nursing research increased significantly. Educators began to emphasize the importance of critically assessing research findings and adopting appropriate innovations to improve practice [1–2]. Although nurses were becoming more educated and a growing proportion held nursing degrees, nursing literature remained underused. A study of health professionals in eight hospitals by King found that nurses used their hospital libraries less than did other groups [3], and a survey by Bunyan and Lutz discovered that nurses represented 34% of hospital employees but only 6% of library clientele [4]. Nurses neglected libraries despite evidence that research literature was potentially useful. Participants in a study by Marshall and Neufeld claimed that using library resources had a significant positive effect on their treatment of patients [5].

Reasons for nurses' neglect of research literature include the overwhelming volume of information, ignorance of searching techniques, lack of time, and

problems with library hours [6]. However, these reasons are not the complete explanation, because nurses would surely demand access to information sources they believed essential to their job.

Each discipline has its own information-seeking style, and the sources and types of literature sought are influenced by disciplinary culture. Information seeking by nurses on duty has not been investigated in detail. However, Corcoran-Perry and Graves' study of cardiovascular nurses revealed that colleagues and patient records supplied the answers to most of the nurses' clinical questions [7]. Nurses rarely consulted printed sources.

Proposed solutions to the problem of nurses' neglect of literature have included marketing the library to nurses [8], providing the services of a clinical librarian [9–10], and suggesting that clinical nurse specialists take responsibility for scanning the literature and making recommendations to colleagues [11]. These initiatives have been effective, at least for the duration of the programs. However, long-term planning requires information about whether an almost exclusive use of oral and written sources is adaptable to the work environment. Nurses must be provided with information literacy skills, but they must also have the opportunity to use these skills in the work environment.

THE STUDY

The sample consisted of thirty-two consenting nurses out of the thirty-four eligible full- and part-time registered nurses on a thirty-two–bed general medical and hematology and oncology unit in a teaching hospital. In gathering data, an ethnographic approach was adopted. Ethnography, or cultural description, is the study of culture in natural settings. A researcher with training in qualitative methods observed the participants for some forty hours in their work setting over a period of six weeks. Observations were recorded for full-day and night shifts as well as shorter periods. Semifocused interviews were conducted with sixteen staff nurses and other unit personnel, and a questionnaire was given to all nurses participating in the project. In addition, an inventory was made of printed material on the unit. The data were interpreted based on the congruence between observation and verbal reports and between interviews and data from anonymous questionnaires.

RESULTS

Information used by the nurses came from oral, written, printed, and computerized sources. Oral sources included fellow nurses, physicians, and other mem-

bers of the health care team. Handwritten information consisted of individual patient records, the Kardex, and other frequently updated resources. Printed materials included institution-specific publications such as departmental manuals and commercially published reference sources such as the *Compendium of Pharmaceuticals and Specialties* (*CPS*). A few current textbooks were kept on the unit, but others were dated. The hospital computer system included laboratory reports, organizational databases such as bed allocation, and Micromedex.

Nurses engaged in two broad types of information seeking. First, they sought information to help them make decisions about the care of individual patients. Second, they looked for information about broader topics within nursing. In this work environment, the activities in the former category took precedence.

Most questions on the unit related to patient care. Routine questions usually were answered using a single source. Nurses made daily use of the patient's record and the Kardex and frequently accessed laboratory results. Many questions were answered by other nurses, particularly the team leader, or by a physician or the pharmacist; questionnaire results showed that almost all nurses had requested information from each of these sources during the previous week. Less often, the nurses reviewed protocols or checked procedures in the departmental manuals. Among printed sources, quick reference tools such as the *CPS* often were used to answer patient care questions. Nurses rarely used Micromedex because few were familiar with its operation, and they read research literature only when an article was attached by the pharmacist or a physician to a patient's record.

Nonroutine questions arising from contingencies in patient care often were more complex than routine questions. They frequently required that information be collected from multiple sources. For example, a drug-related question might call for input from a patient's record, the laboratory reports, the *CPS*, and occasionally other reference sources. If the problem could not be resolved using the sources at hand, then a physician and the pharmacist would be consulted. Resolution of problems through collaboration was commonplace.

Information seeking not directly related to patient care was restricted to times such as quiet periods on the night shifts when nurses had no urgent duties. Professional development reading, whether for job-related purposes, curiosity, or educational courses, usually was pursued outside the workplace.

DISCUSSION

Inevitably, nurses focused on patient-care–related questions at work. Because information seeking either was routine and task oriented or was triggered by patient needs that required quick decision making, nurses sought clear directions from knowledgeable oral sources or quick reference material. They stated both in interviews and on questionnaires that their greatest information need was for accurate, concise reference sources in either printed books or computerized databases. The nurses believed that access to these resources would reduce the need for time-consuming consultations and *ad hoc* strategies. They also stressed that they needed direct access to information resources on the unit itself, because they could not leave their patients.

Professional development was peripheral in the nurses' work environment. They borrowed from the unit and used personal books to satisfy curiosity and learning needs. Few of the nurses subscribed to professional journals, and they used libraries only when they took educational courses. Because most nurses did not take courses at the medical center, they did not use its library, even though it was in the same building as the unit, and they did not identify access to a library or to research literature as a need.

The neglect or substantive nursing literature could be attributed in part to the nurses' work environment. There was little opportunity or encouragement to use research material on the job. Staffing needs on the unit were estimated in terms of specified care activities and the workload measurement system did not include information seeking as a nursing task. Consequently, they sought information only about specific tasks or particular problems, and they did so within strict time constraints. On the study unit, patient care practices did not emphasize the development of nursing plans nor was there evidence of established methods of introducing new procedures. As a result, nurses read research literature in conjunction with educational courses but not to solve problems related to their work.

IMPLICATIONS

This research is preliminary and the sample was small, but the results may have implications for librarians, educators, and nurses themselves. Librarians should address both categories of nurses' information needs— their perceived need for patient care reference sources and their professional need for research materials. The first can be addressed easily. If the library is to extend its services effectively into the nurses' work environment, librarians need to learn more about that environment. Then they can introduce nurses to appropriate information sources and, where these do not exist, become advocates for their creation.

The second need is more difficult to satisfy, because nurses themselves do not always recognize it. It is nursing educators who are concerned with the gap between research and practice. Aggressive marketing

of the library to nurses and the provision of clinical librarians are effective strategies for alerting nurses to relevant professional literature, but, ultimately, nurses themselves must actively identify information needs that librarians can then help them fulfill.

The most salient reason for nurses' infrequent use of research literature may relate to working conditions. Educators prepare nurses for a profession that includes decision making and innovation, but the work environment demands mainly established skills and tasks. Information literacy must be matched with an environment where it can be used. Educators, nursing managers, and practicing nurses need to cooperate in creating a workplace in which knowledge-based practice is a realistic option. Librarians can facilitate this process by providing consultation services in informatics and information literacy not only to practicing nurses but also to nursing managers and educators, who influence both nurses' values and the practical organization of their working lives.

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Funding a patient education collection*

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The reference desk in a typical medical or hospital library serves a wide variety of patrons, from physicians and nurses to laboratory assistants and secretaries. Staffing the reference desk up to four hours a day exposes a librarian to diverse individuals beyond the primary patrons; in particular, reference questions often come from patients and their families. To their frustration, librarians may be unable to provide the information that these patrons need. Often the problem is not that the information does not exist, but that someone has checked out the source material. Even if the material is available, it may not be in a form easily understood by the lay reader.

The Health Science Center Library at the University of Florida attempts to meet the needs of faculty, staff, and students in the six colleges of the J. Hillis Miller Health Center. These are medicine, nursing, pharmacy, dentistry, veterinary medicine, and health-related professions. The last college contains the departments of clinical and health psychology, communicative disorders, health services administration, occupational therapy, physical therapy, rehabilitation counseling, and a physician assistant program. Significant breadth and depth of information must be readily available to serve such a spectrum of potential patrons.

Many thousands of patients each year receive treatment at Shands Teaching Hospital and Clinics, which is associated with the J. Hillis Miller Health Center. Shands is a tertiary-care center that accepts referrals from the entire southeastern United States. It is located in Alachua County, Florida, a small metropolitan area with a 1990 population of 180,000.

Although patients and their family members are not primary users of the Health Science Center Library, librarians have perceived a growing need for materials addressing issues relevant to this population. In an effort to provide specifically for patients and their families, one reference librarian developed strategies that linked the academic library with a local public library. These strategies were needed to develop an information delivery system that would benefit not only the patients and their families but also the reference librarians. R. M. Dougherty recently