

ELECTRONIC RESOURCES REVIEWS

CINAHL Plus. EBSCO Information Systems, 10 Estes Street, Ipswich, MA 01938; 800.653.2726; fax, 978.356.6565; information@epnet.com; <http://www.epnet.com/thisTopic.php?topicID=171&marketID=1>; pricing available on request.

When EBSCO Publishing acquired CINAHL Information Systems in 2003, they promised to keep CINAHL intact as well as to develop enhancements that would further the usability of this primary nursing and allied health database.

It seems EBSCO has kept its word with the introduction of CINAHL Plus, an expanded version of the original Cumulative Index to Nursing and Allied Health Literature (CINAHL). In addition to the original content, CINAHL Plus includes over 300 additional journals; new materials such as Evidence-Based Care Sheets, Quick Lessons, and Search Strategies; expanded searchable cited records; and indexing for important journals in nursing and allied health dating back to 1937.

For users familiar with the EBSCO_{host} design layout, the CINAHL Plus search screen is similar. EBSCO_{host} CINAHL users have always had the option to search or browse using a variety of methods. CINAHL Plus adds two more: Evidence-Based Care Sheets and Quick Lessons. The search results screen has added tools as well. While CINAHL simply displays all results by date, options are available in CINAHL Plus to filter and sort results by Periodicals, Books, Continuing Education Units (CEUs), Evidence-Based Care Sheets, Quick Lessons, Research Instruments, and Search Strategies.

Evidence-Based Care Sheets and Quick Lessons

Evidence-Based Care Sheets provide two page portable document format (PDF) summaries of treatment care for many conditions and include a list of references. They are intended to be general informational overviews of the subjects for

health care professionals. Users may browse for a term or select a topic from an extensive list. While these care sheets are certainly useful for nurses at point-of-care, one must consider the caveat of authority. Care sheets are written by CINAHL Information Systems. Reviewers and their affiliation (generally members of a Clinical Research Council) are duly noted at the end of the material. To further aid users in evaluating the effectiveness of recommendations, a "coding matrix" classifies references at the end of the care sheet, listing everything from "M" for meta-analysis to "GI" for general or background information, texts, or reports. The sheets also include a disclaimer that assumes no liability on the part of CINAHL Information Systems for included information.

Quick Lessons are similar to the Evidence-Based Care Sheets, again providing two-page summaries in PDF for many diseases and conditions, with references. Quick Lessons include etiology, clinical presentation, assessment, treatment goals, and other information tidbits, such as "Red Flags" to consider during treatment and advice for the patient's family. Like Evidence-Based Care Sheets, users can either browse for a term or select a topic from an extensive list. Quick Lessons also index CEUs and exam questions, which can be divided into their own list using the CEU or Quick Lesson sort buttons. However, the content of the two did not have much difference.

While Evidence-Based Care Sheets and Quick Lessons are useful additions to CINAHL, the search/browse process leaves much to be desired. Within the topic lists, users have the option to search for terms, however, if there are no results for a topic, the page reloads in the alphabetical location where the topic would appear. This can be confusing, as there is no message indicating "no results found." In addition, subject coverage is limited: as of March 2006, only 92 Evidence-Based Care Sheets and 148 Quick Lessons were available.

Search Strategies

Search Strategies are an interesting addition to CINAHL Plus. Presented again in two-page PDF format, Search Strategies begin with a case study and then offer strategies on planning a search related to the topic. Search concepts are compared and mapped to CINAHL terms in a simple table, while flowcharts illustrate limit options like Explode and Focus. Illustrated graphics of Boolean operators are included to demonstrate the use of "AND" and "OR" in searching. Finally, a selected bibliography is attached that includes both CINAHL Accession numbers and PubMed identification numbers (PMIDs) in the citations.

Search Strategies are published by CINAHL Information Systems and are written by a small but talented group of authors. Several contributors were authors of *Information RN: Searching the Literature for Lifelong Learning in Nursing* (1988). In addition, notable librarian Margaret (Peg) Allen, AHIP, is credited for several entries. While some may look upon Search Strategies as a subtle threat, this tool could be useful to librarians as a handout during education sessions or as a hint sheet for a patron. For students, Search Strategies present a way to learn how to use a database without having to ask. This may make some librarians uncomfortable, but, with remote access and off-campus learning becoming more prevalent, it would be a boon for more databases to provide this type of content.

Cited References

Another added benefit to CINAHL Plus is an increased number of searchable cited references as well as a Cited References search screen, which is available from the Basic and Advanced Search. On the Cited References search screen, users enter terms in the author, title, source, year, or all fields. The results of a cited reference search are displayed below in the Cited References subtab. The search fields remain available so users can edit search terms

or run a new search. Users can mark records and retrieve a list of Citing Articles from the results of the Cited Reference search.

Cited References also appear on the Search Results screen, where each citation indicates the number of cited references, when available. Although CINAHL Plus includes searchable cited references for more than 1,160 journals, not all cited references have abstracts or detailed records. In addition, references are listed randomly on the Cited Reference results page. For example, when comparing an original bibliography from an article to the CINAHL Plus Cited Reference list, references were not listed alphabetically (as they appeared in the full text), by date, or in the order they were cited in the text. In addition, no information was provided regarding the algorithm or order used in displaying CINAHL Plus cited references.

In the Cited Reference page, users may also be confused by the Related Records feature. To view records related to the original article, users are advised "to mark checkboxes and click Related Records." This leads users to a list of related records that seem to be the bibliographies of the articles listed as the original record's cited references. The Related Records feature is an excellent way for users to mine out related articles they may have missed, but confusion may reign in the process.

Coverage

While CINAHL Plus touts indexing dating back to 1937, a closer look reveals only a small selection of journals offer this type of coverage. *RN* and the *American Journal of Nursing* are the only two journals dating back to 1937 in the CINAHL Plus database coverage list. The next closest journal is *Geriatrics*, with coverage beginning in 1946.

Conclusion

CINAHL Plus adds a variety of new features to the original CINAHL database. While the functionality of some of the new search

mechanisms leaves something to be desired, the usefulness of the available content cannot be denied. Users would be wise to consider the authority of information presented, especially when using the Evidence-Based Care Sheets. Simply including "evidence-based" in an article title does not make the material good information. Users should examine the type of materials used to back up an evidence-based recommendation, as many care sheets cite evidence of only marginal strength. Nursing students should also note that care sheets and Quick Lessons, while useful for an overview, are not primary journal articles and should not be substituted as such when writing a paper. Overall, CINAHL Plus does a good job in providing new and useful content. The challenge, as always, is providing users with simple tools and methods to mine out the information.

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Mosby's Nursing Consult. Elsevier, 11830 Westline Industrial Drive, St. Louis, MO 63146; 877.857.1057; fax, 314.997.5080; mnc.groupinfo@elsevier.com; <http://www.nursingconsult.com>; annual subscription, \$179; contact for institutional pricing.

Mosby's Nursing Consult is a new product from Elsevier that consolidates nursing electronic books, journals, patient education material, news updates, and drug information into a single source that can be used by nurses in a clinical or library setting. According to a company press release, Elsevier designed this product in conjunction with an advisory board of nursing professionals to be a "robust collection of standard nursing content designed to fit into the current

workflow of a clinical environment and provide efficiencies to nurses already overextended with the demands of patient care." Mosby's Nursing Consult is only available in an online format.

The layout of the universal Nursing Consult navigation is similar to another Elsevier product, MD Consult, with tabs across the top that allow the user to easily jump to the various sections: Home, Drugs, Handouts, Journals, Books, News, Clinical Updates, and the Marketplace. Directly below is a static search bar that lets the user search across the entire Website or select the desired category from a pull-down menu.

The Drugs section consists of two areas: recent drug-related news (found under the Updates tab) and Mosby's Drug Consult (under the Contents tab). Information in the Updates section includes drug news updates, Food and Drug Administration (FDA) approvals for new drugs, and drug indications and safety notices about newly discovered drug-related side effects and health risks. Information in this section is provided by the FDA, Reuter's news service, drug companies, and staff writers at Mosby's Nursing Consult. Citations to relevant studies mentioned in news articles are provided when available. Several common IV and PO drug calculators are also included in the Updates section.

The Contents tab provides electronic access to Mosby's Drug Consult, a drug monograph compiled by an editorial board of physicians, pharmacists, nurses, and veterinarians. Users can browse for drug information in multiple ways: Indications (alphabetical list of conditions, such as "headache," retrieves a list of drugs indicated for that condition), Ingredient (browse by substance name to retrieve a list of all drugs containing that substance), FDA-class, Category, Generic drug name, United States drug name, Global drug name, or across all these indexes using the Comprehensive Index. A Drug Identification Guide/Pill Images section allows users to identify pills

by browsing using the first number or letter of the imprint code found on a pill. Currently, no function allows users to browse or search by pill shape or color.

Mosby's Nursing Consult licenses more than 8,000 patient education handouts from McKesson Clinical Reference Systems. Patient handouts are written and reviewed by physicians and pharmacists. Spanish-language handouts are available for many topics. Users can add up to two pages of customized instructions to patient handouts simply by entering text or copying and pasting existing text into a text box at the bottom of each handout. It is also possible to create contact information by either creating a profile that will default to customized contact information at the top of each handout or by manually entering up to eight lines of text. Contact information and specific patient instructions can be quickly and easily edited. Patient handouts can be located using a keyword search from the main search bar by selecting the Patient Handout category from the drop-down menu or browsing the broad categories Conditions and Treatments, Medications, or Spanish Handouts. Browsing is also available for more specific topics under the Conditions and Treatments by Category heading; the categories are Topics by Specialty, Adult Health Topics, Pediatric Health Topics, Senior Health Topics, and Women's Health Topics.

The Journals section offers several methods to simultaneously search Mosby's Nursing Consult and MEDLINE for citations to journal articles. Mosby's Nursing Consult includes twenty-three full-text journals (including *Critical Care Nursing Clinics* and *Nursing Clinics*), with portable document format (PDF) versions of articles available from 2003 forward. A basic keyword search is available and can be limited by the focus of the article to etiology, diagnosis, prognosis, or treatment. A thesaurus-mapping function includes conceptually similar terms in the search with no transparency in how terms are mapped. Users can create a more

sophisticated search strategy using Boolean operators and field tags: abstract, article title, author(s), author affiliation, chemical compound name, language, major Medical Subject Headings (MeSH), MeSH, National Library of Medicine (NLM) Citation ID, publication date, publication title, abbreviated publication title, publication type, source database, and yearbook articles. The following customizations for searches are also available: author name, journal name, publication dates, study group (all, human, or animal), subject age (all; infant, newborn; infant; child, preschool; child; adolescence; adult; middle age; and aged), and article type (all, review, Cochrane, opinions, trials). Search results can be sorted by full text, then relevance (the default), or reverse chronological.

The Books section contains twenty-nine reference books selected to cover a broad range of topics relevant to nurses in clinical practice such as Swearingen's *Manual of Medical Surgical Nursing Care* and *Mosby's Pediatric Nursing Reference* by Betz. A basic keyword search is offered across all reference books or within a particular title, including the option to limit the search to a specific focus (etiology, prognosis, diagnosis, or treatment). A book can also be browsed separately by its table of contents or alphabetical index. The table of contents for each book is based on a hierarchical structure: chapter, then subsections of each chapter.

News articles relevant to nurses are updated daily under the News tab. Content is provided by Reuter's news service. Users can sort stories by date or specialty. Individual subscribers can create a customized list of articles from specialties they choose. The Clinical Updates section contains brief articles written by nurses. These updates are on specific, clinically relevant topics that nurses can be expected to encounter in their regular practice. They are, however, not formal literature reviews. The Marketplace section of this product provides links to the nursing books

section of the Elsevier Website, where users can purchase titles directly from this publisher.

Mosby's Nursing Consult content does overlap with MD Consult in several ways: both products incorporate the McKesson patient handouts and Mosby's Drug Consult, as well as a few duplicated reference books. Institutions that currently subscribe to MD Consult will need to evaluate whether there is enough unique content between their current collection and Mosby's Nursing Consult before deciding to purchase it. Overall, Mosby's Nursing Consult is a well-organized, easy-to-navigate product appropriate for nurses in clinical practice or for those still in nursing school.

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EMCare. Elsevier, E-products Team, 360 Park Avenue South, New York, NY 10010-1710; 212.633.3730; fax, 212.633.3680; emcare@elsevier.com; <http://www.info.embase.com/emcare/>; contact for pricing.

In the abstract of their article published in the September 2006 issue of the *American Journal of Nursing*, authors Pravikoff, Tanner, and Pierce present their research focusing on nurses employed in clinical settings. They discuss, among other things, the nurses' perception of the tools available to them and their comfort level with and ability to use the tools to support evidence-based practice:

Although these nurses acknowledge that they frequently need information for practice, they feel much more confident asking colleagues or peers and searching the internet and World Wide Web than they do using bibliographic databases such as PubMed or CINAHL to find specific information. They don't understand or value research and have received little or no training in the use of tools that

would help them find evidence on which to base their practice [1].

Hospital and academic librarians can use this information to encourage collaboration with nursing faculty and hospital supervisors responsible for instructing health care professionals and to promote the use of resources that support evidence-based practice. The numbers of practicing nurses nationwide is down, but applications to nursing science programs as well as acceptance rates are on the rise. This is a very good time to be involved in research instruction. Coincidentally and in support of this, nurses and allied health professionals have new biosciences online resources from which to choose. Elsevier's EMCare has joined the ranks with CINAHL in competing for the nursing and allied health care professional market.

EMCare, produced by Elsevier, a sister company of Mosby and W. B. Saunders, is a product extension of EMBASE. This bibliographic health sciences database is aimed at supporting clinical practice and biomedical, nursing, and allied health research and education. It covers all nursing specialty areas including school health nursing, addictions nursing, hospice and palliative care, and more. EMCare's target audience includes nurses, allied health professionals, educators, and students. Currently available on DataStar, plans are underway to make it available on other vendors as well as on Elsevier's Nursing Consult platform.

Coverage

More than 2,700 currently published international source titles are indexed cover-to-cover on EMCare. An additional 900 relevant ceased journal titles, as well as about 400 relevant MEDLINE journal titles, are also indexed. As of March 2006, the database contained close to 2 million records from the biomedical sciences. There are 1,200 titles unique to EMCare that are not found in EMBASE, and the overlap between the two databases is just over 50%. Indexed resources in-

clude peer-reviewed journals, trade publications, and electronic-only journal titles. Journal coverage dates from 1995 to the present with plans to add 250,000 new records each year. Full author abstracts are supplied for nearly 75% of all articles (active and ceased) and nearly 85% of current articles. Journals are indexed within 10 days of receipt, and the database is updated weekly.

The scope of this database is international and the literature of North and South America is the largest at 52%. The Asia-Pacific Americas represent about 6% and Europe, the Middle East, and Africa total 42%. A comparison of EMCare's and CINAHL's coverage shows North and South America is higher (about 71%) on CINAHL, and Europe, the Middle East, and Africa is lower (23%). Overall, the literature coverage overlap with CINAHL is 67%.

Searching

Currently, DataStar is the first and only vendor available for searching EMCare. DataStar search screens are not complicated and are easy to navigate. The default screen is the Easy Search, but Advanced Search is also an option. The Easy Search method allows users to enter up to three keyword terms or phrases. The information link (*i*) following each search bar provides a convenient quick look-up for the correct way to enter search information (e.g., author name, journal titles, Elsevier's Life Science Emtree thesaurus "explode" terms, etc.). A click in the "Thesaurus Mapping" box links free-text terms to the most relevant controlled vocabulary term. When the Thesaurus Mapping feature is turned on, the results screen displays the results along with the mapped Emtree thesaurus term and related or appropriate terms for further refining the search.

A search performed without Thesaurus Mapping results in a titles display screen, from which users can choose to display the full record. The default setting for each subject entry is for full record

searching, but users may limit to any of at least fifteen different field searches, including, but not limited to title, title in original language, author, author affiliation, product trade name, product manufacturer, country of publication, descriptor, or major descriptor. Limit options include: time from last update (from one week up to forty-eight months or from a specific date set by the searcher), publication year, age group, article type, language of publication, country of author, and type of document (meta-analysis article, clinical trial, review, record with abstract, or records relating to females or males).

The Advanced Search screen includes all options displayed on the Easy Search, plus two additional limiting options using Emtree links. The Emtree—Browse Headings link allows searchers to break out any of the fifteen Emtree subject categories and to narrow down to specific descriptor terms. The Emtree—Enter a Term link maps a keyword to the nearest relevant descriptor term. Other options available from the search history screen include the ability to repeat EMCare searches on other databases and to remove duplicates when multiple databases have been searched. Simultaneous searching of multiple databases (e.g., EMCare, CINAHL, and MEDLINE) is also possible, and, with the help of the split results feature, searchers can display the results from each database separately. The rank feature displayed with the search history allows tracking of statistical trends from search results. Searchers may designate, for example, descriptor terms, and the rank feature will count the occurrence of terms in a given field.

Over 1,500 new nursing indexing terms have been added to existing terms already in the Emtree thesaurus to increase access to the nursing content. Although users are best advised to use Emtree to capture the most comprehensive search results, the thesaurus mapping feature provides quick results for those not interested in investing a lot of time in learning how to

navigate the thesaurus. The EMBASE Vocabulary, EVOC, is another tool recommended for use with the Emtree thesaurus when a thorough search of a topic is the goal. It is a collection of "all the descriptors used as indexing terms in EMBASE and EMCare along with their synonyms, date of introduction, position in the Tree hierarchies, and other annotations" [2]. By way of comparison, EVOC is used with EMBASE or EMCare in the same way that the MeSH Annotated Alphabetical List is used with the National Library of Medicine's MEDLINE database.

A typical record viewed in full display contains accession number and update, title, source, author(s), author affiliation, abstract, descriptors, language, language of summary, publication type, article type, country of publication, CODEN designation, publication year, publication date, entry date, and copyright statement. Full-text articles may be ordered from the Documents display screen. ISI in Philadelphia and Infotrieve in Los Angeles are the two distributors in the United States.

DataStar's additional features include the ability to Save Search and create updates using the Alerts feature. Citation displays may be saved in a variety of formats including portable document format (PDF), hypertext markup language (HTML), rich text format (RTF), and plain text (TXT). As well as results, searchers may elect to save, not save, or save select steps from the search strategy. The Alerts link will display the session search history from which any or all search steps can be selected to create an alert (current awareness) search. Alerts are run on a schedule, and results can be either emailed or sent via regular mail.

Comparison with other databases

Marketing professionals at Elsevier supplied a comparison (December 2005) of EMCare and CINAHL subject features (Table 1). Nursing coverage under EMCare above represents over 100 core nursing titles

Table 1
Comparison of EMCare and CINAHL subject features

Subject coverage	EMCare	CINAHL
Allied health	35%	20%
Biomedicine	49%	47%
Nursing	13%	27%
Other	3%	3%

that were selected by a panel of Elsevier indexing experts, nursing professionals, and database content specialists from their Bibliographic Databases Department and Health Division. Elsevier's EMCare team continues to add to its collection of nursing titles, and suggestions for inclusion are welcome.

Of the total 2,700 active source titles covered in EMCare, 54.8% (1,454) titles are unique. By comparison, CINAHL's unique title coverage is quoted at 55.5%, or 1,499 of its total (i.e., active and inactive) titles indexed.

The twenty-three nursing journals/clinics indexed on Mosby's Nursing Consult, a new database released by Elsevier in January 2006, are all indexed on EMCare. Full-text is available for all nursing book and journal titles on Nursing Consult (see review in the issue).

Summary

DataStar, the initial host vendor for this database, supplies abundant online support. Their WebEx training is a virtual training-without-the-trainer service in which trainers, from their offices, can view the screen and interact with subscribers at their own desks. This training, offered free to DataStar customers, needs to be scheduled in advance. In addition, DataStar has a complete online search guide covering all the information necessary to become thoroughly familiar and comfortable with searching the DataStar system. DataStar DataSheets supply descriptive information on the database and support tools, sample documents, field tags and how to use them, price, limit options, print options, and notes on how to search using the Emtree Thesaurus. The (*i*) symbols on the database search screens serve as

quick look-up aids and are especially helpful for searchers unfamiliar with the platform.

The ability to search numeric information is a plus in this database. Thanks to the unique field tags, it is possible to search, for example, molecular sequence data and enzyme commission numbers. Users of Elsevier's Excerpta Medica Database (EMBASE) who are familiar with using the thesaurus for formulating their searches will have an easier time searching EMCare than will inexperienced searchers. Although not necessary, the best search results are obtained with the aid of the thesaurus.

Probably the biggest handicap is the inability to access full-text articles immediately online. Whereas researchers, and even educators, recognize that it takes time to get their resources through interlibrary loan or online ordering, health care practitioners more often need and want to view the full text of a few good articles right away. Another shortfall is the volume of representative nursing journal titles indexed. More nursing titles need to be added to the database to attract the interest of nurses involved in research. The database producers continue their work in this area.

It would appear that, while the two databases have significant overlap, they have sufficient differences in the geographic and subject coverage to warrant a search of both EMCare and CINAHL to be assured of comprehensive search results. The simultaneous search capability and the remove duplicates features on DataStar help searchers save time and limit costs while conducting multiple and/or simultaneous searches.

The broad geographic coverage on EMCare is one of its strong

points, particularly in this age where the emphasis on and interest in globalization is growing. As a work in progress, this reviewer thinks we can look forward to more good things in the future from Elsevier's EMCare product.

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Virginia Henderson International Nursing Library. Sigma Theta Tau International, 550 West North Street, Indianapolis, IN 46202; 888.634.7575; international 317.634.8171; LibraryManager@nursinglibrary.org; <http://www.nursinglibrary.org/Portal/>; free Website.

The Honor Society of Nursing, Sigma Theta Tau International (STTI), has steadily grown and evolved since its founding in 1922 by six nurses whose mission was to provide "leadership and scholarship in practice, education and research to enhance the health of all people" [1]. The society's ongoing commitment to providing various knowledge products, such as the revised and relaunched electronic Virginia Henderson International Nursing Library (VHL), is evidence of the organization's vision to "create a global community of nurses employing knowledge and advanced technology to improve the health of the world's people" [1]. The revised and relaunched Website debuted in July 2005, but, to this reviewer, it is evident that the Website is still a work in progress.

The Virginia Henderson Interna-

tional Nursing Library began as a repository of nursing knowledge in 1979 after a resolution by the society calling for a "national nursing library resource offering services to nurses and those interested in nursing" [2]. The main content of the database is the "fugitive" literature of nursing—information presented at meetings or conferences, unpublished studies, ongoing studies, and dissertations—that contains a wealth of useful information but that frequently does not find a widely known or accessible data repository. In 1983, as the content and structure of the library evolved and became more distinct, the society published the first *Directory of Nurse Researchers* in paper format. The publication of the *Directory* was pivotal in advancing the vision of the library to be "a national clearinghouse for information regarding nurse researchers and nursing research" [2], as voiced by then president-elect of the society, Carol Lindeman. Advances in computer technology and network communications prompted STTI to purchase the library's first computer in 1989, "enabling a critical transformation from a paper-based system to the beginnings of an electronic library" [2]. The creation of the on-line database provided information about nurse-conducted research as well as information about the researcher. With the inauguration of the *Registry of Nursing Research* in the 1990s under the guidance of Judith Graves, for the first time researchers and searchers had access to information about research findings supplementing the original data about the study and researcher.

Entering the new millennium, the society convened a meeting to "revision" the library. Catching the wave of dramatic technologic developments in computerization and the Web that now allows near universal access to information would support the society's mission to provide global access to nursing research. The enhanced Website continues the society's commitment to "knowledge modeling while supporting nursing practice and re-

search" and dissemination of nursing information. "The aim is to develop a 'tell and ask' functional interface for a digital nursing library, where the professional—the nurse—communicates with the knowledge base by making logical assertions (tell) and posing questions (ask) based on her/his professional discourse" [3]. The design process was modular; each page being reviewed for semantic precision, linguistics and terminological correctness, consistency in presentation and navigation, and accuracy in mapping to the knowledge structure.

The redesigned Website is friendly and appealing in its opening screen, however, it does not give an immediate and clear description of the unique content of the database. It is only by going to the "About Us" page that one learns in a one-sentence description, "Through the library's complimentary *Registry of Nursing Research* database, individuals have access to research study abstracts and conference abstracts." On the home page, links in a list of enhancements generally lead to the advanced search page and not to a description of the enhancements. In light of the main barrier to searching that nurses experience—lack of time—this inattention to clarity costs searchers valuable time in understanding the usefulness of the content.

A search box on the upper right of each page allows for a universal keyword search. A Search Abstracts tab leads to a Web page with two forms for searching either conference or research study abstracts. The Advanced Search also leads to two different forms, one for searching conference abstracts and one for searching research study abstracts. Given the scope of the database, providing five search forms is unnecessary and likely to confuse searchers.

Conference abstracts may be searched by presentation title, abstract, presenter name, conference sponsor, and year. The basic and advanced search pages are nearly identical. The vast majority of conference abstracts are from meetings of the Africa Honour Society, East-

ern Nursing Research Society, International Women's Conference, Midwest Nursing Research Society, Oncology Nursing Society, Sigma Theta Tau International, Southern Nursing Research Society, and the Western Institute of Nursing. Limiting to year is a useful feature because the database includes more than 8,000 conference abstracts from 1970 forward.

The research study abstracts basic search form allows users to enter keywords, title words, and researcher names. The advanced form offers a plethora of options for searching, providing "a focused search to ongoing or completed research, dissertations, or other types of nursing publications." At the time of the writing of this review, the advanced search function was not operational. A call to the VHL was immediately answered and an explanation was offered that the VHL was aware of the nonfunctioning feature and hoped to have the glitch resolved very quickly. In the meantime, searchers can use the basic search form to find descriptions of over 17,000 research studies.

A unique feature of the VHL is that researchers may register on the Website to enter information about their own conference presentations, research, or publications. Researchers are able to enter a conference abstract or research study data. Available fields for research studies include title, abstract, research focus, design, study type, framework and description of sample, sample size, number of groups, sampling plan, gender, age, and collection setting. The researcher is asked to qualify the study as quantitative research, qualitative research, or quantitative and qualitative research. Researchers are also asked to complete a "My Profile" data questionnaire that provides contact information to the searcher viewing the abstract who may wish to contact the researcher with additional questions. A review of research study abstracts reveals that most studies include only title, abstract, and contact information.

The "Find Resources" tab pro-

vides a large array of links to helpful Websites on topics related to research (e.g., evidence-based practice, statistics, grant information, complimentary or open-access full-text journals) that a novice or advanced practitioner would find useful.

Unfortunately, the tables of contents for the STTI publications *Worldviews on Evidence-Based Nursing*, *Journal of Nursing Scholarship*, and *Reflections on Nursing Leadership* are not included in the Virginia Henderson International Nursing Library. The VHL Website provides neither a link nor any guidance on how to locate these well-known publications. Nursing Knowledge International, a not-for-profit STTI subsidiary, has established sales, marketing, and distribution partnerships with a wide range of nursing associations, publishers, continuing education providers, and universities to produce health care books, continuing education, journals, research papers, and teaching aids. However, these STTI knowledge products are not linked to or integrated with the VHL. This unexplained subdivision of product access without a coherent linking structure, in the estimation of this reviewer, produces confusion about the scope and nature of the STTI's brand. For example, on the STTI Website, My Info Search leads to a page to register for access to Doody's book reviews and to a fee-based selective dissemination of information (SDI) service; Nursing Library leads to the VHL Website; and Publications leads to the society's fee-based journals.

The VHL appears to be a work in progress. To effectively serve the budding nurse researcher, the Website designers should provide greater explanatory material on the breadth and content of this resource, thus saving the searcher from making an erroneous assessment of the Website's content and value when first visiting the site. The legacy of the society and its commitment to becoming a "premier contributor to nursing knowledge" gives this reviewer confidence that the usability of the Web-

site will improve to meet the needs of present day and next generation nurse researchers.

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NLM Gateway. US National Library of Medicine, 8600 Rockville Pike, Bethesda, MD 20894; 888.346.3656; gateway@nlm.nih.gov; <http://gateway.nlm.nih.gov>; free Website.

NLM Gateway, a Web-based meta-search engine for many resources of the National Library of Medicine (NLM), searches MEDLINE/PubMed, the NLM Catalog, TOXLINE Special, Developmental and Reproductive Toxicology (DART), Meeting Abstracts (HIV/AIDS, Health Services Research, and Space Life Sciences), five subfiles of the MedlinePlus consumer health database, ClinicalTrials.gov, DIRLINE, Genetics Home Reference, Health Services Research Projects (HSRProj), Online Mendelian Inheritance in Man (OMIM), and five toxicology databases (HSDB, IRIS, ITER, GENE-TOX, and CCRIS). Developed by the library's Lister Hill National Center for Biomedical Communications, the Gateway debuted in October 2000 as part of the migration from the older ELHILL fee-based search system to free access on the Web [1].

Figure 1 NLM Gateway search screen

Figure 1 NLM Gateway search screen

NLM Gateway
Your Entrance to the Knowledge Resources of the National Library of Medicine

Search Clear Help FAQ What's New About

Term Finder Limits/Settings Search Details History Locker Contact Us

Enter term(s) in the box above to search across the following NLM resources:

Bibliographic Resources ⓘ

MEDLINE/PubMed - journal citations, abstracts	DART - Developmental and Reproductive Toxicology
NLM Catalog - books, AVs, serials	Meeting Abstracts
TOXLINE Special - toxicology citations	

Consumer Health Resources ⓘ

MedlinePlus - Health Topics	MedlinePlus - Other Resources
MedlinePlus - Drug Information	ClinicalTrials.gov
MedlinePlus - Medical Encyclopedia	DIRLINE - Directory of Health Organizations
MedlinePlus - Current Health News	Genetics Home Reference

Other Information Resources ⓘ

HSRProj - Health Services Research Projects	ITER - International Toxicity Estimates for Risk
OMIM - Online Mendelian Inheritance in Man	GENE-TOX - Genetic Toxicology (Mutagenicity)
HSDB - Hazardous Substances Data Bank	CCRIS - Chemical Carcinogenesis Research Information System
IRIS - Integrated Risk Information System	

U.S. National Library of Medicine | National Institutes of Health | Health & Human Services
 Privacy | Copyright | Accessibility | Freedom of Information Act
 Last updated: 4 April 2005

The target audience for the Gateway is "the Internet user who comes to NLM not knowing exactly what is here, or how best to search for it" [2]. The Gateway is best understood as "first-stop shopping" [3] for some of the gems in the NLM's collections of resources. Its twenty separate systems are grouped visually into three collections appropriate for users from a wide variety of subject specialties and educational levels: Bibliographic Resources, Consumer Health Resources, and Other Information Resources. Each constituent database (there are now 20) has a link to its own separate interface, except for Meeting Abstracts, which may be accessed only

through the Gateway or through an Internet search engine such as Google.

The clean design of the home page features a single search box (Figure 1); users may enter their own terms or click Term Finder to find indexing terms from Medical Subject Headings (MeSH) or Unified Medical Language System (UMLS). Boolean operators, field qualifiers, and several limiters may be used (these are ignored for collections that do not support them). The user may view Search Details explaining how terms are searched in each database; History displays previous search statements; and the user may choose a password to store settings or references in a

Locker. The number of search results is displayed for each constituent database; clicking the number or database name displays the list of results. The Gateway is exceptionally easy to navigate; clear directions at each step explain what to do next.

As might be expected from such a disparate collection, the Gateway is more successful at handling certain types of queries. For example, the MeSH term "Rotavirus Infections" produces a reasonably precise set of references in each of several subfiles. However, phrases such as "mosquito control" or strings of common words such as "vitamin c aged common cold" (an example from the NLM Training

Manual) [4] produce large numbers of apparently irrelevant references, especially in the Consumer Health collection, because Gateway “cannot duplicate exactly the processing sequences and capabilities of each [system]” [5]. Phrases and limits are not recognized by some collections. Using Search Details, one may view, but not change, the way queries are parsed in each system.

Another problem is the layout of the Gateway home page, which first lists MEDLINE/PubMed references (many of which are written at a postgraduate level incomprehensible to the average person). To answer general consumer health questions, going directly to MedlinePlus seems preferable. Use of a search wizard or better clustering of systems by user category or subject might improve usability of the Gateway for the nonspecialist. Also, the inexperienced user may not realize that the Gateway does not search all NLM resources (more are found on the NLM Website) and is not a US government-wide search engine.

In summary, NLM Gateway, like its largest constituent database, PubMed, “can provide more depth but may require more effort to use; training may help searchers to obtain the best results” [6]. Consumers use a wide variety of Web-based health resources [7] and might not wish to expend the effort to learn a complex system. NLM’s *Gateway Basics* trifold brochure is recommended for a brief overview. In spite of its wealth of resources, the Gateway seems to have limited appeal to the new generation of users

who expect to connect immediately to a custom-tailored display of full-text results. Usage statistics have slipped from a high of 1.6 million in fiscal year 2002 to 722,000 in fiscal year 2005 [8], despite skyrocketing use of the Web. Today’s searcher apparently prefers other search engines such as PubMed, Google, Google Scholar, and HighWire Press (which now has a PubMed search option) [9].

The lack of references to the Gateway in CINAHL nursing journals suggests that this resource is little used by nurses, although a PubMed search for “NLM Gateway” finds the Gateway mentioned in several Cochrane reviews, as a key resource for health sciences librarians [10], public health professionals [11], and physician writers [12]. Whether or not the Gateway is used as a search engine, it is still valuable as a collection of world-class resources and, as such, deserves a place on the Website of every sizable library serving health sciences users. Perhaps it can be re-engineered to serve a wider audience of twenty-first century users as capably as the ELHILL system served an earlier generation of health sciences librarians.

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