

## References (updated February 2006)

### Trends in nursing and allied health information needs

American Nurses Association. *Nursing's social policy statement*. (2nd ed.)(2003). Washington, DC: American Nurses Association.

Baessler, C. A., M. Blumberg, et al. (1994). "Medical-surgical nurses' utilization of research methods and products." *Medsurg Nursing* 3(2): 113-7, 120-1, 141.

Following an excellent review of the research utilization concern, this article presents results of research on medical-surgical nurses' use of "the methods and products of research" and their attitudes toward research. This is a descriptive survey, using a convenience sample of 212 nurses. Tables present demographics of the sample, the relative difficulty of research utilization activities, frequency of use of knowledge sources and research competencies. Three activities related to changing behavior ranked as the most difficult of the ten listed, with finding journal articles sixth and contacting a resource person as the least difficult. While not seen as difficult, actual use of journal literature was at the bottom of that list. The last three in this group included research articles in nursing journals, in nursing research journals, and articles in medical journals. This list was topped by individual patient information, personal experience, and knowledge from nursing school (!). The final table - actual competencies - noted the following library related skills in a list of 13:

(6) "Know what computerized search of literature is."	66.5%
(8) "Know what hand search of the literature is."	53.4%
(11) "Knowledge of what CINAHL is."	42%
(13) "Ease of using library at work to look for citations"	20.8%

While this presents a challenge to health science librarians, the final item is likely the result of many barriers, including the lack of work time for these activities. Resource allocation to support research activities - including library use - is seen as a very significant factor.

Bowker, G. C., S. L. Star, et al. (2001). "Classifying Nursing Work." *Online Journal of Issues in Nursing*.

Mark Spasser, PhD, AHIP, was Associate Professor and Library Director at the Jewish Hospital College of Nursing and Allied Health in St. Louis when he co-authored this social informatics review of the Nursing Intervention Classification (NIC) with two professors from the University of San Diego Department of Communications. They discuss how NIC serves to build the knowledge base for scientific nursing and create tension relative to the professional nursing role. Along with Barbara Schloman's article noted later, this article illustrates how online journals can add articles to issues - this one on nursing classifications began in 1998.

Bowles, K. H. (1997). "The barriers and benefits of nursing information systems." *Computers in Nursing* 15(4): 191-6; quiz 197-8.

Nurses are becoming involved in the design, installation, and use of nursing information systems (NIS). From the abstract: "This article describes the evolution of nursing information systems and the design goals for current systems. The lack of a unified nursing language and individual and organizational factors such as characteristics of the nurse, the unit, the administrative philosophy, and workload issues are discussed as barriers to NIS development. Increased nurse involvement, education, research, and recognition of the benefits of computerization are suggested to overcome the barriers. A review of the literature provides the reader with evidence of improved efficiency, patient safety and satisfaction, and ability to measure quality as benefits of NIS. Areas for further research are identified: outcomes measurement using NIS, decision support and expert systems, point-of-care documentation, interagency and interdisciplinary communication, and further work on individual and organizational factors."

- Baessler, C. A., M. Blumberg, et al. (1994). "Medical-surgical nurses' utilization of research methods and products." *Medsurg Nursing* 3(2): 113-7, 120-1, 141.  
Following an excellent review of the research utilization concern, this article presents results of research on medical-surgical nurses' use of "the methods and products of research" and their attitudes toward research.
- Bulechek, G. M., J. C. McCloskey, et al. (1994). "Report on the NIC Project. Nursing interventions used in practice." *American Journal of Nursing* 94(10): 59-64, 66.  
This study provides an answer to the question "What do nurses really do?" by testing the reported use of the 336 nursing interventions included in the Nursing Interventions Classification (NIC). Both professional nursing organizations and individual nurses were surveyed. The article includes charts listing the most frequently used NIC interventions and a sample intervention: Hypoglycemia management. Each intervention consists of a definition, activities, and background readings. Activities include both physiological and psychological elements - the one illustrated has 19 separate activities. High use interventions included those supporting psychological functioning and facilitating lifestyle changes and risk management. Read this article to improve your understanding of nursing and one major element for the Nursing Minimum Data Set, which needs to be part of the computerized patient record.
- Carty, B. and P. Rosenfeld (1998). "From computer technology to information technology. Findings from a national study of nursing education." *Computers in Nursing* 16(5): 259-65.  
This paper presents a study based on a random sample of NLN accredited nursing programs. Findings indicated that schools have almost universal access to computers and educational software. However, further data analysis indicated that a majority of schools lacked a coordinated plan for technology implementation and were underfinanced for technology and related personnel. In addition, less than one third of the schools addressed nursing informatics (the information of nursing) in the curriculum and only 19 schools indicated that nursing informatics was offered as a separate course. Successful strategies for the implementation of computer and information technology are presented based on the findings." It includes table that demonstrates lack of access to key databases, particularly in diploma and associate degree programs.
- Corcoran-Perry, S. and J. Graves (1990). "Supplemental-information-seeking behavior of cardiovascular nurses." *Research in Nursing and Health* 13(2): 119-27.  
Domain knowledge accounted for 21% of the information needs; another 3% related to procedures and protocols. While reference materials were not the most frequently used written materials, they were second only to patient records even though availability was limited on the study unit. Discussion suggested a growing need for reference materials as nursing becomes more research based - would such materials be more used if more available?
- Curtis, K. L. and A. C. Weller (1993). "Information-seeking behavior: a survey of health sciences faculty use of indexes and databases." *Bulletin of the Medical Library Association* 81(4): 383-92.  
This study included nursing faculty. It notes that they have different information needs than faculties in other health sciences programs.
- Curtis, K. L., A. C. Weller, et al. (1997). "Information-seeking behavior of health sciences faculty: the impact of new information technologies." *Bulletin of the Medical Library Association* 85(4): 402-10.  
As a follow-up to the 1991 study, this study revealed that most faculty were searching databases electronically, but they did not take advantage of either in-house or electronic training sessions offered by librarians. They conclude that the training preferences of faculty need to be further explored.
- Dee, C., & Stanley, E. (2005). Information-seeking behavior of nursing students and clinical nurses: implications for health sciences librarians. *Journal of the Medical Library Association*, 93(2), 213–222.

- Finley-Zarse, S. R., Overman, P. R., Mayberry, W. E., & Corry, A. M. (2002). Information-seeking behaviors of U.S. practicing dental hygienists and full-time dental hygiene educators. *J Dent Hyg*, 76(2), 116-124.
- Gessner, B. A. and M. L. Armstrong (1992). "Reading activities of staff nurses from states with mandatory or voluntary continuing education." *Journal of Continuing Education in Nursing* 23(2): 76-80.  
 From the abstract: "Reading activities of staff nurses (N = 269) residing in six states with mandated educational requirements for relicensure were compared with a similar number (N = 275) of staff nurses from states that have no legislative continuing education (CE) requirements. Time spent reading both professional and general literature was obtained. Nurses spent twice as much time reading general literature as professional literature. Both groups stated that conferences were the preferred method of CE; reading was the second choice in mandatory states and the third in voluntary states. However, nurses in voluntary states spent slightly more time reading professional literature
- Goode, C. J. and M. G. Titler (1996). "Moving research-based practice throughout the health care system." *Medsurg Nursing* 5(5): 380-3.
- Graves, J. and S. Corcoran (1988). "Design of nursing information systems: conceptual and practice elements." *Journal of Professional Nursing* 4(3): 168-77.  
 Discusses needs of a nursing information system that would go beyond the administrative needs typical of hospital information systems to one supporting the needs of clinical decision making and knowledge development - a bi-directional link to the nursing literature. Deals with issues related to information flow in the decision making and knowledge development processes and to conceptual and practice characteristics influencing system design. Before presenting the model for the flow of information presented in this course, the article summarizes current problems with both use and access to the nursing literature. Some key quotes: "Practicing nurses have traditionally operated in the verbal and memory modes; that is, they are more likely to go to experts or to each other than to the written literature when seeking knowledge to help with decision making.... As a consequence of the verbal tradition, an unrealistic expectation that nurses can and must carry in memory all pertinent knowledge has developed.... Faulty information system design that does not provide access to the literature of the discipline merely propagates the tradition." Also notes the problems related to lack of or poor abstracts in the nursing literature. Goes on to illustrate how the variety of conceptual models in use challenges developers of nursing information systems. A very useful article for understanding the challenges of nursing informatics.
- Henderson, V. (1968). "Library resources in nursing - their development and use, Parts I, II, and III." *International Nursing Review* 15: 164-73, 236-46, 348-53.  
 Following an extensive history and discussion of reference sources appropriate for nursing use, Miss Henderson makes recommendations to improve nursing libraries that include nurse participation in collection development decisions, requiring documentation from the literature in written reports, including library instruction in nursing education, and faculty status for librarians.
- Henderson, V. (1966). *The Nature of Nursing*. New York, Macmillan.  
 Provides background information on Henderson's definition of nursing and its relationship to nursing research and education needs. Includes appendix with information on library resources for nurses.
- Huffstutler, S. Y., S. S. Stevenson, et al. (1998). "The public's image of nursing as described to baccalaureate prenursing students." *Journal of Professional Nursing* 14(1): 7-13.  
 Caring was the concept most used to describe nursing in this qualitative study of 813 response from non-nursing students, professionals, and others. The content analysis also showed that the concept of caring had many meanings for the respondents.
- McCloskey, J. C. (1986). "Redefining the role of the nurse." *Imprint* 33(2): 53-8, 62.  
 Compares nursing's Ideal Role, Real Role, and Public Image. Suggests that the keys to a more professional identity are to develop the knowledge base and professional autonomy.

- McKnight, M. and M. Peet (2000). "Health care providers' information seeking: recent research." *Medical Reference Services Quarterly* 19(2): 27-50.
- McKnight, M. (2001). An observational investigation of information seeking and use by nurses at work in a non-teaching community hospital: implications for hospital librarians. Annual Meeting of the Medical Library Association, Orlando, FL.
- McKnight, M. (2006) The information seeking of on-duty critical care nurses: evidence from participant observation and in-context interviews. *Journal of the Medical Library Association* [in press]
- Panniers, T. L. and S. K. Jacobs (2001). Health Care Informatics. In *Conceptual foundations: The bridge to professional nursing practice*. J. Creasia and J. Parker. St. Louis, Mosby: 465-490. It's great to see a chapter on informatics in a nursing issues book! Susan Jacobs wrote this with a member of her nursing faculty at NYU. Following a profile of a nursing informaticist, the chapter reviews this field, including informatics concepts, nursing taxonomies, and information literacy, both print and electronic. This is an excellent introduction for students. Be sure to read the objectives, key points, and critical thinking exercises. The latter are featured in each chapter. A new edition is in process.
- Pravikoff, D. (2000). "On the information highway, or sitting on the curb?" *Journal of Nursing Education* 39(3): 99-100.  
Cites need for access to databases and searching skills as the foundation for critical thinking and evidence-based nursing practice. Summarizes two poster presentations of doctoral research by Pierce and Tanner (below): "Their research examined electronic information-seeking by practicing nurses (including advanced practice RNs), faculty, and baccalaureate and graduate nursing students. They found that only a small percentage of their sample, including faculty, had Internet access at home or work, most did not use either CINAHL or MEDLINE successfully, and although the subjects agreed that nurses should use research in their practice, most did not regularly read research articles. In fact, 16% of the nursing faculty stated they never read a research study."
- Pravikoff, D. S., Pierce, S., & Tanner, A. (2003). Are Nurses in U.S. Hospitals Ready for Evidence-Based Practice? *American Journal of Nursing*, 103(5), 95-96.  
Published results of ICIRN study.
- Pravikoff, D. S., Tanner, A. B., & Pierce, S. T. (2005). Readiness of U.S. Nurses for Evidence-Based Practice. *American Journal of Nursing*, 105(9), 40-51. Retrieved from [http://www.nursingcenter.com/library/journalarticleprint.asp?Article\\_ID=599256](http://www.nursingcenter.com/library/journalarticleprint.asp?Article_ID=599256)
- Report of key findings of RCN's survey of the Information Needs of Nurses, Health Care Assistants, Midwives and Health Visitors. (2005, April 20, 2005). Retrieved September 26, 2005, from <http://www.rcn.org.uk/downloads/news/INA%20report%20external.doc>
- Royle, J., J. Blythe, et al. (2000). "The organizational environment and evidence-based nursing." *Canadian Journal of Nursing Leadership* 13(1): 31-7.
- Royle, J. A., J. Blythe, et al. (1997). "Do nurses have the information resources and skills for research utilization?" *Canadian Journal of Nursing Administration* 10(3): 9-30.  
response rate (67 of 71 vice-presidents or directors of nursing). The survey included the availability of library services for nursing. Study results suggest that the hospital size tends to correlate with library services. For example, none of the 32 hospitals with less than 100 beds had a master's prepared librarian, while 60% (9 of 15) of the hospitals with 300 or more beds had a master's prepared librarian. Likewise, hospital based library orientation and electronic literature search, critical appraisal, and nursing research courses were more prevalent in the larger hospitals and almost non-existent in smaller institutions. The larger hospitals were also more likely to have a research director, clinical nurse specialist, nursing research experts, nursing faculty, and a nursing research committee. While the issues addressed by this survey were of concern to most respondents, the authors note that "...not all administrators appreciate the importance of information to nurses. Only half ... believed that nurses needed additional information management skills and less than two-thirds thought that nurses required courses in literature searching and critical appraisal." The

authors suggest that use of the Internet can promote increased sharing of information resources and instruction in information management skills.

- Sadler, G. R., J. M. Lantz, et al. (1999). "Nurses' unique roles in randomized clinical trials." *Journal of Professional Nursing* 15(2): 106-15.  
Clinical trials are critical to the development of the knowledge-base for evidence-based practice. This article describes the basic types of clinical trials and the nurse's role as patient advocate and educator. Selected reading for the NAHRS Evidence-Based Nursing journal club.
- Schloman, B. F. (2001). Nursing Faculty and Scholarly Publishing: Survey of Perceptions and Journal Use. *Online Journal of Issues in Nursing* 5(1): Manuscript 8.  
Barbara Schloman of NAHRS reports the findings of a survey used to develop a profile of the current perceptions and use of journals - both print and electronic - by nursing faculty and administrators. Access to technology and computer literacy contributes to faculty perceptions, as does lack of awareness. One interesting statistic: 51.8% felt print journals were seen as more credible than electronic journals in tenure/promotion decisions.
- Spath, M. and L. Buttlar (1996). Information and research needs of acute-care clinical nurses. *Bulletin of the Medical Library Association* 84(1): 112-16.  
Using a convenience sample of nurses at two suburban Ohio hospitals, the authors surveyed usage of libraries and information sources. As in other studies, colleagues headed the list of information sources, followed by library use, expert consultation, and consulting a librarian. Most reported regular reading of one to three journals.
- Swanson, K. M. (1993). Nursing as informed caring for the well-being of others. *Image - the Journal of Nursing Scholarship*, 25(4), 352-357.
- Sydney-Halpern, R., S. Corcoran-Perry, et al. (2001). Developing clinical practice environments supporting the knowledge work of nurses. *Computers in Nursing* 19(1): 17-23.  
Presents model with four roles that correspond to steps in the nursing process: Data-gatherer; Information User; Knowledge User; and Knowledge Builder.
- Thede, L. Q., Pierce, S., & Allen, M. (2003). Other Facets of Informatics: A wide Impact. In L. Q. Thede (Ed.), *Informatics and Nursing: Opportunities & Challenges* (2nd ed., pp. 243 - 258.). Philadelphia: Lippincott.  
Includes EBP model for analyzing questions, as developed by Dr. Pierce.

### **Evidence Based Practice/Research Utilization**

- Brown, S. J. (1999). *Knowledge for Health Care Practice: A guide for using research evidence*. Philadelphia: Saunders.  
An interdisciplinary approach, written by a nurse. Includes a model for research utilization activities as a framework for organization and guides for critical appraisal of systematic reviews and various types of research studies. Fred Pond wrote the excellent chapter on searching for studies.
- Bunyan, L. E. (2002). "The Body of Evidence in the Library: Resources for Evidence-Based Nursing." *Journal of Hospital Librarianship* 2(1): 29-39.  
Defines evidence-based practice, suggesting four basic goals:  
  1. Reduce variations in practice
  2. Improve patient outcomes
  3. Reduce reliance on opinion and tradition
  4. Reduce costs  
Discusses librarian role in five-step process: Define questions, search the literature, evaluate the literature, plan care, and evaluation outcomes. Suggests resources, with an emphasis on medical.
- Chichester, S. R., Wilder, R. S., Mann, G. B., & Neal, E. (2002). Incorporation of evidence-based principles in baccalaureate and nonbaccalaureate degree dental hygiene programs. *J Dent Hyg*, 76(1), 60-66.

- Ciliska, D., S. Hayward, et al. (1999). "Transferring public-health nursing research to health-system planning: assessing the relevance and accessibility of systematic reviews." *Canadian Journal of Nursing Research* 31(1): 23-36.  
A research study. Results from the abstract: "Respondents reported a great, largely unmet, need for research evidence. They viewed systematic reviews as likely to overcome the barriers to research use related to critical appraisal, time, timeliness, availability, cost and credibility, but not the barriers related to policy climate, authority, or implementation resources. Three months after requesting a review, 93% said they would follow it up; 91% remembered receiving it, and 71% of these had read it while 23% stated it played a part in program planning or decision-making."
- Hankinson, S. E., G. A. Colditz, et al. (2001). *Healthy Women, Healthy Lives: A Guide to Preventing Disease from the Landmark Nurses' Health Study*. New York, Simon & Schuster Source.  
In recent years, health professionals have been urged to support the evidence-base practice model, which encourages them to critically appraise research when making clinical decisions. By presenting women's health research in straightforward language, this book promotes the use of critical thinking skills that can also be used to evaluate future research. It could serve as a readable text for women's health courses, often offered by health profession schools, as well as a readable approach to evidence-based health promotion and patient advocacy.
- Lang, N. M. (1999). Discipline-based approaches to evidence-based practice: a view from nursing. *Joint Commission Journal on Quality Improvement*, 25(10), 539-544.  
Basis for slide comparing medical to nursing concerns.
- Ledbetter, C. A. (2001). "Evidence-Based Best Practice: The Common Knowledge of Ethical Clinical Scholarship (editorial)." *Online Journal of Knowledge Synthesis for Nursing*.  
Quoting from this excellent editorial: "The ideal state between best practice (BP) and evidence-based best practice (EBBP) can be represented by the equation:  $BP = EBBP$ . Where BP = best practices implemented by clinicians and EBBP = best practices based on systematically derived evidence. If BP is not equal to EBBP because the principles of respect, beneficence and justice have not been applied, then the practice is unethical." In other words, practice that is not based on the evidence is unethical.
- Mitchell, G. J. (1999). "Evidence-based practice: Critique and alternative view." *Nursing Science Quarterly* 12(1): 30-35.  
Suggests that evidence based practice is contrary to nursing's central premise: the diagnosis and treatment of individual human responses to actual or potential health problems.
- Oncology Nursing Society *EBP Resource Center*. (2003).  
<http://onsopcontent.ons.org/toolkits/ebp/index.htm>  
Includes definitions and a useful model of evidence-based practice. This toolkit is a very useful introduction to evidence-based practice.
- Pollock, A. S., Legg, L., Langhorne, P., & Sellars, C. (2000). Barriers to achieving evidence-based stroke rehabilitation. *Clinical Rehabilitation*, 14(6), 611-617.
- Rasmussen, L., M. O'Connor, et al. (2000). Basic research review checklist. *Journal of Continuing Education in Nursing* 31(1): 13-7.  
Presents a tool designed to help clinical nurse critique research. This tool is used to develop nursing policies and procedures, validate practice standards, and support educational programs. The entire tool is printed on a single sheet, with the checklist for quantitative studies on one side and the one for qualitative studies on the other.
- Silver, J. (2004). Implications for librarians of magnet hospital designation. *Journal of Hospital Librarianship*, 4(2), 37-46.  
Reviews Magnet Hospital program and librarians' experiences working with nursing to achieve this status. Includes bibliography of resources useful for those going through the application process.

- Simpson, B. (1996). "Evidence-based nursing practice: the state of the art." *Canadian Nurse* 92(10): 22-5.  
 In addition to discussing EBHC, this article does a nice job of briefly summarizing research barriers and models for nursing research utilization.
- Stetler, C. B., M. Brunell, et al. (1998). Evidence-based practice and the role of nursing leadership. *Journal of Nursing Administration* 28(7-8): 45-53.  
 This is the nursing reading selected for the first month of the NAHRS Evidence Based Nursing journal club discussion. It discusses the need for first establishing a model of nursing care conducive to using evidence. It also discusses how evidence includes more than research.
- Stevens, K. R. (2001). Convergence of Science and Health. *Online Journal of Knowledge Synthesis for Nursing*.  
 Discusses how knowledge synthesis places nursing at the convergence of science and health, in an ideal position for interdisciplinary collaboration.
- Stevens, K. R. (2001). The Truth, the Whole Truth....about EBP and RCTs. *Online Journal of Knowledge Synthesis for Nursing*.  
 A nice rebuttal to those who take exception to evidence-based practice that appears to favor randomized clinical trials as the only acceptable form of evidence. Discusses how other forms of evidence fit the EBP model. The concept of "the current best evidence" is summarized to help dispel the "myths" of EBP.
- Stevens, K. R. (2005). *ACE Star Model of Knowledge Transformation*.  
[http://acestar.uthscsa.edu/Learn\\_model.htm](http://acestar.uthscsa.edu/Learn_model.htm)  
 Another source for the evidence-based practice model used in this course. The website also includes a glossary: Terminology in Evidence-Based Practice, by Ledbetter and Stevens.
- Stevens, K. R. and J. D. Long (1998). Incorporating systematic reviews into nursing education. *Online Journal of Knowledge Synthesis for Nursing* 5(Document 7).  
 Describes systematic reviews, their importance to nursing, and the Research Application Projects at the University of Texas Health Science Center at San Antonio. Projects include: 1.) Comparing OJKSN and textbook information; 2.) Comparing AHCPN guideline and textbook; 3.) Comparing Clinical expert opinion and a research report; and 4.) Comparing an integrative review from another source and textbook.
- Titler, M. G., C. Kleiber, et al. (1994). Infusing research into practice to promote quality care. *Nursing Research* 43(5): 307-13.  
 This is an outstanding example of implementation of research-based practice. While the literature is full of articles concerned about the lack of research utilization, this article presents the Iowa Model of Research in Practice and describes its success. The flow chart illustrating the process illustrates the critical role of the literature review. Following analysis of the literature, changes are made if the research is conclusive, or a research project is initiated. Triggers for a review can come from problems or knowledge. The latter includes national standards such as the AHCPN guidelines and "new information in the literature." In discussing the literature review recommends working with the hospital librarian or involving nursing students who need research learning experiences. The use of CINAHL, MEDLINE and other electronic databases is noted. Change management techniques include early involvement of staff nurses from the involved units and other elements of staff empowerment. Several examples illustrate the breadth of research activity at this institution.
- Titler, M. G., & Mentes, J. C. (1999). Research utilization in gerontological nursing practice. *Journal of Gerontological Nursing*, 25(6), 6-9.
- Titler, M. G., Mentes, J. C., Rakel, B. A., Abbott, L., & Baumler, S. (1999). From book to bedside: putting evidence to use in the care of the elderly. *Joint Commission Journal on Quality Improvement*, 25(10), 545-556.

## Expert Searching – Collaboration

- Role of expert searching in health sciences libraries: Policy Statement* by the Medical Library Association adopted September 2003. *Journal of the Medical Library Association*, 93(1), 32-39.
- Allen, M. (1998). From the Literature: Library Access for Nurses - Lessons from the United Kingdom? NAHRS Newsletter(1). Available from the author – summarizes major UK studies.
- Allen, M. (1998). Library services for nurses in school: where do you draw the line? *National Network*, 22(4), 7, 25. Available at <http://www.hls.mlanet.org/NatNet/issues/v22n4.pdf>
- Allen, M. P., Jacobs, S. K., Levy, J., Pierce, S., Pravikoff, D. S., & Tanner, A. (2005). Continuing education as a catalyst for inter-professional collaboration. *Medical Reference Services Quarterly*, 24(3), 93-102.
- Impact of 2003 Evidence Based Nursing Practice symposium at MLA, including results of six-month follow-up survey.
- Dorner, J. L., Taylor, S. E., & Hodson-Carlton, K. (2001). Faculty-librarian collaboration for nursing information literacy. *Reference Services Review*, 29(2), 132-140.
- Forrest, J. L., & Miller, S. A. (2001). Integrating evidence-based decision making into allied health curricula. *Journal of Allied Health*, 30(4), 215-222.
- Fox, L. M., Richter, J. M., & White, N. E. (1996). A multidimensional evaluation of a nursing information-literacy program. *Bulletin of the Medical Library Association*, 84(2), 182-190.
- Holst, R. (2005). Expert searching (symposium introduction). *Journal of the Medical Library Association*, 93(1), 41.
- Alpi, K. M. (2005). Expert searching in public health. *Journal of the Medical Library Association*, 93(1), 97-103.
- Harris, M. R. (2005). The librarian's roles in the systematic review process: a case study. *Journal of the Medical Library Association*, 93(1), 81-87.
- Lavin, M. A., Krieger, M. M., Meyer, G. A., Spasser, M. A., Cvitan, T., Reese, C. G., et al. (2005). Development and evaluation of evidence-based nursing (EBN) filters and related databases. *Journal of the Medical Library Association*, 93(1), 104-115.
- McGowan, J., & Sampson, M. (2005). Systematic reviews need systematic searchers. *Journal of the Medical Library Association*, 93(1), 74-80.
- Paterson, B. (2001). "So what have others said? in Clinical focus research in practice column." *Canadian Nurse* 97(6): 14-15.
- A brief overview of the literature review, suggesting web sites and one Canadian Nurses Association book to consult for information on how to conduct a literature review. While some of the websites are from libraries, there is no mention of using the library. The author also recommends the use of listservs such as NURSERES. See librarian response by Elyse Pike.
- Pike, E. (2001). "Librarian as resource." *Canadian Nurse* 97(8): 6.
- An excellent response to Paterson's article, noting how librarians can save time. She describes us as "professional finders," making a comparison to other professionals we consult, even though we could attempt to do what they do for us. A must read!
- Pond, F. (1999). Searching for studies. In S. J. Brown (Ed.), *Knowledge for Health Care Practice: A guide for using research evidence*. Philadelphia: Saunders.
- Using a conversational approach, this nursing librarian begins by promoting the value of searching with a librarian. The search is portrayed as an evolving process. The chapter covers computerized searching, health care databases, use of keywords (subject headings), limiting and expanding results, and obtaining the actual literature.
- Rosenfeld, P., Salazar-Riera, N., & Vieira, D. (2002). Piloting an information literacy program for staff nurses: lessons learned. *Computers Informatics Nursing*, 20(6), 236-241; quiz 242-233
- Solimine, M. A. (1993). "Seek and you will find: the librarian and the team." *Holistic Nursing Practice* 7(4): 82-90.
- Offers advice to nurses on the team approach to information access. The needs of an

interdisciplinary team are greater than the total needs of its members and, ideally, the team should be able to access a health science librarian. As a member of your interdisciplinary team who shares the ultimate goal of meeting patient care needs, the librarian can be a strong ally in forming a firm foundation for your teamwork. Includes a nice diagram of how the library fits in the decision making process for changes in nursing practices.

Verhey, M. P. (1999). Information literacy in an undergraduate nursing curriculum: development, implementation, and evaluation. *Journal of Nursing Education*, 38(6), 252-259.  
Describes an integrated program of information literacy in the undergraduate curriculum. Author is a Ph.D. nurse and a librarian.

## Searching

- Allen, M. (1997). Teaching the importance of nursing subject headings. *CINAHLnews*, 16(1), 1-4.  
Explains how the author used indexing an article as part of a class for RN degree completion students. Available on the Cinahl Information Systems website in the Library section.
- Allen, M. (1998). Evaluating Search Engines: Task Force Progress Report. *NAHRS (Nursing and Allied Health Resources Section of MLA) Newsletter* 18(1): 4, 6-8. Available on the NAHRS website, <http://nahrs.library.kent.edu/resource/reports/searchengine.pdf>
- Allen, M. (1998). Selecting keywords: helping others find your article. *Nurse Author & Editor*, 8(1), 4, 7-9.  
While written to help authors select keywords for articles submitted for publication, some nurse educators wrote that it helped them understand databases so that they could do better searches. Included with course resources.
- Allen, M. (1999). Searching Bibliographic Databases for Nursing Theory (On The Nursing Theory Page). <http://www.sandiego.edu/nursing/theory/>
- Allen, M. (2003). Nursing Knowledge: Access via Bibliographic and Factual Databases. In L. Q. Thede (Ed.), *Informatics and Nursing: Opportunities & Challenges* (2nd ed., pp. 280-302). Philadelphia: Lippincott. Discusses bibliographic databases in relation to general discussion of databases in preceding chapter. Written conceptually, this chapter notes that search software is ever changing. It includes list of skills needed to search databases, to be learned from online help or in classes.
- Andrews, M. M. (1999). How to search for information on transcultural nursing and health subjects: Internet and CD-ROM resources. *Journal of Transcultural Nursing* 10(1): 69-74.  
Selected reading for the NAHRS Evidence-Based Nursing Electronic Journal Club. From the abstract: "This article provides suggestions for narrowing and focusing a search on transcultural nursing and related subjects using key terms indexed in the Cumulative Index to Nursing and Allied Health Literature, International Nursing Index, Medline, Index Medicus, and Psychological Abstracts/PsychLit. Information about accessing the Native American Resource Information Service, Education Resources Information Center, Infotrac/Expanded Academic Index, and Sociological Abstracts also is provided. In the article, selected examples of Internet sites of interest in transcultural nursing and health are identified with their universal resource locator, and they are annotated. Web sites for U.S. government agencies, organizations, and commercial groups that concern transcultural nursing and health are cited. Global transcultural health and nursing Internet resources also are included."
- Burnham, J. and B. Shearer (1993). Comparison of CINAHL, EMBASE, and MEDLINE databases for the nurse researcher. *Medical Reference Services Quarterly* 12(3): 45-57.  
This comparison of search results on three very different questions posed by nurse researchers offers an excellent overview of the strengths of each database. Even when the question is limited to nursing care, these authors suggest that MEDLINE or EMBASE searches should be added to CINAHL searches when a comprehensive review is needed. I would have liked to review their search strategies, as indexing policies and practices would also affect the retrieval. All nursing librarians should consider this article must reading.

- Dee, C. (2005). Making the Most of Nursing's Electronic Resources: Accessing evidence-based Web sites. *American Journal of Nursing*, 105(9), 79-85.
- Detweiler, S. M. (2000). *Super Searchers on Health & Medicine: The online Secrets of Top Health & Medical Researchers*. Medford, NJ, Cyber-Age Books, Information Today.  
Useful searching tips from "experts." In Margaret (Peg) Allen: Serving Allied Health, Susan Detweiler did a nice job of transforming a rambling interview into an excellent explanation of my philosophy of searching, as well as the resources and techniques I like to use (pp 57-69).
- Duffel, P. G. (1995). "Searching for articles in the medical literature." *Insight* 20(3): 20-7.  
This is the best article I've seen on searching written for the end user. Tables include database vendors, search hints for CINAHL on Ovid and SilverPlatter, an example of a tree, and a page of Venn diagrams for the logical connectors and Explode command. Steps in the search strategy are clearly identified. Published in a journal for ophthalmic nurses, the examples are based on their needs.
- Fitzpatrick, J. J. and K. S. Montgomery, Eds. (2000). *Internet Resources for Nurses*. New York, Springer Publishing Company.  
Selected as an AJN Book of the Year. Each chapter in this book describes ten top websites relevant to the chapter topic. Includes excellent advice on website evaluation. The megasites chapter and evaluation content was co-authored by two health science librarians. Annotation based on this edition – look for update.
- Jacobs, S. K. (2005). Interagency Council on Information Resources for Nursing. Essential Nursing References. *Nursing Education Perspectives*, 26(5), 300-309. Available <http://www.nln.org/nlnjournal/nursingreferences.htm>.
- Levy, J. (2001). Searching the CINAHL Database. *CINAHLnews*, 20(1,2), 6-7.  
A review of CINAHL search options, including subject headings, subheadings, document types, and specific interest categories. Invites questions, as well as input on thesaurus terms and suggestions of material to index. Available on the Cinahl Information Systems website in the Library section.
- Lomax, E., & Setterlund, S. K. (2005). A Virtual Reference Shelf for Nursing Students and Faculty: Selected Sources. *Journal of Library Administration*, 44(1-2), 429-450.
- Pravikoff, D. (1994). Searching for research instruments, clinical assessment tools and psychological tests on CINAHL. *CINAHLnews*, 13(3), 3.
- Pravikoff, D. (1996). Access to CINAHLdirect(SM) online service offered free to nursing and allied health faculty. *CINAHLnews* 15(2): 2.  
Explains how faculty can get free access to CINAHLdirect - an alternative for those who cannot offer remote access to CINAHL for their faculty. Available on the Cinahl Information Systems website in the Library section.
- Pravikoff, D. S., & Levy, J. (2001). Computerized Information Resources. In V. K. Saba & K. A. McCormick (Eds.), *Essentials of Computers for Nurses: Informatics for the New Millennium* (3d ed., pp. 457-475.). New York: McGraw-Hill.  
This is an excellent overview of knowledge-based information resources for nurses. The authors categorize computerized information resources as essential (MEDLINE, CINAHL, current awareness and review services) or supportive - those that are interesting but not critical. The focus is on maintaining currency using the professional literature. Key databases and resources are described, followed by a basic introduction to developing a bibliographic search strategy.
- Press, N. O. (2001). Making Sense of Subsets. *Dragonfly*, NN/LM Pacific Northwest Region. 2002. <http://nlnm.gov/pnr/news/200101/subsets.html>
- Redman, P. M., J. A. Kelly, et al. (1997). Common ground: the HealthWeb project as a model for Internet collaboration. *Bulletin of the Medical Library Association* 85(4): 325-30.
- Schloman, BF. **Information Resources Columns**. *Online Journal of Issues in Nursing*. <http://nursingworld.org/ojin/infocol/infotoc.htm>.

- Van Camp, A. J. (1994). Databases for nurses: special features. *Online* 18(1): 113-6.  
A comparison of CINAHL and MEDLINE, focused on various features. Notes that comprehensive information retrieval requires the use of both. Covers practices and statistics regarding abstracts, grant and contract numbers, publication and document types, research instrumentation, books, and nonprint materials. Notes CINAHL's addition of the cited reference field in 1994. Includes reference to other sources for nonprint materials and meeting information.
- Verhey, M. P., J. R. Levy, et al. (1998). *Information RN: Searching the literature for lifelong learning in nursing*. Glendale, CA, Cinahl Information Systems.  
Overview of the need for information, bibliographic databases, search principles and 24 case studies guiding the reader through actual CINAHL database searches. For each, the actual running of the search is left to the reader. Includes a CD-ROM version of "See the cites with CINAHL," a 1993 video program.
- Wandel, J. C. and D. S. Pravikoff (1994). Image letters should be indexed & CINAHL responds. *Image: Journal of Nursing Scholarship* 26: 258.  
Yes, both CINAHL and MEDLINE do index letters - selectively - as did RNdex. This is a good, brief explanation of why such indexing is selective, and how to either retrieve or eliminate letters in a search.

### **Citation analysis and resources**

- Mapping the Literature of Allied Health (NAHRS Task Force)  
<http://nahrs.library.kent.edu/activity/mapping/alhealth/index.html>
- Mapping the Literature of Nursing (NAHRS Task Force)  
<http://nahrs.library.kent.edu/activity/mapping/nursing/index.html>
- Allen, M., Jacobs, S. K., & Levy, J. R. Mapping the literature of nursing: 1996-2000. (2006) *Journal of the Medical Library Association* [in press]
- Johnson, E. D. (1989). In search of applications of nursing theories: the Nursing Citation Index. *Bulletin of the Medical Library Association*, 77(2), 176-184.  
Reviews use of the Nursing Citation Index and shows how it is particularly valuable for finding articles using particular nursing theories and models. From the abstract: "Fully 75 percent of the relevant papers would have been missed by a conventional subject/textword search in the MEDLINE or CINAHL databases." This was prior to the addition of the Nursing Theory tree and Cited References field to the CINAHL database. The Nursing Citation Index was published 1986-1990.
- Leff, D. (2005). Business of dietetics. Making an impact: the rise of the impact factor as a measure of journal quality. *Journal of the American Dietetics Association*, 105(1), 29-30.  
Helps explain Impact Factor and citation indexing.
- Levy, J. (1994-1995). Why a cited author approach? *CINAHLnews (Publ Ed)*, 16(1), 2, 5.  
Explains why the Cited References field was added to the CINAHL database, providing insight on this feature. Available on the Cinahl Information Systems website in the Library section.
- O'Neill, A. L., & Duffey, M. A. (2000). Communication of research and practice knowledge in nursing literature. *Nursing Research*, 49(4), 224-230.
- Reed, K. L. (1995). Citation analysis of faculty publication: beyond Science Citation Index and Social Science Citation Index. *Bull Med Libr Assoc*, 83(4), 503-508.  
Based on a presentation at the 1994 NAHRS Section program, this article suggests ways to help faculty to track down citations to their work - an important factor for promotion and tenure. Given the relative lack of access to citations in the nursing literature, this is a valuable skill to help faculty develop. Searching CINAHL Cited References needs to be added to the methods discussed.

## Health Education/Consumer Health

Ertwine, R. and B. Jakubowski (1986). CHID: an automated information retrieval system. *Diabetes Educ* 12(1): 55-60.

Followed by reaction by D.G. Schlundt. CHID: A Useful Alternative to MEDLINE, 60-61, this article describes the Combined Health Information Database (CHID) - a system designed for health care educators and other health professionals, with 20,000 references to journal articles, factsheets, brochures, audiovisual materials, health program descriptions, and other health-related information. Topics include diabetes, arthritis, digestive diseases, hypertension, and health promotion and health education. It includes the combined databases of several federally supported health information services; each maintains its own subfile. Two case studies are presented. In the reaction, the author compared MEDLINE and CHID searches in his areas of interest. While MEDLINE retrieved more citations, those retrieved by CHID were quite different with an emphasis on review articles and patient education. CHID is quite useful for those interested in patient education including audiovisuals and other teaching materials, or in the health problems covered. It's available on the public web at <http://chid.nih.gov/>.

Fitzpatrick, J. J., C. Romano, et al., Eds. (2001). *The Nurses' Guide to Consumer Health Web Sites*. New York, Springer Publishing Company.

This book's purpose is to provide both the professional and the patient with a tool for finding reliable health information on the Internet. This is a multi-authored work, with subject experts reviewing websites in more than 40 categories. Almost all are nurses, with two health science librarians contributing to the introductory chapter. These experts were asked to select one to six sites and review them for relevance to consumers. The five common evaluation criteria identified for these reviews include authority/source, purpose/objectivity, content, currency, and design. The narrative reviews follow a structured outline. In addition, each chapter begins with an introduction that usually includes key points to consider when evaluating sites related to the topic - one of the book's most useful features. An appendix indexes the sites by title, including the URL and indication of languages other than English. The book serves as an excellent introduction to consumer health resources on the web. Like the other Fitzpatrick reference, the introductory chapter may be copied for instruction. Annotation based on this edition – look for update.

Fitzpatrick, R. B. and G. Hendler (1999). What every medical librarian needs to know about Medlineplus. *Medical Reference Services Quarterly* 19(4): 11-17.

While MEDLINEplus has changed and grown, this article is still useful for understanding NLM's consumer health website and its background.

Lunin, L. F. and R. S. Stein (1987). CHID: a unique health information and education database. *Bulletin of the Medical Library Association* 75(2): 95-100.

A comprehensive review of the history and development of CHID, with a description of format, vocabulary, and data elements. Enlarges on and updates the Ertwine article.

## Website evaluation classics

Bridges, A. and L. Q. Thede (1996). "Nursing education resources on the World Wide Web." *Nurse Educator* 21(5): 11-5.

This is an excellent article on the evaluation of web sites, emphasizing the importance of content on the web. The authors identify six evaluation criteria: Believability, Authority, Evidence, Support, Logic, and Timeliness. They then show how the criteria can be applied to web sites, discussing six sites as examples. These are presented in a chart, with references to specific examples noted in the discussion of the criteria. Discussion of dates and what is old on the Internet were thought provoking. Several additional sites are identified in a table.

Murray, P. (1996). "Click here--and be disappointed? Evaluating web sites." *Computers in Nursing* 14(5): 260-1.

Read this in conjunction with the Bridges and Thede article, and you'll have a good start on understanding the basic of web site evaluation. Comments focus on content, size and location. He demonstrates excellent insight into the needs of users without the ultimate web connection, as well as the fact that nursing care is delivered in a wide variety of legal and cultural environments. Neither of these evaluation articles focus on the visual and graphic effects praised by many site awards programs. Nurses seem to value content and access over high tech.

### **Focusing Searches for Evidence Based Practice**

Allen, M. and J. Levy (2002). "Evidence-based Searching for Nursing & Allied Health." *Bibliotheca Medica Canadiana* 23(3): 90-95.

Avenell, A., Handoll, H. H., & Grant, A. M. (2001). Lessons for search strategies from a systematic review, in The Cochrane Library, of nutritional supplementation trials in patients after hip fracture. *American Journal of Clinical Nutrition*, 73(3), 505-510.

When evaluating the Cochrane Library search strategy used for a systematic review related to nutrition, the authors noted that BIOSIS and EMBASE each retrieved 7 or 8 RCTs, comparable to the 8 retrieved via MEDLINE.

Lavin, M., Krieger, M., Meyer, G., Spasser, M. A., Cvitan, T., Reese, C. G., et al. (2005). Development and evaluation of evidence-based nursing (EBN) filters and related databases. *Journal of the Medical Library Association*, 93(1), 104–115.

Focuses on PubMed/MEDLINE filters.

Levy, J. (2002). Effective Literature Searching. *Online Journal of Clinical Innovations*, 5.

Levy, J. (2004). Searching for evidence. *CINAHL News*, 24(2), 2 -8. Retrieved from <http://www.cinahl.com/library/library.htm>

McKibbon, A., A. Eady, et al. (1999). *PDQ evidence-based principles and practice*. Hamilton, ON; St. Louis, Decker.

Best choice for evidence-based search strategies; covers MEDLINE, CINAHL, PsycINFO, and EMBASE. Includes a CD-ROM with sample step-by-step searches.

McKibbon, K. A. and S. Marks (1998). EBN Notebook Editorial -Searching for the best evidence. Part 1: Where to look. Part 2: Searching CINAHL and MEDLINE. *Evidenced Based Nursing*. 1(3): 68-70; 105-7.

This two-part series was the best overall approach to evidence-based nursing searches in MEDLINE and CINAHL at the time it was written. However, suggested search filters do not take advantage of CINAHL publication types and indexing practices.

McSweeney, M., Spies, M., & Cann, C. J. (2001). Finding and evaluating clinical practice guidelines. *Nurse Practitioner*, 26(9), 30-49.

This article discusses the importance of clinical practice guidelines as well as systematic reviews in evidence-based practice. It discusses searching both the web and databases. Useful charts include web archives, search engines & databases, and web-based evidence-based practice sources. Librarian Cheryle Cann co-authored with two nursing faculty.

Pravikoff, D. S. (2004). The evidence-based practice dilemma. *CINAHL News*, 23(1), 6-7.

Spasser, M. A. (2005). Evidenced-based nursing resources. *Medical Reference Services Quarterly*, 24(2), 71-85.

Stevens, K. R. (2001). Systematic reviews: the heart of evidence-based practice. *AACN Clinical Issues*, 12(4), 529-538.

More than systematic reviews – covers searching and critical appraisal as well.

Subirana, M., Sola, I., Garcia, J. M., Gich, I., & Urrutia, G. (2005). A nursing qualitative systematic review required MEDLINE and CINAHL for study identification. *Journal of Clinical Epidemiology*, 58(1), 20-25.

Webber-Jones, J. (2002). Unabridged literature search. *Nurse Author & Editor*, 12(3), 9-10. Question with responses, including one by June Levy.