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With the rise of the evidence based nursing movement, it is more important than ever for nurses to have access to information to inform practice. Electronic point of care resources offer one possible solution to the barriers surrounding nurses' information seeking. This research surveys nurses working at a large academic hospital to determine their awareness and use of Nursing Consult, an electronic point of care resource. The results of this study indicate that few nurses are aware of the resource, but those who use it find it valuable. The researcher recommends the library publicize and provide training on Nursing Consult to select groups of nurses to increase awareness of the resource.

Headings:

Evidence-Based Nursing -- Databases

Use Studies -- Information Systems

Nursing

Questionnaires

NURSES' USE OF NURSING CONSULT: A POINT OF CARE RESOURCE

by
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Approved by

Claudia Gollop

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Introduction

Hospital nurses seek information for a wide variety of reasons: to provide the best possible patient care, to engage in research, to participate in quality improvement and for continuing education, just to name a few. In particular, the emphasis on the need for information has increased in recent years due to the rise of the evidence based nursing movement, which involves the application of research literature to everyday clinical problems. Besides being considered best practice by scholars and practitioners alike, providing evidence based nursing care is a factor that helps hospitals earn prestigious magnet status designation. However, as nurses juggle multiple duties, they have a limited amount of time to spend on searching for information. One need they articulate is the ability to access electronic information they need at the point of care “in the fewest clicks” possible.

The UNC Health Sciences Library is an academic health sciences library that serves the University of North Carolina at Chapel Hill Schools of Dentistry, Medicine, Nursing, Pharmacy, and Public Health, the citizens of North Carolina, and UNC Hospitals. UNC Hospitals is a large public academic medical center that employs approximately 700 nurses, including clinical nurses, nurse managers, nurse administrators, and nurse educators. In 2008 the library aimed to purchase a health information resource for the nurses at UNC Hospitals to help them access evidence based information at the point of care, and the result was the acquisition of Mosby’s Nursing Consult (subsequently referred to as Nursing Consult). Since the acquisition of the

resource, very little information had been gathered on which nurses are using Nursing Consult, how they access the resource, why they choose to use it, or even if they have heard of it. In the face of increasing budget cuts, the library needs, now more than ever, to reassess if their purchases are providing value to their patrons.

This study seeks to investigate UNC Hospital's nurses' awareness and use of Nursing Consult. Specifically, the study will address the following research questions:

- 1) How do nurses access Nursing Consult?
- 2) Why do nurses use Nursing Consult?
- 3) Why do nurses not use Nursing Consult?

Literature Review

Nurses' information needs

With the increased dialogue around the evidence based practice movement, nurses are aware of the need for current health information in order to practice. They desire information on a wide range of topics, and multiple studies have sought to find out what types of health information nurses want to find. A category of information that has long been popular is information that helps them provide care to patients, such as drug information, patient education materials, journal articles, and information to help answer specific clinical questions (Blythe & Royle, 1993). Additionally, they also search for information for personal enrichment, which encompasses information for professional development purposes, to stay current, or for coursework requirements (Younger, 2010).

When discussing information needs for this population, it is important to note that nurses are not a homogenous group. Educational levels of nurses can range from Diplomas and Associate's degrees up to Master's degrees and beyond. Furthermore, the primary role of a hospital nurse may not be direct patient care, but in management, administration, or education, just to name a few examples. Some studies have taken this into account and have examined subgroups of nurses. For instance, surveys and interviews with nurses by Cogdill suggested that with more education comes a more frequent perception of the need for information (Cogdill, 2003). Cho found that the amount of information nurses want displayed in a database varies: novice nurses prefer

as much information as possible to help them make decisions, whereas experienced nurses prefer a moderate amount of information (Cho, Staggers, & Park, 2010). Lastly, findings by Thompson suggest that senior nurses may be well suited as trainers who can disseminate research evidence to other nurses, which has implications for librarians who are deciding how to market towards and train nurses on the use of newly acquired resources (Thompson, McCaughan, Cullum, Sheldon, Mulhall, & Thompson, 2001a; Thompson, McCaughan, Cullum, Sheldon, Mulhall, & Thompson, 2001b).

Nurses' information seeking behavior

Study findings on which information sources nurses turn to for their information needs vary. In general, nurses value “accurate and concise reference sources” (Blythe & Royle, 1993). Their ideal information sources are characterized as accessible, available, credible, and relevant (Nwagwu & Oshiname, 2009). A common thread throughout the literature is that the ability to access information from their unit or work area is a must. Since nurses value convenience, the first source they often turn to is a trusted peer (Ajayi, 2005; Blythe & Royle, 1993; Dee & Stanley, 2005). A review by Spenceley et al. elaborated that nurses turn to peers first, then nursing journals, then reference material, but cautioned that the high ranking of nursing journals may have been due to sampling bias in the studies they reviewed (Spenceley, O'Leary, Chizawsky, Ross, & Estabrooks, 2008). An observational study of on-duty critical care nurses found that information sources nurses turned to most often were people, patient charts, and computer systems (McKnight, 2006).

As far as electronic resources go, studies by Dee and Hider found that internet search engines were more likely to be used than the nursing database CINAHL, but then

a study by Beke-Harrigan found the opposite (Dee & Stanley, 2005). Interestingly, nurses felt they were more successful in finding the information they needed when using a general search engine versus CINAHL (Beke-Harrigan, Hess, & Weinland, 2008). There are several documented case studies involving libraries providing training to address that particular issue. For instance, one study revealed that nurses reported a desire to learn more about information seeking, and were “pleasantly surprised” to learn about services provided by the library (Dee & Stanley, 2005). After training, it was noted that the nurses wished they had known about the contents of scholarly databases sooner (Dee & Stanley, 2005).

Barriers to information seeking

There are several barriers nurses can encounter that dissuade them from using electronic resources to find health information to implement into practice. The most often stated barrier is a lack of time (Hutchinson & Johnston, 2006). Another barrier is a lack of access to information in the areas that they work (Thompson, McCaughan, Cullum, Sheldon, Mulhall, & Thompson, 2001b). Naturally, setting up access to electronic resources can solve part of the problem. In a pre/post intervention study, it was found that 20% of surveyed nurses started using libraries electronic resources when given access to them (Tannery, Wessel, Epstein, & Gadd, 2007).

However, how do we account for the nurses in Tannery’s study that did not start using electronic resources when given access to them? Other research studies offer some possible explanations. First, even if nurses have access to electronic resources, they may be unaware that relevant information sources are available (Nwagwu & Oshiname, 2009). Next, even when nurses are aware of which resource to use, they can still encounter

difficulty due to a lack of searching or critical appraisal skills (Thompson, McCaughan, Cullum, Sheldon, Mulhall, & Thompson, 2001b). Finally, some nurses may not turn to electronic resources because they feel that their information needs were satisfied by print resources (Dee & Stanley, 2005).

How point of care resources can help

Electronic point of care resources have the potential to help nurses overcome the barriers they encounter in seeking information (Newman, Papadopoulos, & Sigsworth, 1998; Royle et al., 2000). They can accomplish this twofold- first of all, by making it easier and quicker for healthcare workers to retrieve information since they can access it from their work area, and secondly, by presenting information in a summarized, easily read format, which can help overcome some of the issues with critical appraisal. Studies conducted with doctors have shown that they value point of care resources over databases that focus on the primary literature. For instance, one study showed that residents chose to use the point of care resource UpToDate more often than PubMed, and they perceived it to be more useful for answering patient-related questions (Hoogendam, Stalenhoef, de, & Overbeke, 2008). Multiple studies have reinforced this finding and have shown that out of available resources, doctors rank electronic point of care resources as the most helpful and useful, outranking traditional health databases interfaces like PubMed (Ely, Osheroff, Chambliss, Ebell, & Rosenbaum, 2005; Leff & Harper, 2006; McCord et al., 2007; Schilling, Steiner, Lundahl, & Anderson, 2005). Additionally, research has been conducted that compares how physicians rank different medical point of care tools (Campbell & Ash, 2006).

In comparison, the research on nurses using point of care resources is scant. A UK study of nurses investigated their use of the Cochrane Library compared to MEDLINE and CINAHL, and found that the vast majority of nurses had not even heard of the Cochrane Library. They surmised that perhaps it was because the Cochrane Library's coverage of nursing research was limited, and a comparable resource that focused on nursing was not available at the time of the study (Griffiths & Riddington, 2001). Later studies have been somewhat more encouraging. A study by Hider found that nurses chose to use a point of care resource called Clinical Evidence more than CINAHL, but did not delve into why the nurses chose to do that (Hider, Griffin, Walker, & Coughlan, 2009). Additionally, Wozar and Worona tracked nurse access to various resources after they attended training classes, and found the top accessed resources were Primary Care Online, a clinical resource that provides lab, drug, and disease information, followed by another clinical resource called MDConsult, then finally the primary literature database Ovid (Wozar & Worona, 2003). Ndosi & Newell did a study on the types of information used by nurses at the point of care to find drug information, and the top information source was found to be the British National Formulary (Ndosi & Newell, 2010).

Gosling and Westbrook have done multiple studies assessing the use of the "Clinical Information Access Program" point of care resource by Australian healthcare workers, including nurses, and these yield some very interesting data about nurses' willingness to use point of care resources (Gosling, Spencer, & Westbrook, 2004). They found that CIAP use in nurses was half of that of doctors, and sought to find why that was (Gosling et al., 2004). They found that only 58% of nurses had heard of CIAP, and

that awareness of CIAP went up along with seniority of the nursing staff. However, the encouraging finding was that of those nurses who had heard of CIAP, 74% had used it. Factors positively associated with CIAP use were seniority and computer skills. CIAP was used for professional development, education, and research (Gosling et al., 2004). Those who didn't use it cited lack of training, lack of time, or sources of other information filling their needs (Gosling et al., 2004). Training had no effect on frequency of use, but did have a link to how successful they were at finding information. The vast majority of those who had heard of CIAP thought the system had the potential to improve care (Gosling et al., 2004).

Importance of Study

This research can benefit medical librarians who serve nurses by revealing whether a nursing point of care resource is considered useful by nurses, and therefore a worthwhile acquisition. Additionally, surveying whether nurses are aware of the resource can help explain whether usage statistics are low because nurses are not aware of the resource, or if they know of the resource and choose not to use it. This can help librarians determine whether the resource should be more heavily promoted. The researcher hypothesizes that librarian's best practice should be to provide access to and promote a nursing point of care resource. Finally, the research can indirectly benefit nurses, because if librarians know more about the information seeking habits and needs of nurses, they will be better able to serve that population.

Investigator Qualifications

The primary investigator is an Instructional Assistant at the UNC Health Sciences Library. As a registered nurse and a former UNC Hospitals' employee, she has an

understanding of the perspectives of hospital nurses. She is designing the study with input and support from the UNC Health Sciences Library Liaison of the School of Nursing as well as a UNC Hospitals nurse manager. The faculty advisor has done past research on health sciences information.

Methodology

Methods

A couple of years prior to the study, the nurses at UNC Hospitals had been given access to a point of care resource, specifically a resource called Mosby's Nursing Consult. Mosby's Nursing Consult is a resource provided by Elsevier that is unique in the fact that it is designed specifically for nurses with the input of a nursing advisory board. In contrast, other point of care resources such as UpToDate and MDConsult are designed with physicians in mind. The resource includes drug information, patient education handouts, access to journal articles, reference books, current news, evidence-based practice information, clinical practice guidelines, and care planning tools. Nursing Consult focuses on providing summarized information to be used at the point of care. This is in contrast with the popular nursing literature database CINAHL, which is intended to be a comprehensive index of citations to the nursing literature.

Access was defined as a paid subscription to the resource via the library with a hyperlink to the resource on the library's website. The resource was accessible in multiple ways: through the library's database page at <http://www.hsl.unc.edu/Databases/EIDSearch.cfm>, the university libraries database page at <http://eresources.lib.unc.edu/eid/>, as well as a quick link through the library's "Clinical Reference" page at <http://guides.hsl.unc.edu/content.php?pid=130637>. The Clinical Reference page link is perhaps the most important point of access, as this page is

hyperlinked from the hospital's clinical information system called WebCIS. Nurses must log into the WebCIS system to perform some of their regular work tasks.

The study sought to measure awareness and use of the e-resource, as reported by nurses. Nurses were asked the reasons they choose to use or not use the resource. The investigator also aimed to determine if the use of Nursing Consult helps nurses easily find information that enables evidence-based practice, that is, information derived from research to inform everyday nursing job duties, including clinical care, nursing management, and/or nurse education.

A short, online questionnaire was chosen as the data collection method. The survey was cross-sectional, meaning that data was collected at one point in time. The length and the duration of the survey was made as short as possible since nurses are particularly busy at work. Since most nurses do not have one set computer they use at work or may work limited hours in the hospital, it was also important that the survey was accessible from any computer. Finally, online surveys are cost effective way to reach many participants at once.

Survey Design

A questionnaire survey was created using the web-based Qualtrics system. Fourteen questions were multiple choice, three were multiple choice with the option of filling out a free response to clarify the selection of "other" as an answer, and two were open ended free response. There were a total of nineteen questions, however, the survey made use of question blocks and branching logic that skipped questions irrelevant to the participants based off of their answers. Appendix C contains the full text of the survey questions along with notes on the survey logic.

The first block of the survey determined the nurses' role at the hospital and whether they had been aware of Nursing Consult prior to the survey. The interface of Nursing Consult had changed the month before the survey was sent out, so screenshots of both the old and new interface were included along with the question to help promote recall of the resource. If the participant had not heard of Nursing Consult, they were automatically skipped to the last block of the survey, which consisted of three demographic questions.

Those who had heard of Nursing Consult continued to the Usage Determination Block, which asked how they had heard of Nursing Consult and whether they used it or not. Participants who responded they did not use Nursing Consult were routed into the question Non-User Block, asking the reasons they did not use Nursing Consult, after which they answered a question about their desire for training and then were routed to the Demographic Data block.

Participants who confirmed that they used Nursing Consult were routed into the block with the greatest number of questions. This section contained questions asking which elements of Nursing Consult that they use, why and how often they use the resource, how they rate their computer and database searching skills, how easy they rate Nursing Consult to use, how often it satisfies their needs, where they use the resource from, and finally, if they believe the resource has the potential to improve patient care. Once they finished their block, they were routed to the Training and Demographic Data blocks. The content of the survey questions was loosely based off of the surveys used in the Gosling and Westbrook studies, but was modified to better suit the UNC study population and the Nursing Consult resource.

The survey was pretested by the researcher, the nursing librarian liaison at the UNC Health Sciences Library and a UNC Hospitals nurse manager. The amount of time needed to complete the survey averaged five minutes, and any question could be skipped to encourage participation by nurses reluctant to invest time in a task outside of their work duties. The survey and study were approved by the UNC Chapel Hill Institutional Review Board and the UNC Hospitals' Nursing Research Council.

Subject Recruitment

Any nurse working at UNC Hospitals was eligible for the study, however, in a discussion between the researcher and a UNC Hospitals nurse manager it was determined that the most feasible approach to the study would be to select a sample of nurses. The reasoning behind this was a combination of the time-limited nature of a masters paper project combined with the stipulation that any research involving nurses at UNC Hospitals must be individually signed off by the nurse managers overseeing the participating units. The sample of nurses for the study consisted of those working on three medical units for a total of 80 nurses, the vast majority of which were clinical nurses.

Survey Distribution

One nurse manager informed the researcher that she wanted to e-mail her employees notification that a survey would be sent to them. After that, an invitation containing a link to a web-based confidential questionnaire survey along with a description of the study was sent via e-mail to the study population on August 19th, 2011 (see Appendix A). Eleven days after the initial invitation, a reminder e-mail was sent on August 30th (see Appendix B) before the survey period ended at midnight on September

3rd. The only participant identifier collected were IP addresses, as they are automatically collected from the online survey software (Qualtrics), but they were discarded immediately upon receiving the data.

Univariate analysis of the data was used to get an overall picture of nurses' experiences with Nursing Consult, including perceived ease of use and choice of database if they do not use Nursing Consult. In addition, chi square analysis and t-test was used to compare the characteristics of nurses who are Nursing Consult users to those who know of, but do not use Nursing Consult. The significance level was set at $P < 0.05$. Qualitative data was coded for themes.

Results

Three of the nurses' e-mail addresses returned a "Mailbox Full- Message Undeliverable" message back to the researcher, reducing the sample size to seventy-seven. In the two weeks the survey was open, twenty-seven responses to the survey were received, for a response rate of approximately 35%.

Demographics

Figure 1 conveys that 81% of nurses (n=22) that responded to the survey classified themselves as fitting into the role of a clinical nurse, reflecting the known composition of the study sample. However, Figures 2, 3, and 4 suggest that the sample was more diverse in the other demographic categories. 31% (n=5) nurses had less than five years of experience, 27% (n=7) had five to fourteen years, 31% (n=8) had fifteen to twenty four years of experience, and three nurses had twenty five years or more. A slight majority of nurses (51%, n=13) had attained a bachelor's degree, 20% (n=5) reported obtaining a master's degree, 24% (n=6) reported obtaining an associate's degree, and 4% (n=1) reported obtaining a diploma. Finally, 35% of nurses were 25-34 (n=9), followed by 35-44 and 45-54 receiving 19% of the responses each (n=5 each), 15% were 55-64 (n=4), 5% were 24 or younger (n=2) and one respondent was over 65.

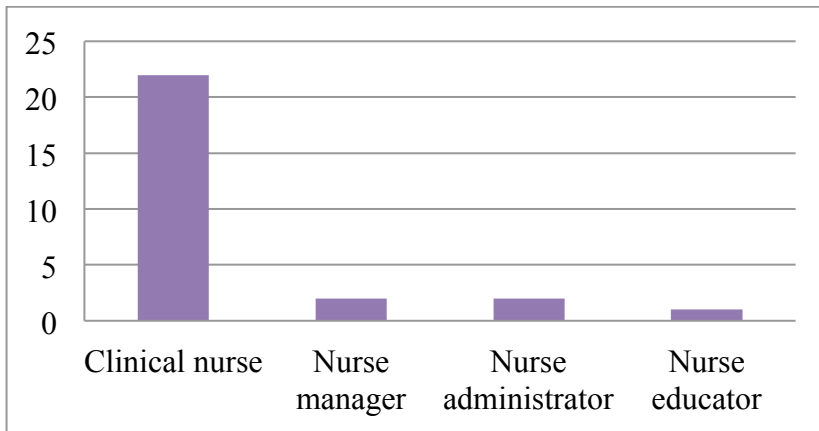


Figure 1. Nurse's Role

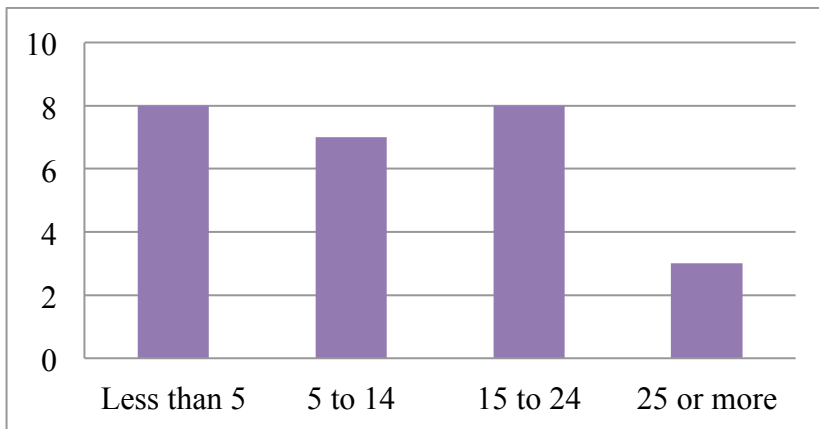


Figure 2. Years in Practice

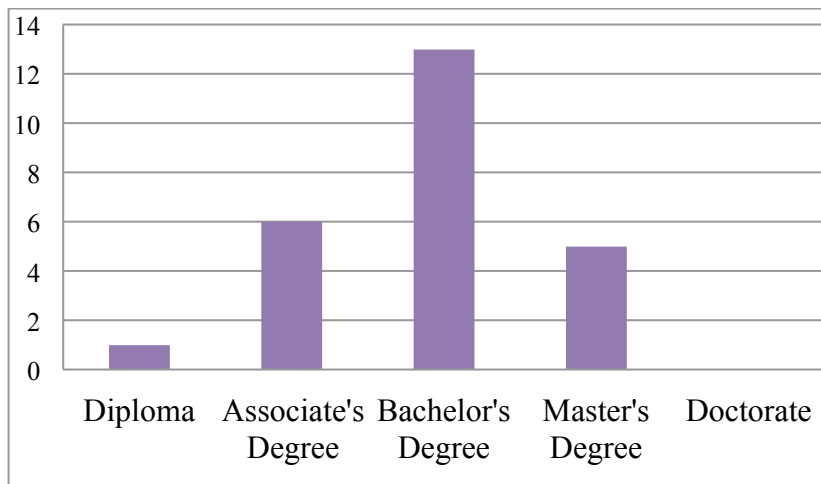


Figure 3. Highest level of education completed.

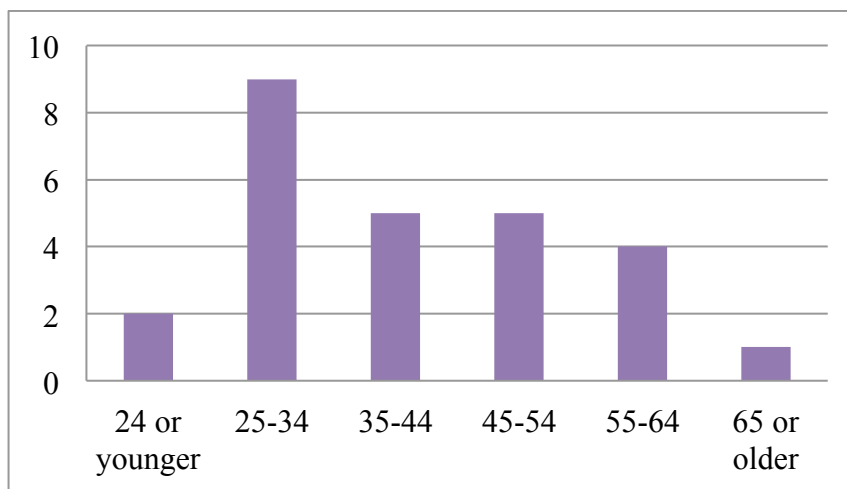


Figure 4. Age in years.

Awareness of Nursing Consult

Twenty-seven respondents continued to the question regarding whether they had heard of Nursing Consult. As seen in Figure 5, the results to this question were striking: almost three fourths of the nurses (74%, n=20) had not heard of the resource.

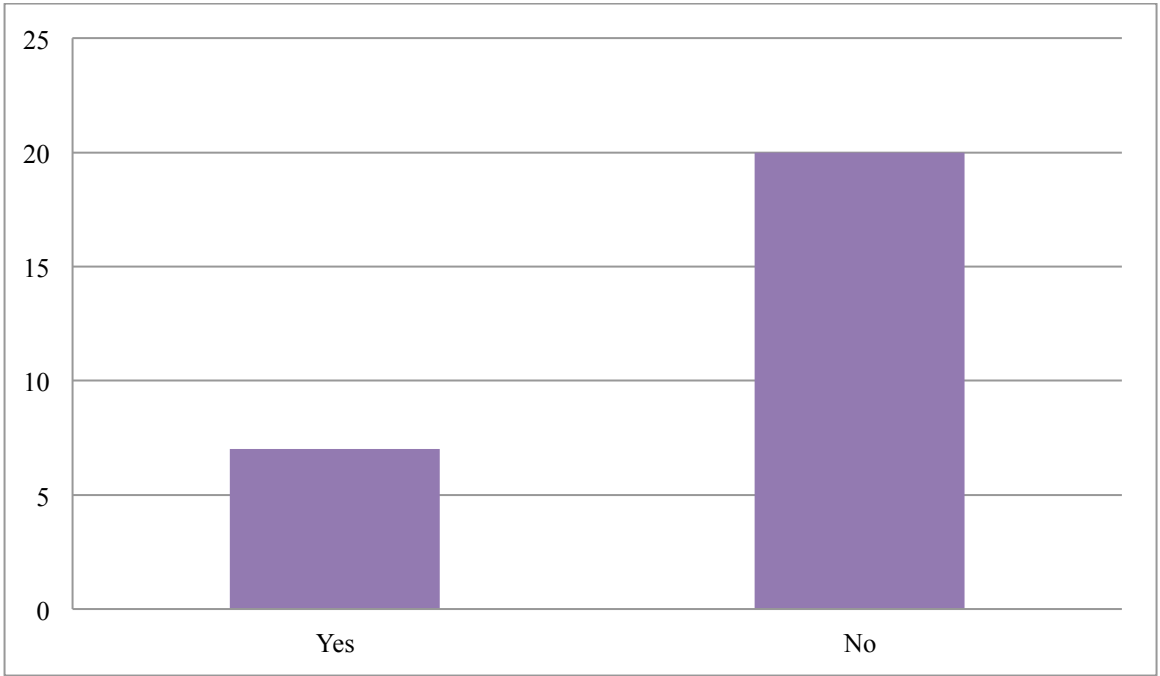


Figure 5. Nurses who have heard of Nursing Consult

Figures 6, 7, and 8 show the breakdown of answers to the question “Have you heard of Nursing Consult?” by demographic. From these graphs it would appear that awareness of Nursing Consult decreases as age and years of experience increase, but chi square testing revealed that these relationships were not statistically significant.

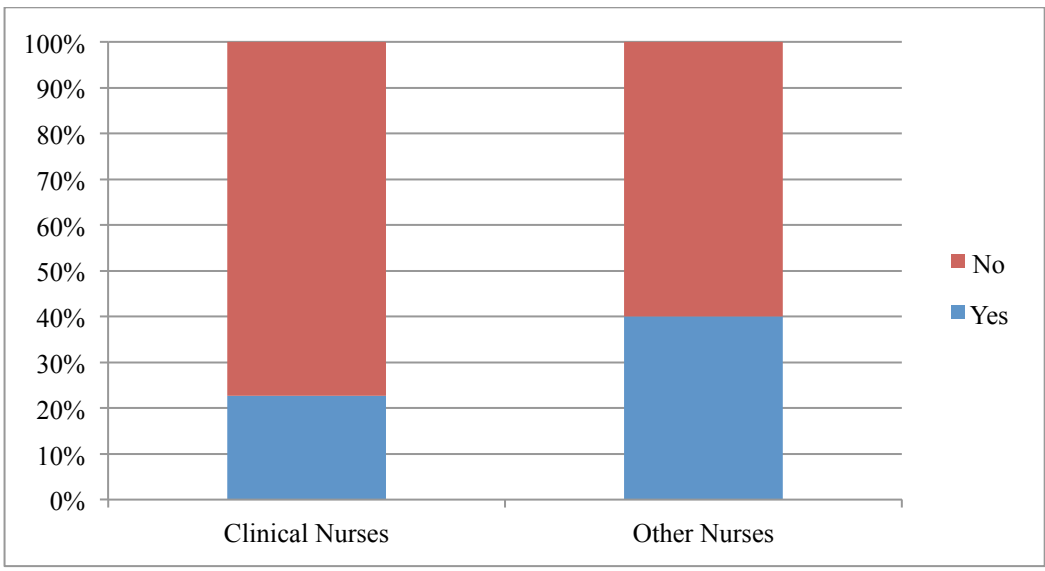


Figure 6. Nurses who have heard of Nursing Consult by Nurse Role

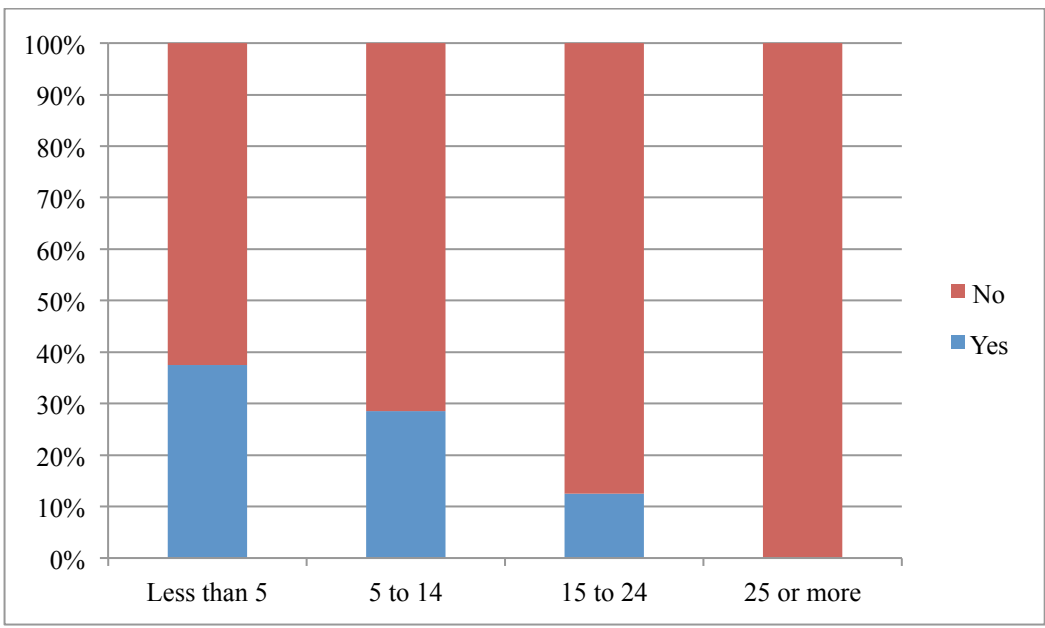


Figure 7. Nurses who have heard of Nursing Consult by Years of Experience

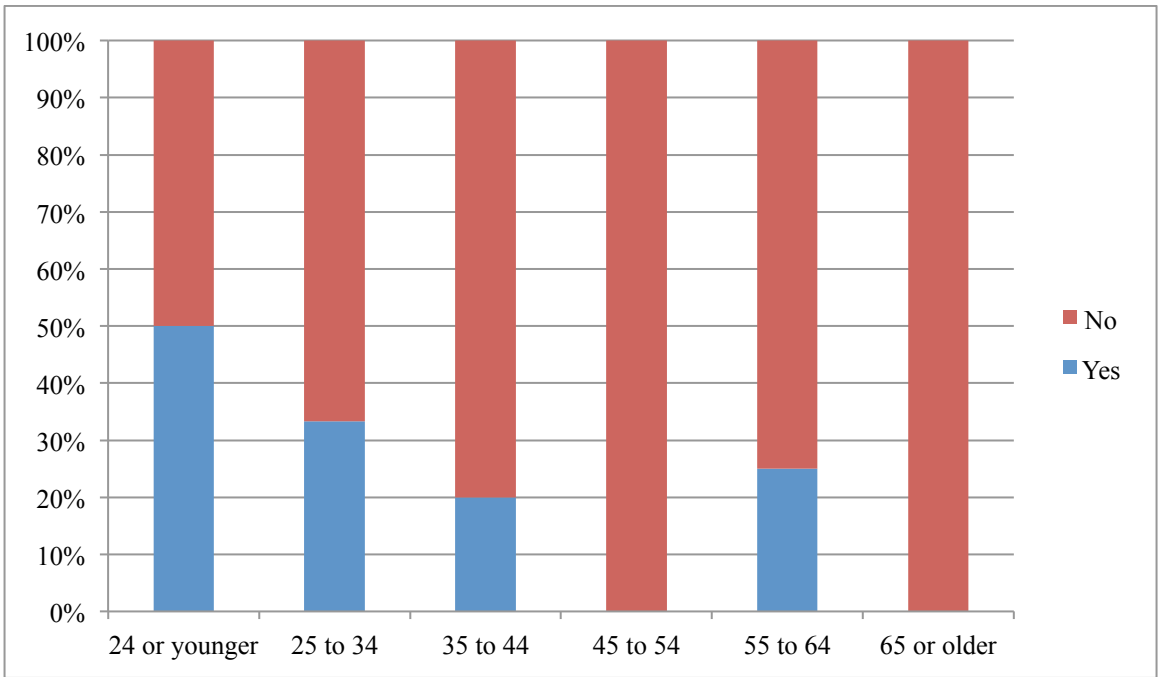


Figure 8. Nurses who have heard of Nursing Consult by Age in Years

The seven nurses who had heard of Nursing Consult were asked how they had heard of the resource, and most of them found out about the resource through a peer or website as shown in Figure 9. Specifically, 29% (n=2) mentioned a nurse educator, 43%

(n=3) mentioned a coworker, 29% (n=2) mentioned they saw it on the webpage. One respondent specifically mentioned that she found out about the resource through a clinical committee that she serves on as part of UNC's shared governance structure. Finally, one respondent found out about Nursing Consult serendipitously while looking up nursing research.

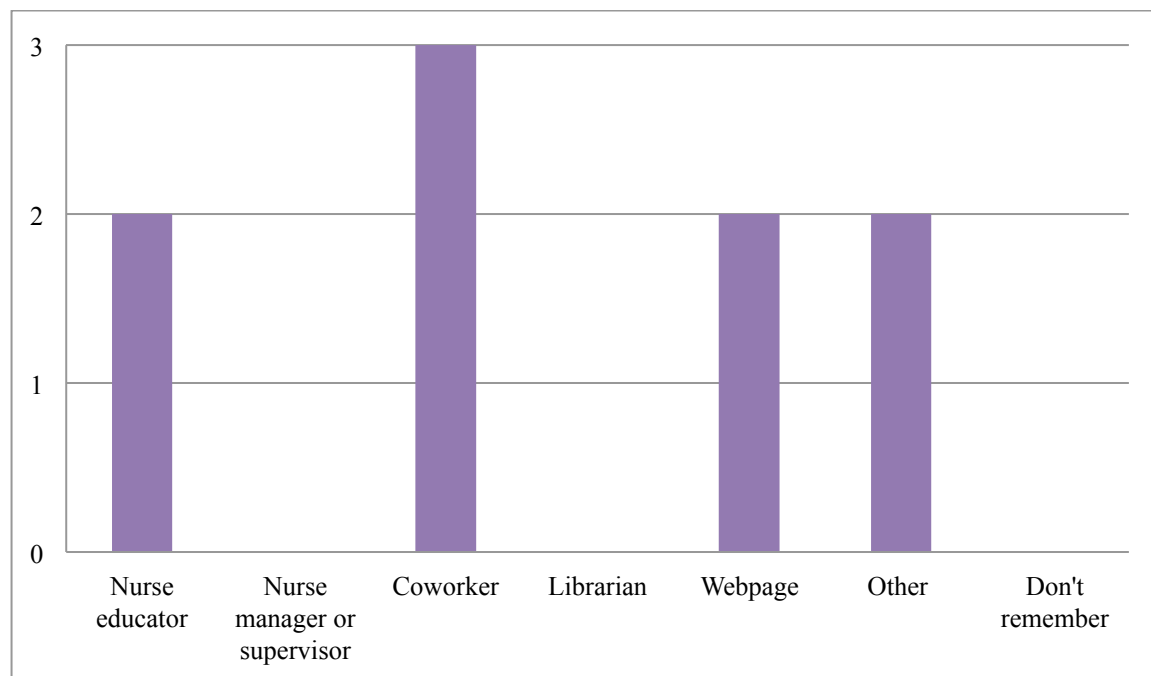


Figure 9. How nurses found out about Nursing Consult

Use of Nursing Consult

Out of the small sample of nurses that had heard of Nursing Consult, 71% (n=5) reported using the resource, while 29% (n=2) said they did not use it. From this sample, the researcher was unable to find a statistically significant link between the demographic category that the nurse fell into and whether they were likely to use the resource. The only discernable patterns in Figures 10 through 13 was that usage appeared to be higher among clinical nurses when compared to other nurses, and lower in nurses who had

obtained advanced degrees but again the researcher stresses that these patterns were not statistically significant.

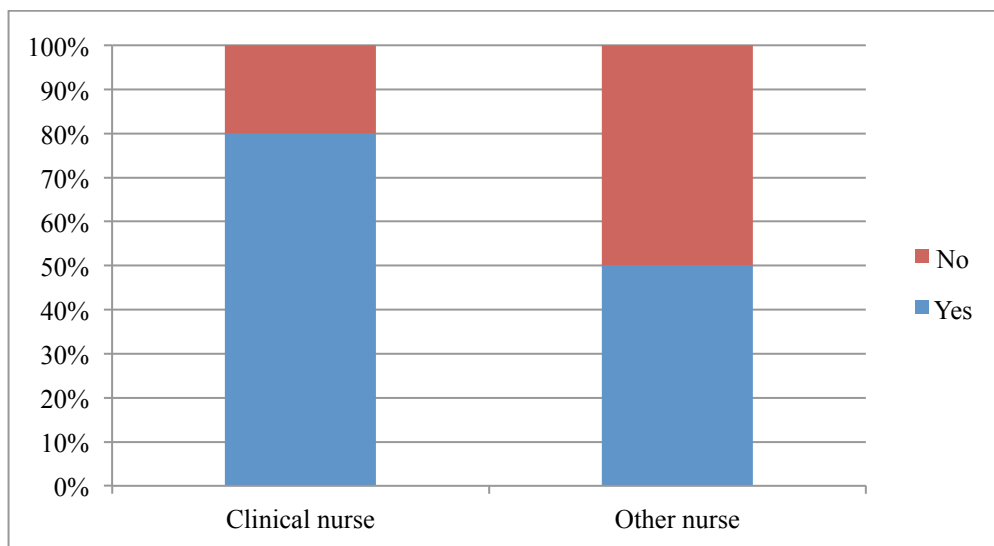


Figure 10. Usage of Nursing Consult by Nurse Role

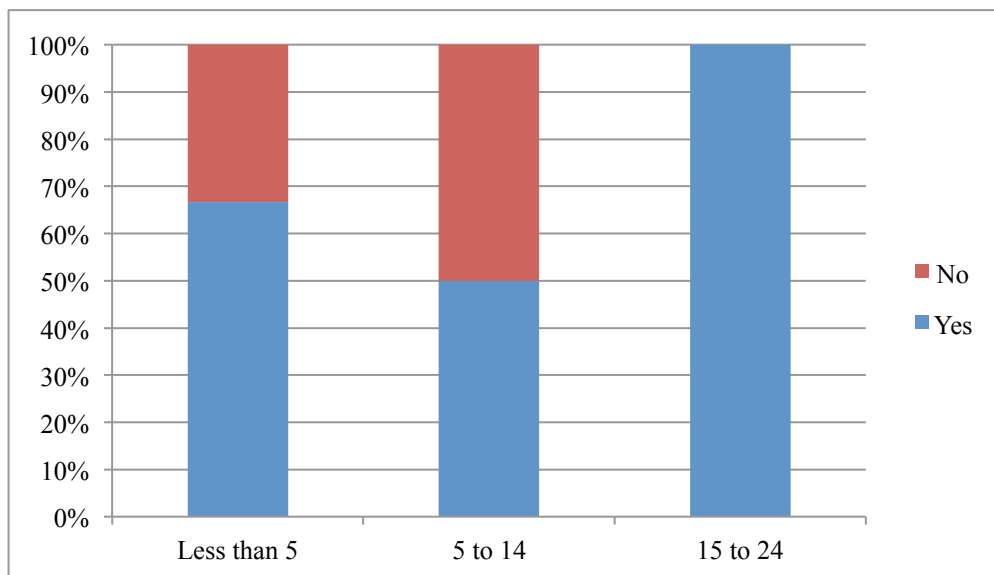


Figure 11. Usage of Nursing Consult by Years of Experience

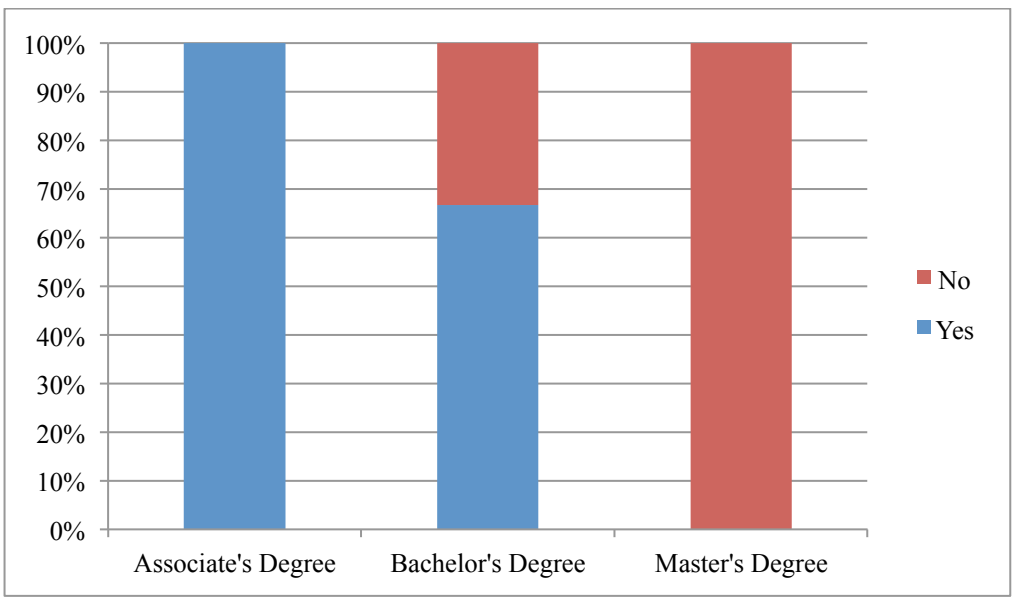


Figure 12. Usage of Nursing Consult by Degree

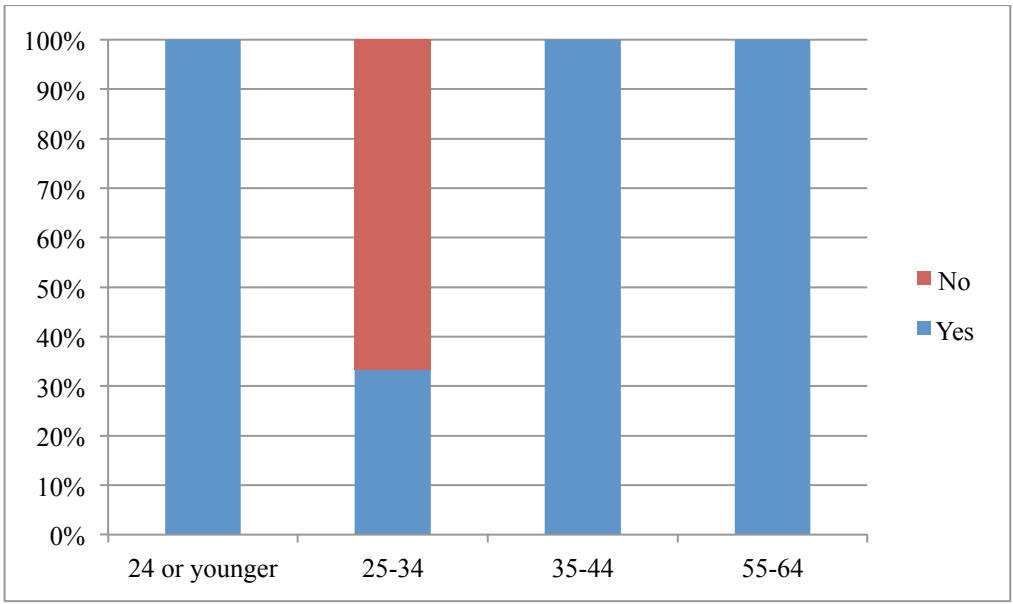


Figure 13. Usage of Nursing Consult by Age in Years

Non-User Feedback

The two nurses who had heard of Nursing Consult but did not use it were asked why they chose not to use the resource. One nurse cited not having enough time as the reason for not using it, while the other mentioned not knowing how to use the resource.

User Feedback

The nurses who used Nursing Consult were asked some additional questions regarding their experience using the resource. First, they were asked which sections of Nursing Consult they used. Four nurses chose to answer this question, and 100% of them mentioned using the Evidence Based Information section. However, as Figure 14 shows, almost every aspect of Nursing Consult was used, with the only option receiving a 0% response rate being “Nursing News.”

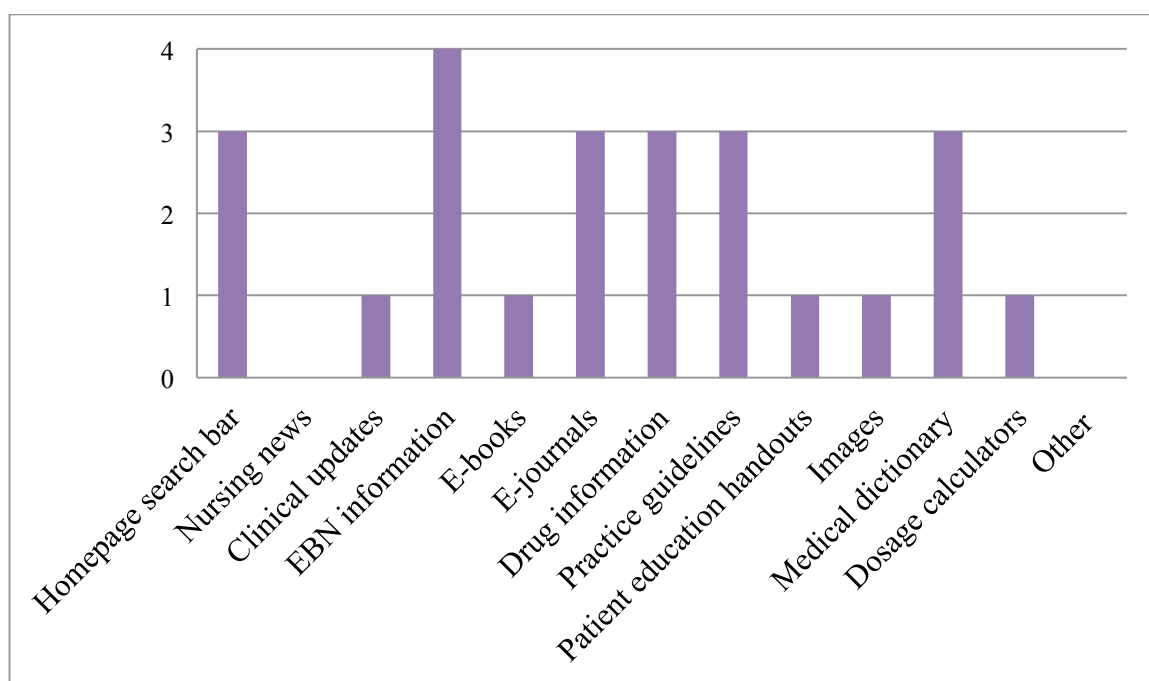


Figure 14. Sections of Nursing Consult Used

When asked about what prompted them to use Nursing Consult, two nurses mentioned they used it to seek information related to their practice area, while a third specifically mentioned wanting to find patient education materials on top of using it as a general reference resource.

Figure 15 shows that the nurses used the resource fairly regularly in the past three months. 50% (n=2) used Nursing Consult weekly, 25% (n=1) used Nursing Consult at least twice a week, and 25% (n=1) reported using the resource a couple of times per month.

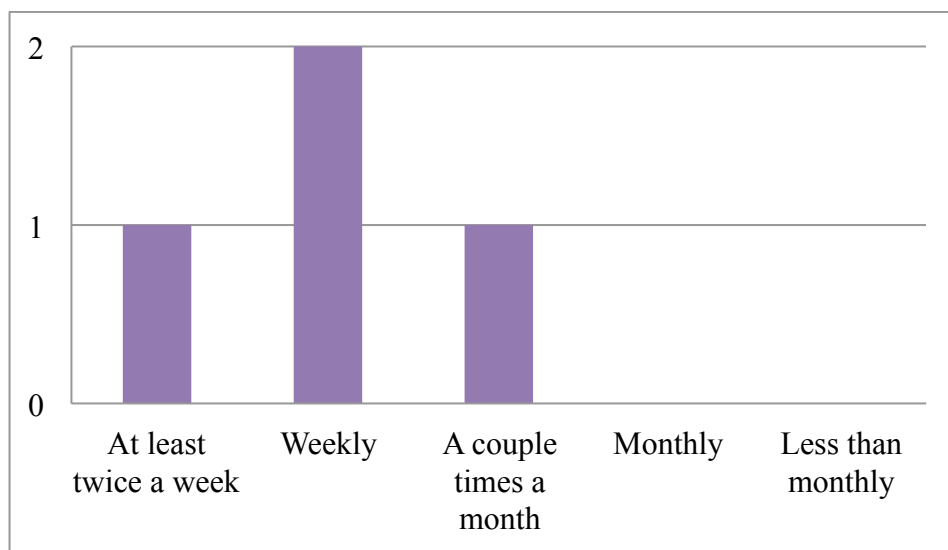


Figure 15. Frequency of Use of Nursing Consult In the Past Three Months

Four nurses also answered a question regarding where they primarily access Nursing Consult from. They were able to select more than one choice. 100% of the nurses mentioned using the resource at their primary work area or unit station, while one also selected “At home.”

Next, the nurses had to rate their own computer and database search skills. The four respondents all rated their computer skills as excellent or above average. Their confidence in using databases was slightly lower, with two nurses rating their skills as excellent, one nurse rating their skill as above average, and one nurse rating their skill as average. However, when the four nurses responded about how easy Nursing Consult was

to use they unanimously agreed that the resource was either “very easy” or “easy” to use, as seen in Figure 16.

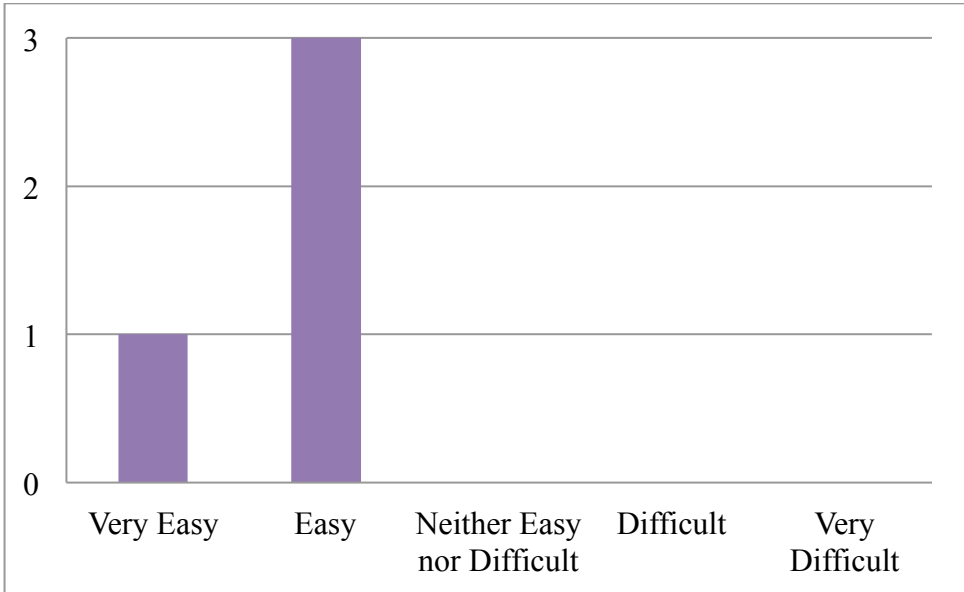


Figure 16. Ease of Use of Nursing Consult

Additionally, Figure 17 shows that all four found what they were looking for in Nursing Consult either “most of the time” or “all of the time.”

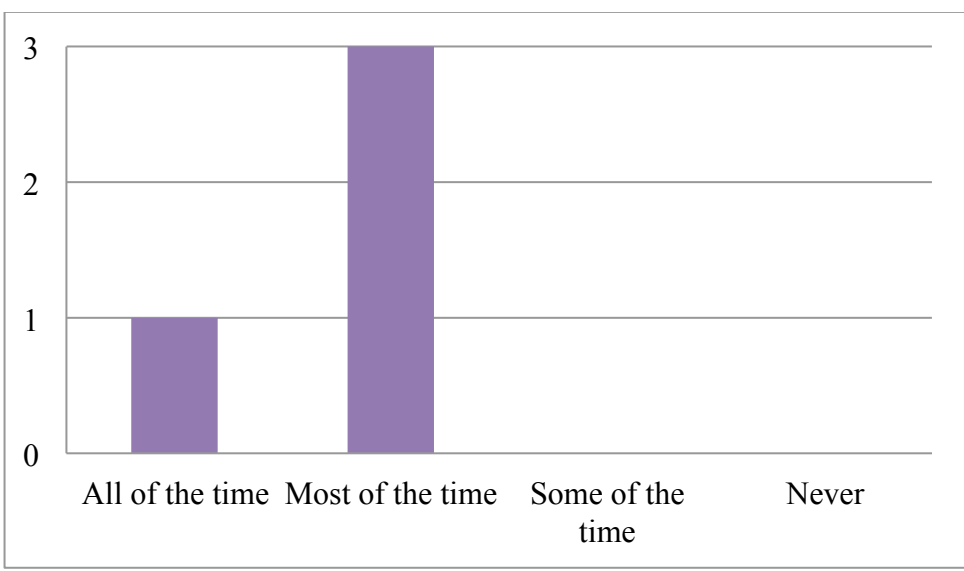


Figure 17. Frequency that Nurses Found the Information they Were Looking for in Nursing Consult

Interest in Training & Other Feedback

The four nurses who responded to the questions about using Nursing Consult all agreed that Nursing Consult has the potential to improve patient care. Plus, out of six nurses that were asked about their desire for training on using Nursing Consult, 83% (n=5) replied that they were interested, while 17% (n=1) was not interested. No feedback was reported in the final open response box allowing nurses to make additional comments about the resource.

Discussion

A lack of use: the story behind the numbers

Before and throughout the study, the UNC Health Sciences Library kept track of usage of Nursing Consult through publisher statistics and Google Analytics. Data from 2010 (Figure 18) shows that usage of Nursing Consult was woefully low compared to other nursing resources. Additionally, monthly usage statistics in Figure 19 supplied from the publisher in 2011 show that during the time the study was conducted, usage of Nursing Consult has risen. However, in looking at the high number of hits on other resources, these gains are not significant.

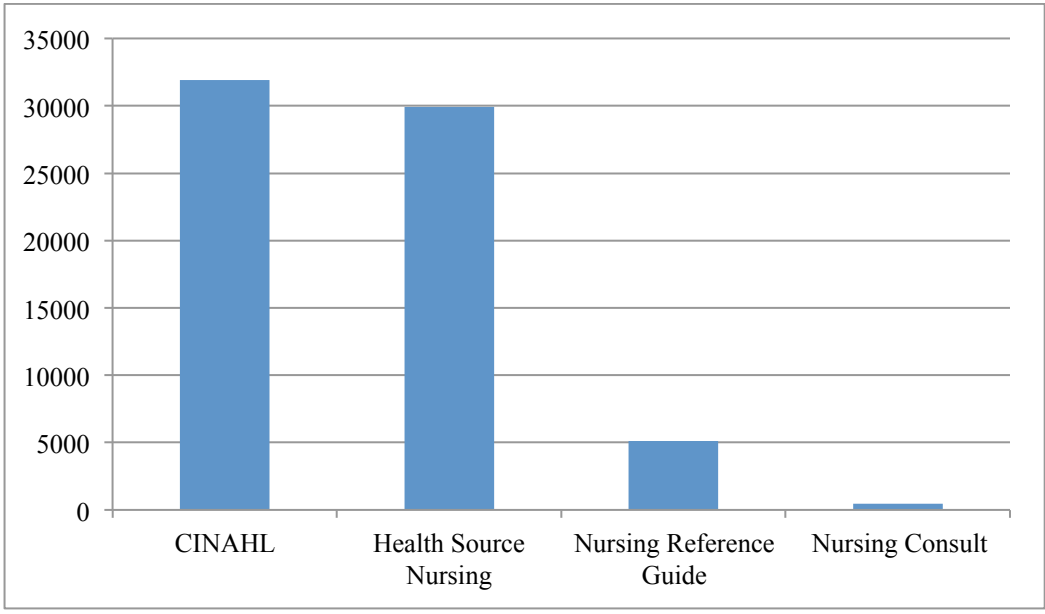


Figure 18. Total Number of Hits on Nursing Resources at UNC in 2010

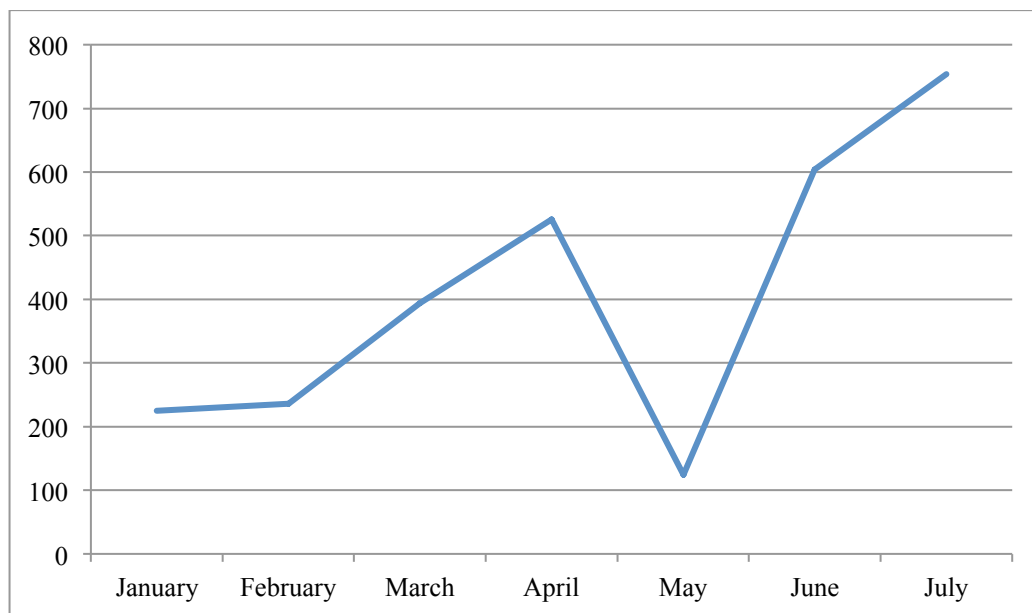


Figure 19. Number of Hits on Nursing Consult by UNC Chapel Hill Users in 2011

The researcher's study attempts to understand the story behind the numbers. The main study finding was that among the study population, many nurses had not even heard of Nursing Consult. Furthermore, the researcher hypothesized that perhaps nurses who were involved in roles other than direct patient care or had a greater amount of education may have heard of or used Nursing Consult more than other nurses since they generally have greater involvement with process improvement or research, but the study data did not support this hypothesis. Next, an e-mail from a nurse educator to a librarian as the study was being conducted stated that, "I don't think most nurses know that it is available," and another nurse went on to say that the resource was not linked from several of the systems nurses access during their everyday workflow. Given that, it is no surprise that usage statistics are low. No matter how good a resource is, if individuals have not heard of it, it will not get any use.

Few conclusions can be drawn from the data from nurses who had heard of Nursing Consult but do not use it since there were only two responses. The fact that one nurse mentioned that a lack of time was a barrier to using an electronic resource was not a surprise given that particular reason is often cited in the literature. However, that the other nurse mentioned their barrier involved not knowing how to use Nursing Consult should be of interest to librarians, especially combined with the results that showed 83% of nurses who answered the question about desire for training on Nursing Consult said they would be interested in training indicates that nurses genuinely do have a desire to learn how to use resource. It can perhaps be assumed that they perceive that Nursing Consult could be of value to their work.

A Resource with Potential

The researcher hypothesized that Nursing Consult had the potential to be useful to nurses due to the fact it is a point of care resource designed especially for nurses. The survey feedback from the few nurses who both had heard of Nursing Consult and use it affirmed this hypothesis. They used a variety of the resources in Nursing Consult on a fairly regular basis, mostly at the workplace. They looked for information to apply to nursing practice, and were able to easily find the information they looked for most of the time. Most revealingly, all four nurses said the resource had the potential to improve patient care. It would seem then, that the problem with lack of usage of Nursing Consult does not stem from the quality or usability of the resource. Knowing this, should the library cancel the resource due to low usage or give it a second chance?

Publicizing Nursing Consult

Examining the data on how nurses heard about Nursing Consult can reveal some routes that the library could publicize the resource. The nurses found out about the resources from their peers, nurse educators, and websites, so it would make sense for the library to target those sources.

As far as access from the web goes, the researcher found out that Nursing Consult was not linked to from several of the online systems that nurses use to do work and there was only one reference to the resource from the UNC Hospitals Intranet, which was posted in 2008. During the time the study was being conducted, one of the HSL library liaisons collaborated with the hospitals nurses to get Nursing Consult linked from the hospital's "e-chart." The library also started featuring the link to Nursing Consult on their clinical resources page. There are other potential systems that Nursing Consult could be linked from, but that is certainly a start. One should also consider if nurses would know what type of information can be found through Nursing Consult and if a hyperlink alone would be enough to entice them to click on the resource. Both this survey and usage statistics reveal the most popular sections of Nursing Consult, and these might be worth highlighting.

One nurse mentioned in the survey that they found out about Nursing Consult through a committee they served on. Given that nurses interested in advancing their career at UNC get involved in committee work at the hospital, targeting select committees that may be interested in Nursing Consult could also be a good idea. Such committees would be ones that focus on evidence based nursing and practice/process improvement.

Finally, nurses mentioned that they found out about Nursing Consult through nurse educators. Whether these were nurse educators at the hospital or through school were not specified. However, the one nurse educator who responded to the survey had not heard of Nursing Consult. Since that was the case, it may be wise for the library to publicize Nursing Consult to UNC Hospitals nurse educators or clinical instructors. To take it a step further and address the desire for training expressed through the survey, the library could adopt a train the trainer approach, providing in person or virtual training to the nurse educators, who could then pass their expertise down to the nurses they serve.

Limitations

Limitations from this study include the use of a convenience sample and a low return rate, meaning the results from this study would not be generalizable to the larger population. Additionally, the survey sample primarily consisted of clinical nurses, which made it difficult to draw any conclusions regarding the relationship between user demographics and use or awareness of Nursing Consult. As with any survey, one should be mindful that survey results have been self reported by users. Nurses with knowledge that the survey results may influence purchasing decisions by the library may exaggerate the importance of Nursing Consult. Finally, multiple choice questions could constrain the responses.

Summary and Recommendations for Practice

Overall, the survey indicated that Nursing Consult has the potential to help nurses overcome the barriers they face in finding information to apply to practice. Nurses found the resource easy to use and felt it could be helpful to practice. Given unlimited funds, it would certainly be a good idea to retain access to the resource for the hospital nurses. However, the prominent finding of the survey was that awareness of the resource among UNC nurses is very low, and this is coupled with increasing financial pressure on the library to cut resources with low usage. Given that, the author recommends that the library reach out to select groups of nurses through resource publicity and offer training on Nursing Consult, then reassess usage trends in one year.

Appendices

Appendix A: Initial Email

Subject: Nursing Consult Survey

Dear Colleague,

My name is Lisa Philpotts and I am a graduate student at the UNC School of Information and Library Science, an Instructional Assistant at the UNC Health Sciences Library, and a former UNC Hospitals Clinical Nurse. For my master's paper, I am investigating how nurses find health information at the point of care. Specifically, I am interested in why nurses do or do not use an online resource called Mosby's Nursing Consult.

Whether you use Nursing Consult or not, your input is greatly valued and will help HSL staff understand your needs and help us best determine which electronic resources to subscribe to as we face budget cuts, as well as potentially help medical librarians as a whole better understand the unique needs of nurses and consequently provide better service.

Would you kindly take a moment to complete a brief questionnaire found at [survey URL]? It should only take about 5 minutes to complete. You are free to answer or not answer any particular question and have no obligation to complete answering the questions once you begin.

Responding to the survey indicates your consent to participate in the study. Your individual responses will be strictly confidential. Only aggregated data will be shared and no individual responses will be identified. There are no anticipated risks to you. If you have any questions about the study, please do not hesitate to call me at (919) 962-0801 or email me at lphilpot@email.unc.edu. All research on human volunteers is reviewed by a committee at UNC that works to protect your rights and welfare.

If you have questions or concerns you may contact, anonymously if you wish, the Institutional Review Board at (919) 966-3113 or by email to IRB_subjects@unc.edu. Reference study number #####.

Thank you for your time & help.

Sincerely,
Lisa Philpotts, RN, BSN
Master's Degree Candidate
School of Information and Library Science
Instructional Assistant
UNC Health Sciences Library
(919) 962 0801
lphilpot@email.unc.edu

Appendix B: Reminder Email**Subject:** Final Reminder: Nursing Consult Survey

Dear Colleague,

Recently I contacted you to request your participation in a study on nurses' use of Mosby's Nursing Consult. I am writing to encourage you to respond in the next three days. This survey will be closed by 12:00 AM on [insert exact date here].

Whether you use Nursing Consult or not, your input is greatly valued and will help HSL staff understand your needs and help us best determine which electronic resources to subscribe to as we face budget cuts, as well as potentially help medical librarians as a whole better understand the unique needs of nurses and consequently provide better service.

Would you kindly take a moment to complete a brief questionnaire found at [insert survey URL]? It should take about 5 minutes at the most to complete. You are free to answer or not answer any particular question and have no obligation to complete answering the questions once you begin.

Responding to the survey indicates your consent to participate in the study. Your individual responses will be strictly confidential. Only aggregated data will be shared and no individual responses will be identified. There are no anticipated risks to you. If you have any questions about the study, please do not hesitate to call me at (919) 962-0801 or email me at lphilpot@email.unc.edu. All research on human volunteers is reviewed by a committee at UNC that works to protect your rights and welfare.

If you have questions or concerns you may contact, anonymously if you wish, the Institutional Review Board at (919) 966-3113 or by email to IRB_subjects@unc.edu. Reference study number #####.

Thank you for your time & help.

Sincerely,
Lisa Philpotts, RN, BSN
Master's Degree Candidate
School of Information and Library Science
Instructional Assistant
UNC Health Sciences Library
(919) 962 0801
lphilpot@email.unc.edu

Appendix C: Survey Instrument

Awareness block.

Consent to Participate in a Research Study

Title of Study: Nurses' Use of Nursing Consult: A Point of Care Resource

Principal Investigator: Lisa Philpotts

Faculty Advisor: Claudia Gollop

What are some general things you should know about research studies? You are being asked to take part in a research study. To join the study is voluntary. You may refuse to join, or you may withdraw your consent to be in the study, for any reason, without penalty. Details about this study are below. It is important that you understand this information so that you can make an informed choice about being in this research study.

What is the purpose of this study? The purpose of this research study is to gather data on why nurses do or do not use an online resource called Mosby's Nursing Consult.

How many people will take part in this study? If you decide to be in this study, you will be one of approximately ninety people in this research study.

What will happen if you take part in the study? During this study, you will complete an online questionnaire. We anticipate this survey will take about 5 minutes to complete.

What are the possible benefits from being in this study? Data from this study may help Health Sciences Library staff understand your needs and help best determine which electronic resources to subscribe to as we face budget cuts, as well as potentially help medical librarians as a whole better understand the unique needs of nurses and consequently provide better service. You may not benefit personally from being in this research study.

What are the possible risks or discomforts involved from being in this study? We anticipate no risk to you from taking part in this study.

How will your privacy be protected? All of the data you provide will be stored anonymously. This means that there will be no way for anybody to ever link your data or the results of the study to your identity.

What if you want to stop before your part in the study is complete? You can withdraw from this study at any time, without penalty and skip any question for any reason.

Will you receive anything for being in this study? Will it cost anything? You will receive no monetary reward for participating in this study. There are no costs associated with being in the study.

What if you have questions about this study? You have the right to ask, and have answered, any questions you may have about this research. Contact Lisa Philpotts at lphilpot@email.unc.edu or 919-962-0801 with any questions, complaints, or concerns you may have.

What if you have questions about your rights as a research participant? All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns, or if you would like to obtain information or offer input, please contact the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu.

By clicking *next* and completing the survey, you agree to be a participant in this study.

1) Which of the following best describes your job title?

- a. Clinical nurse
- b. Nurse manager
- c. Nurse administrator
- d. Nurse educator

2) Below are two screenshots of a resource called Mosby's Nursing Consult (also known as "Nursing Consult"). Had you heard of Nursing Consult prior to this survey?



The screenshot shows the Mosby's Nursing Consult website. At the top, it says 'MOSBY'S NURSING CONSULT' and 'University of North Carolina at Chapel Hill'. There are links for 'Newsletter', 'Dictionary', 'Help', and 'Exit'. A navigation menu includes 'Home', 'Evidence-Based Nursing', 'Books', 'Journals', 'Drugs', 'Guidelines', 'Patient Education', 'Clinical Updates', 'Images', 'News', and 'SKILLS'. A search bar is located below the menu. A yellow banner reads 'Mosby's Nursing Consult is changing! The #1 online clinical reference product for nurses is being enhanced. Learn More >>'. Below this, there's a 'Home' link and a 'My Profile' link. The main content area is divided into several sections: 'Welcome To Mosby's Nursing Consult' with links for 'What's New', 'About Us', 'Explore Features', 'FAQs', 'Magnet Recognition', 'Nursing Advisory Board', 'Press Room', and 'Testimonials'; 'What's New' dated April 27, 2011, with a link to 'Get ready for the new Mosby's Nursing Consult!'; 'Top Picks' with a link to 'Save time with search results tailored for common clinical topics.'; 'Evidence-Based Nursing Collection' with links for 'Sickle Cell Anemia/Disease', 'Diabetic Ketoacidosis', and 'Autonomic Dysreflexia'; and 'Nursing News' with links for 'Perspective - In Utero Exposure to Antipsychotics', 'Study: Scleroderma Survival Improving', 'C. difficile Increases IBD Patients' Deaths Sixfold', 'Hospitals Vary Widely in Applying Proven STEMI Treatments', and 'Expert Panel Weighs NSAID Treatment Options'. There are also promotional banners for 'CONTINUING EDUCATION' and 'CMS NEVER EVENTS TOOL'.

- a. Yes
- b. No (skip to question 17)

Usage determination block.

- 3) How did you hear about Nursing Consult? Choose all that apply.
 - a. Nurse educator
 - b. Nurse manager or supervisor
 - c. Coworker
 - d. Librarian
 - e. Saw it on the clinical resources page
 - f. Other: Please specify
- 4) Do you use Nursing Consult?
 - a. Yes
 - b. No (skip to question 14)

User block.

- 5) What sections of Nursing Consult do you use? Choose all that apply.
 - a. The search feature from the homepage
 - b. Nursing news
 - c. Clinical updates
 - d. Evidence-based nursing information
 - e. Electronic Books
 - f. Electronic Journals
 - g. Drug Information
 - h. Practice guidelines
 - i. Patient education handouts
 - j. Images

- k. Medical dictionary
- l. Drug calculators

6) What type of information do you most frequently look for in Nursing Consult? In other words, what situations prompt you to use Nursing Consult?

Free response

7) In the past three months, how frequently did you use Nursing Consult?

- a. At least twice a week
- b. Weekly
- c. A couple times a month
- d. Monthly
- e. Less than monthly

8) Where do you mainly use Nursing Consult? Choose all that apply.

- a. My primary work area or unit station
- b. Somewhere in UNC Hospitals other than my primary work area
- c. At home
- d. Other: please specify

9) How would you rate your database (ex: CINAHL) searching skills?

Scale of 1-5, excellent to poor

10) How would you rate your computer skills?

Scale of 1-5, excellent to poor

11) How easy is Nursing Consult to use?

Scale of 1-5, very easy to very difficult

12) Think back to when you have used Nursing Consult. How often did you find the information you wanted?

- a. All of the time
- b. Most of the time
- c. Some of the time
- d. Never

13) Do you think that Nursing Consult has the potential to improve patient care? (skip to question 15)

- a. Yes
- b. Don't know
- c. No

Non-user block.

14) What are the reasons you do not use Nursing Consult? Choose all that apply.

- a. Lack of time

b. Use other information sources

Which other sources to you use? (Display if “Use other information sources” is checked)

- CINAHL
- PubMed
- UptoDate
- MD Consult
- Peers or coworkers
- Print sources like books or reference cards
- Other (please specify)

c. Difficult to use

d. No training

e. Other (please specify)

Training block.

15) Would you be interested in training on using Nursing Consult?

- a. Yes
- b. No

16) Do you have any other comments about what you like or dislike about Nursing Consult?

Free response

Demographic data block.

17) How many years have you been a practicing nurse?

- a. Less than 5
- b. 5-14
- c. 15-24
- d. 25 or more

18) What is the highest level of education you have completed?

- a. Associates
- b. Diploma
- c. Bachelor's
- d. Master's
- e. Doctorate

19) What is your age?

- a. 24 or younger
- b. 25-34
- c. 35-44
- d. 45-54
- e. 55-64
- f. 65 or older

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