Nursing Reference Center: A Point-of-Care Resource

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Recommended Citation
ONLINE UPDATES: A COLUMN FOR SEARCH ANALYSTS

Emily Vardell, Column Editor

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ABSTRACT. Nursing Reference Center is a point-of-care resource designed for the practicing nurse, as well as nursing administrators, nursing faculty, and librarians. Users can search across multiple resources, including topical Quick Lessons, evidence-based care sheets, patient education materials, practice guidelines, and more. Additional features include continuing education modules, e-books, and a new iPhone application. A sample search and comparison with similar databases was conducted.

KEYWORDS. database evaluation, nursing, Nursing Reference Center, online databases, point-of-care systems

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Nursing Reference Center™ (NRC) is a point-of-care reference tool designed for staff nurses, nurse administrators, nursing students and faculty, and hospital librarians. NRC can be used to access the best available and most recent clinical evidence from thousands of full-text documents, including topic pages, practice guidelines, CEs, patient education materials, and more.

**BACKGROUND**

Access to evidence-based medical and nursing information is an essential part of improving nursing practice and education. As the information needs of nurses continue to increase, nurses are motivated to access information resources in order to improve patient outcomes and narrow the gap between research and practice. However, not all nurses access information the same way. Studies show that nurses in advanced practice roles are more likely to have information needs requiring access to professional literature.¹ This is consistent with Dee’s study, which shows that nursing students and clinical nurses were more likely to rely on their colleagues and books for their information needs and not online databases.² The convenience of having colleagues available nearby may explain why these nurses and students may consider them their primary information resource; however, lack of training and experience using electronic databases may be a factor as well.

Ability to compose a proper search strategy for a database is not an easily acquired skill, but the availability of point-of-care databases in medicine and nursing has made access to information resources easier. Users of NRC have pointed out that language used to search NRC is similar to how they think and that the resource is fast, easy to use, and the content
Because NRC includes content derived from legal cases, clinical guidelines, research data, and more, the database appeals to nurses, administrators, and faculty.

NRC is updated regularly, and new content is added to ensure that the database contains the best available evidence in nursing. Information on content updates can be obtained from the bimonthly Nursing Reference Center Update Newsletter. The newsletter also includes news on the latest evidence in nursing and how it can be implemented in daily nursing practice. In addition, NRC components such as CINAHL are updated regularly as new content becomes available. It is important to note that NRC content is dependent on an institution’s or individual’s subscription to other EBSCO databases such as CINAHL.

SAMPLE SEARCH

The home page of Nursing Reference Center features seven tabs that are located at the top of the page, enabling one-click access to “Basic Search,” “Diseases and Conditions,” “Skills and Procedures,” “Drug Information,” “Patient Education,” “Practice Resources,” and “Continuing Education” (see Figure 1). In addition to these tabs, which are anchors at the top of every page, the home page features a box labeled “Spotlight,” which provides information on Nursing Reference Center itself. At the time of publication, this section featured information on the iPhone application, a magnet case study, evidence-based care sheets, and more. A second box on the home page features “Nursing News,” which is a feed from HealthDay News. A link to the American Nurses Association (ANA) page is located under “Search Other Services.”
The first tab at the top, “Basic Search,” features a box labeled “Find” with check boxes allowing users to limit by assessment, diagnosis, planning, implementation, and evaluation. The small question mark icon next to the search box links to a page that outlines the resources included in the search. The basic search, which is the default search from the home page, searches the EBSCO CINAHL Nursing Guide, EBSCO Health Library™ content, HealthDay News Service content, F.A. Davis’s Drug Guide for Nurses, F.A. Davis’s Laboratory & Diagnostic Tests with Nursing Implications, and National Guideline Clearinghouse™ Practice Guidelines.

The “Find” box has an auto-suggest feature, which can be quite helpful if a user is not sure of the spelling. A sample search for “Sjogren’s Syndrome” was conducted from the home page.
The results of the search are sorted using a tab system. The tabs that appear at the top of the search results include “All Results,” “Quick Lessons,” “Skills,” “Evidence-Based Care Sheets,” “Drugs,” “Patient Education,” “Guidelines,” “CE,” and “Books.” The filtered tabs displayed depend on the material available for the topic searched. A second sample search of “diabetes” was conducted (see Figure 2), and additional tabs included cultural competencies, research instruments, and legal cases.

Legend: FIGURE 2. Nursing Reference Center sample search

The “All Results” tab, which is the default results list tab, sorts results automatically by relevance, but they can also be sorted by descending and ascending date. A user can narrow results using the links on the left side of the search display. The links include narrowing by
“Subject: Major Heading,” subject, publication, age, and publication type. Each of the numbered search results includes information on authors, the source of the information, the date of publication, the number of pages, the type of information (quick lessons, evidence-based care sheet, etc.), and links to the HTML and PDF versions. Users also have the option to add any of the search results to a folder for later use. As a user clicks across the tabs at the top, the results displayed vary, depending on the type of content. The results list layout is similar to the layout described for the All Results tab.

If the user conducts a subsequent search using one of the Basic Search limits (i.e., assessment, diagnosis, planning, implementation, and evaluation), the results are displayed in a manner similar to the general search display. The NRC material suggests using these limits to help target results. Users can return to the home page by clicking the “Refine Search” at the top of the results list.

An advanced search can be conducted by clicking the “Advanced Search” link at the top of the NRC page. Here users will see a box similar to the basic search box with the “Assessment,” “Diagnosis,” “Planning,” “Implementation,” and “Evaluation” limits. In addition, a drop-down box allows users to limit by a particular database. Further down the “Advanced Search” screen, users can limit by document types (by default, all types are selected; this can be adjusted by clicking the “Check All” or “Uncheck All” boxes), full text, publication date, publication title, and more. Users can also browse CINAHL headings and indexes by clicking on the hyperlinks in the “Browse” box on the right. In a feature that would most likely appeal to practicing nurses, it is also possible to search by ICD 9 and ICD 10 codes. (Users can find more information about this by clicking “Field Codes” on the Advanced Search page).
A sample advanced search was conducted by typing “hypertension” in the search box, electing the “Diagnosis limit,” unselecting some of the document types, and entering a publication range of 2008 to 2012. To conduct the search, the “Search” link at the bottom of the page was selected. The results were displayed very similarly to the results in the “Basic Search.” The tabs at the top of the page are dependent on the document types selected in the advanced search. To return to the home page, a user can select “Home” at the very top of the page.

**NAVIGATION TOOLS**

In addition to the first “Basic Search” tab which was discussed previously, there are additional tabs entitled “Diseases & Conditions,” “Skills & Procedures,” “Drug Information,” “Patient Education,” “Practice Resources,” and “Continuing Education” arrayed across the top of the NRC screen. Clicking on the first tab “Diseases & Conditions” reveals a lengthy, alphabetized list of diseases and conditions. The content available in this section includes “Quick Lessons,” designed to complement the nursing workflow, and “Evidence-Based Care Sheets” (denoted by a purple EB icon), which incorporate the “best available evidence through rigorous systematic surveillance.” Clicking on one of the links displays the Quick Lesson or Evidence-Based Care Sheet for that topic.

For example, if a user clicks on “Abdominal Aortic Aneurysm,” a page displays with an overview of that condition (see Figure 3). The following options for the Quick Lesson are offered at the top of the screen: view “Citation” information, “HTML Full Text,” and “PDF Full Text,” as well as “Print,” “E-mail,” “Save,” “Export” (to a bibliography manager), and “Add to folder.” The Quick Lesson page is organized in a box on the left labeled “Contents” by
description/etiology, facts and figures, risk factors, signs and symptoms/clinical presentation, assessment, treatment goals, “Food for Thought,” red flags, “What Do I Need to Tell the Patient/Patient’s Family?,” references, and reviewers. All of these sections are automatically displayed in the Quick Lesson page, but a user can quickly access a particular section by selecting the section’s name in the Contents box.

Legend: FIGURE 3. Nursing Reference Center sample Quick Lesson
Most of the sections are self explanatory. “Facts and Figures” discusses relevant statistics on the condition, “Food for Thought” contains related information, and “Red Flags” signals do-not-miss considerations. It is noteworthy that Quick Lessons includes information geared towards family meetings in the section “What Do I Need to Tell the Patient/Patient’s Family?” The “Reviewer(s)” section lists the names of the nurses responsible for the information, who often appear to be affiliated with CINAHL, as well as the date for the original document and latest revision.

“Related Information” to the topic can be found in the box on the right side of the Quick Lessons screen. Related Information includes links to relevant “Quick Lessons,” “Skills,” “Evidence-Based Care Sheets,” “Patient Education,” “Guidelines,” “CE,” “Books,” and “Legal Cases.” Clicking on one of these links executes a refined search with the particular resource type as the filter. For example, when the Abdominal Aortic Aneurysm Quick Lesson is displayed and “Guidelines” is selected in the “Related Information” box, the resulting screen displays the following search in the Find box: ("Abdominal Aortic Aneurysm" OR "Aortic Aneurysm, Abdominal" OR "Aneurysm, Abdominal Aortic" OR "Aneurysm, Aortic Abdominal" OR "Aortic Aneurysm, Abdominal") and the Guidelines filtered tab in the middle of the screen. The guidelines listed in the search results include the title of the guidelines, its source and date, and one-click access to the PDF full text. See Figure 4 for an example.
Returning to the NRC home screen, the “Skills & Procedures” tab looks similar to the “Diseases & Conditions” tab; it is the content that sets them apart. NRC helpfully explains what kind of information is included in each tab in the Key Content box on the right side of the screen. The text in that box indicates that “Skills & Procedures” includes clinical papers on the “necessary steps to achieve proficiency in a specific nursing task” as well as documents on cultural competencies. Clicking on any of the links listed in this tab will display a Quick Lesson
on that topic (organized the same as the Quick Lessons explored above). Users can also search for a particular skill or procedure in the search box at the top of the tab.

The “Drug Information” tab culls information from *Davis’s Drug Guide for Nurses* and the *AHFS Drug Information Essentials*. Again, the tab screen shows an alphabetized list of medications and also includes the option to search for a particular drug at the top of the screen. Users can also filter the content by limiting to information from one of the two sources (*Davis’s* or *AHFS*).

A sample search for “Nasonex” was conducted in the Drug Information tab with the *Davis’s Drug Guide* selected from the drop-down box. (This is also the default option.) NRC suggested viewing the “Mometasone (nasal)” page based on the search for Nasonex. The mometasone (nasal) page includes information gathered under a “Pharmacologic Profile”: indications, action, pharmacokinetics, time-action profile, contraindications and precautions, adverse reactions and side effects, interactions, route and dosage, and availability; and gathered under “Nursing Implications”: assessment, potential nursing diagnoses, implementation, patient/family teaching, evaluation/desired outcomes. As is the case with the Quick Lesson pages, all of this information is automatically displayed, but a user can jump to a particular section by selecting its name in the Contents box on the left side of the screen. Related Information links are included on the right side of the screen including evidence-based care sheets, drugs, guidelines, and books. The page can be printed, e-mailed, saved, exported, and added to a folder.

The “Patient Education” tab offers users an alphabetized list of conditions, procedures, and more. Hovering over the icon next to the word “Languages” after each topic displays the available languages for each handout. Clicking on one of the links displays information written
for the average consumer. Most of the pages include illustrative diagrams and pictures and include a Spanish-language version. These handouts can be customized by the practicing nurse by adding the patient’s and health care provider’s names, department contact information, and additional notes. For the most common topics, patient handouts are available in additional languages including Arabic, Russian, Italian, Hindi, Chinese, Polish, Korean, Vietnamese, Japanese, Tagalog, Farsi, German, French, and Portuguese.

The “Practice Resources” is the tab with the most visually pleasing display. In addition to the standard “Find” box at the top of each of the tabs, Practice Resources also offers a section of “Featured Books,” which showcase book covers of top practice resources. The practicing nurse would most likely find the cover display feature helpful. Each of the texts is electronic and offers table of contents for users to navigate to a particular section, as well as the option to search within the individual publications.

Practice Resources also contains a section of evidence-based reference materials. This includes legal cases, practice guidelines, and research instruments. Clicking on one of these resource links leads to an alphabetized list of relevant resources. The legal cases discuss malpractice issues, the practice guidelines are from the National Guideline Clearinghouse, and the research instrument documents include information about instruments, tools, psychological tests, attitude measurements, and more.

The final tab “Continuing Education” contains CE from CINAHL Information Systems. CINAHL information systems is accredited to offer continuing education by the American Nurses Credentialing Center and the International Association for Continuing Education and Training. The CE modules require a PDF viewer, a browser with JavaScript enabled, and an individual user account, which is included in the price of a subscription to NRC.
COMPARISON WITH OTHER DATABASES

The closest competing nursing point-of-care resource is Mosby’s Nursing Suite. The Suite contains the Mosby products Nursing Consult, Nursing Skills, Index, and eLearning. Nursing Consult is a database that contains online reference tools for accessing clinical information relevant to patient care. Just like NRC, Mosby’s Nursing Consult is also promoted as a point-of-care resource for clinical nurses, nurse administrators, and nurse faculty. The main tabs on the Nursing Consult home page include “Evidence-Based Nursing,” “Reference,” “Drugs,” “Patient Education,” “Calculators & Tools,” and other topics.

Although both databases provide similar content – access to journals, e-books, Continuing Education modules, drug guides, patient education handouts, etc., it is difficult to compare NRC to Mosby’s Nursing Consult. In a similar vein, NRC content largely depends on subscriptions to EBSCO products and Nursing Consult relies on other Elsevier products, but more differentiates them. Nursing Consult claims to include thousands of images (most of which come from the included e-books), “Best Bets” answer options (Nursing Consult recommended materials), calculators, and more. NRC offers over 900 CE modules, whereas Nursing Consult offers fewer than 30. NRC also offers access to over 700 full-text journals (when combined with a CINAHL Plus subscription) while Nursing Consult has 40.

Nursing@Ovid is another point-of-care product for nurses. Nursing@Ovid provides many of the same functions as NRC, such as bibliographic and full-text content; multiple search options; a “My Workspace” option to save, manage, and organize searches and documents; the Ovid Nursing Subject Thesaurus; the Ovid Nursing Database; and other full-text resources.
Users have noted that it does not have much original content but rather serves as a universal search engine.\textsuperscript{5}

\textbf{WHY NURSING REFERENCE CENTER?}

Nursing Reference Center is a one-stop product designed to provide quick access to relevant clinical resources for nurses and other health care professionals. Although it is not the only product offering this type of point-of-care resource, NRC provides an impressive list of resources in a well-arranged, intuitive manner. NRC’s interface should appeal to hands-on nursing professionals as well as nurse administrators, nursing students, faculty, or hospital librarians. Numerous well-known resources integrated in one interface are very convenient to search, browse, and access. In combination with the availability of an NRC iPhone application, the only evidence-based, point-of-care nursing mobile application available at this time, the ability to integrate NRC into an electronic medical record broadens NRC’s appeal to busy nursing professionals.

\textbf{FOR MORE INFORMATION}

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REFERENCES


