The Information Behavior of Nurses
LIS 510: Assignment #2

By Team 6

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Our review of current literature surrounding information behavior in nursing was dominated by the widely acknowledged need for more extensive evidence-based decision making in actual workplace situations. In an attempt to bridge the gap between research and real-life application in the study of information use and clinical decision making by nurses, Thompson, Cullum, McCaughan, Sheldon and Raynor (2004) attempted to identify "the reality" of nurse information behavior. In line with our own interviews and observations, the study found that nurses prefer humans (specifically, their professional colleagues) as information sources and identified a number of variables to explain why. The study found that nurses valued information from colleagues because it was contextual, relevant, time efficient and grounded in clinical reality. While the study does not offer any possible solutions, it suggests that understanding the preference for peer-to-peer information sharing may be the key to incorporating more evidence-based decision making into nurses' everyday practice. The studies briefly described below offer some additional insight into this phenomenon.

Longbottam, Williams, Smith and Longbottam (2005) employed detailed, in person interviews to identify and examine the information needs of three UK hospital operating theatres (rooms). The researchers found that surgical nurses, in particular, have information needs that fall under three distinct areas: direct care, professional development and medical device knowledge and administration. It was discovered that nurses placed a higher premium on their own professional expertise and that of their peers than on retrieving information from potentially "inappropriate locations" and in general, "information seeking did not form part of the culture of the job, except with regard to training." Additionally, the nurses in this study felt that they had the poorest Internet access compared to other theatre staff (surgeons, in particular). The study, designed to inform the development of a specialist library within the already-existing National Electronic Library of Health (NeLH), highlighted such nurse-identified information needs as training material, current surgical procedure resources, equipment reviews and patient materials. The researchers pointed to the need for a specialist library, but that barriers of access would first need to be addressed for the library to reach its fullest potential use. (Longbottam, 2005) Access in this context refers to both physical and cognitive constraints like those mentioned in the following study by Pravikoff .

In their attempt to determine what personal and organizational barriers keep nurses from using research Pravikoff, Tanner and Pierce (2005) found that clinical registered nurses (RNs)

recognize the need for information to practice effectively, however they are not prepared to use the information resources they may have access to. As found in many of the articles referenced during our literature review, lack of time is consistently seen as one of the main obstacles in seeking reference based information (Hedberg & Satterlund Larsson, 2003), (Thompson, 2004), (Longbottam, 2005). Furthermore, when asked about their computer skills, nurses were confident in their ability to use computers, Windows, word processing, and the Internet, but less confident in their ability to use bibliographic databases. Both of these factors result in a tendency for nurses to seek information from a colleague rather than a reference resource.

In Dee and Stanley (2005) a group of clinical nurses and nursing students were given two hours of training in how to search the National Library of Medicine databases. While nursing students had more access to computers, and used them in their studies, they were as unlikely to use them when they had an information need around a patient as were the nurses who worked in non-profit settings, even after the training. Both groups preferred interpersonal interactions followed, less frequently by books when gathering information. Dee and Stanley concluded that human and print resources were preferred over electronic resources by both nurses and students because they are easy to use and provide immediate access to trusted sources of health information. We saw this during our nurse observation when she was asked a question about a patient's prescription and consulted a reference book.

The results of these studies suggest that in an environment where peer-to-peer information sharing is so highly valued, creating a specialist library and/or providing database training may not induce more information seeking from reference materials. Considering how to transfer the preference for information from peers to evidence-based research using the studies mentioned above as guides may be a worthy subject for future studies.

Field Work Summary

Not surprisingly, the emphasis on peer-to-peer information exchange so prevalent in our survey of the current nursing IB literature carries over to "real world" nursing environments and situations. We chose to observe Pamela Knowles, a Nurse Manager who specializes in triage at the University of Washington's Hall Health Center. Although confidentiality concerns prohibited us from watching our subject interact with patients, we did get three separate opportunities to witness her information behaviors in the context of administrative tasks.

During our first observation with Pam we counted more than 25 information incidents, many of which occurred in person rather than over the phone or via e-mail (please see attached list). She filed various documents and pulled others out during our visit, and she regularly consulted a black staffing planner, which she identified as one of her primary organizational tools. She also consulted a journal article, which, according to the IB literature was rare. She checked e-mails throughout the day, as well as an EPIC Hyperspace scheduling database. One potential barrier to information sharing we noted is that is the fact that Pamela has her primary desk in the billing office and is the only RN in a room that includes roughly 6-7 other workspaces. When she needs to consult with her colleagues it requires a walk down the hall or up several floors, as was the case with a set of incidents surrounding an alcohol and drug awareness brochure designed for students. However, this was not a significant problem as she frequently "checked in" from one colleague's office to another.

During our second observation, one nurse had called in sick, so Pamela was sitting in the absent nurse's cubicle, seeing patients (during which times we left the room). She was the esteemed colleague that many of her fellow nurses went to with questions. We observed six information incidents over a 90-minute period, including one in which Pamela consulted the *Nursing 2005 Drug Handbook* for a colleague who wanted to know more about "solumedrol". She took a phone call from a student, which was something like a neutral reference interview, with her asking questions to tease facts out.

The third observation consisted of watching her type, taking care of necessary administrative duties. There were no observable information incidents at this time.

Pamela's observed actions and IB were similar to what was described in the literature as well as statements made by the nurses we interviewed. Both Pamela and the nurses we interviewed shared these IB attributes: a) they generated information needs from work sources, and both drilled down on topics of their own interest; for instance, the school nurses both researching the special needs students in the elementary school. b) they use empirical search strategies or go to known sites and c) they use several strategies for information giving, including planting a nugget (brochures on different topics), and tailoring complete information to the attributes of a particular need (describing seizure disorder to teachers).

In addition to our observations of Pamela Knowles, we interviewed four nurses with various professional backgrounds. The interviews allowed us to query the nurses and understand

their perceptions of their information environment.

We conducted face-to-face interviews with two elementary school nurses, a surgical nurse at Harborview Medical Center, and an RN specializing in HIV/AIDS hospice care. Each interview addressed the following: general background information, a recent critical information behavior incident, and how information is produced and disseminated in the interviewee's work environment.

Using examples culled from our research, the following generalizations can be made about the information behavior of nurses: a) nurses often need crucial, time-sensitive, and reliable information, b) their initial source preferences are peers, interpersonal communication and websites, c) nurses employ varied methods of managing their information, d) nurses use information to accomplish both externally imposed and internally motivated job-related tasks or goals, e) nurses exhibit a tendency to give information freely (when ethical), whether via formal instruction or general encounters, and both when it is requested or unsolicited.

All four interviews identified importance, time-sensitivity, and reliability as key issues that determine information behavior. For instance, both school nurses recalled a need for more extensive seizure disorder information prompted by the attendance of children with this potentially life-threatening condition, the surgical nurse performs many tasks in the OR that require crucial, time-sensitive, and reliable information from fellow staff. The hospice nurse also shared an information incident highlighting these characteristics; she was responsible for making difficult choices about continued care for a patient close to death, and all three aforementioned factors affected her need for information.

Possibly the most prevalent conclusion of the literature we reviewed on the information seeking behavior of nurses was that their most trusted and utilized sources of information are fellow peers, and they prefer information retrieval via interpersonal communication and the internet. They rarely access scholarly journal articles or consult health science databases. This was confirmed by the results of our interviews. School Nurse #1 said that when she has a question she calls her mentor or consults the web. Surgical Nurse said, "When something comes up and the nurses aren't sure about their practice, we'll talk to one another. We trust the experience and the background of our colleagues because we've worked together so long in this challenging environment." He also stated that he finds most of the information he needs on the hospital's website by clicking on a link called "Nurses Toolbox." In contrast, the hospice nurse

discussed earlier did *not* seek the guidance of her coworkers but rather, sought emotional support and guidance from the clinical nurse specialist (who the hospice nurse selected over her peers due to the clinical nurse specialist's advanced education and experience). And finally, when School Nurse #2 started her search for seizure disorder information she consulted the following sources in chronological order: 1) nurse at student's previous school, 2) student's mother, 3) care provider & medical records at hospital 4) nursing supervisor, 5) Google, 6) hospital's lending library - videos, 7) medical reference book at home. The type and order of these sources is indicative of the patterns seen in the literature. Peers and people were consulted first, then the web, then more traditional sources, and conspicuously absent is any mention of a bibliographic research database or scholarly article.

Each of the nurses we spoke with addressed a common concern with information management. School Nurse #1 mentioned cleaning out and reorganizing the nurse's office after she was hired, Nurse #2 uses paper files, computer files and "her head" to keep track of information, and Surgical Nurse cites documentation and charting as actual facets of his job, and an experience where his quickly retrieved, extensive, and accurate records impressed the Quality Improvement individual who stated "this is exactly what I was looking for. This is the kind of charting that we need here in the OR." The only pattern we saw in how the nurses organize and manage their information is that there is no pattern – they each choose their own methods.

These nurses shared information that showed how they use information to accomplish internally motivated and externally imposed factors. Returning to the Surgical Nurse's charting information need, he recorded and produced those charts because a fellow staff member requested them. Likewise, the Hospice Nurse had to use information to determine what should be done with the patient because she was assigned that responsibility as the patient's nurse. However, the school nurses used their seizure information to satisfy an internally motivated craving for additional knowledge – no one asked them to become experts because those students arrived, or to share with others what they discovered. This example transitions naturally into our fifth general conclusion about the information behavior of nurses: they tend to freely share information both by formal instruction or day-to-day encounters, and in scenarios where the information has been requested or is unsolicited. School Nurse #2 mentioned a daily task is answering questions from parents, teachers, and children about health. They are soliciting this information from her, and she shares it in an informal way. An emergency PowerPoint

presentation given by School Nurse #1 to the staff is an example of giving unsolicited information in a formal structure. The interviews confirmed that nurses have a tendency to share information, and they do it in many ways.

The IB we observed and heard about in our interviews is not surprising in light of the literature already published on the field. Pamela's information behaviors clearly reflect Harris & Dewdney's Principle #4, which is "People Tend First to Seek Help or Information from Interpersonal Sources, Especially from People Like Themselves." Pamela's behavior most closely matched the two school nurses who were interviewed, as all three work in a school setting where there are rarely emergencies or the kinds of pressure associated with Harborview or an AIDS hospice.

Nurses sometimes need to consult other resources (sometimes in order to answer another nurse's question, as we saw in the incident where Pamela checked the *Nurses 2005 Drug Handbook* for a colleague) and this, also, reflects findings from a survey of the current literature (Dee and Stanley, 2005).

As for the five patterns of Information Behavior we noted earlier, each appears numerous times throughout the literature but most notably in Longbottam, Williams, Smith and Longbottam (2005). Examining the information needs of a perioperative staff, Longbottam *et al* found that OR nurses have an even greater need than most for reliable and time sensitive information, that they often turn to peers for information, their information needs can be both externally imposed or internally motivated, they have varied methods of managing their information (with more or less success depending on how easy their systems are to use) and finally, nurses are enthusiastic about information sharing opportunities, whether through formal constructs such as a specialized library or more generally through peer-to-peer sharing.

In the end, our interviews and observations were almost surprisingly in line with conclusions already brought forth in much IB of nurses research. We deliberately selected interview subjects who worked in very different arenas of nursing , hoping perhaps to find areas where their IB might conflict with the IB found in most of our studies. Instead, we discovered that whether nurses were performing administrative tasks, helping patients navigate the late stages of HIV, giving presentations or researching OR equipment, there were still such common themes as a need for fast, reliable information, the preference for peer-to-peer information exchange and a tendency to give information freely, whether in formal or informal contexts.

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