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## *ePROFILES*

*Elizabeth Connor, Column Editor*

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ePROFILES is a column that features interviews with practitioners, leaders, and visionaries in the fields of electronic publishing, digital libraries, medical informatics, content licensing, and related areas.

### Interview with Brian S. Alper of *DynaMed*

Elizabeth Connor

**SUMMARY.** This interview with Brian S. Alper, MD, MSPH, founder and editor-in-chief of *DynaMed* and the medical director of Clinical Reference Products at EBSCO Publishing, describes systemic literature surveillance, topic creation, and peer review processes which distinguish

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**KEYWORDS.** Electronic resources, electronic publishers, *DynaMed*, EBSCO Publishing, evidence-based medicine, systematic reviews, clinical reference resources

Brian S. Alper, MD, MSPH, is Founder and Editor-in-Chief of *DynaMed*, EBSCO Publishing.

**Question:** Please introduce yourself and describe your current roles and responsibilities and a typical day at work at *DynaMed*.

**Alper:** I am Brian S. Alper, MD, MSPH, the founder and Editor-in-Chief of *DynaMed* and the Medical Director of Clinical Reference Products at EBSCO Publishing. My roles include supervision and training of editors, supervision of systematic literature surveillance, supervision of topic creation and peer review, planning of technical enhancements and content upgrades, and evaluation of clinical reference products for potential license or acquisition by EBSCO Publishing.

The editors at *DynaMed* use a systematic literature surveillance model to look at over 500 journals either through direct surveillance or via journal review services. Each article goes through a process to determine its relevance, and relevant articles are further assessed for validity relative to existing *DynaMed* content. The most valid articles are summarized, and those summaries are added to *DynaMed*. This process goes on every day, which allows us to update *DynaMed* daily on an as-needed basis.

**Question:** For the benefit of readers who may not be familiar with your company's products, briefly describe the company, its founder, its history, and current management.

**Alper:** When we say *DynaMed* was created by a doctor for health care professionals we mean just that. I am that doctor. As a medical student I realized I could not possibly memorize sufficient medical information to support practice so I began organizing what I was learning electronically. Through this process I discovered that the information I had

organized was more useful than textbooks or existing resources used during clinical rotations.

During a rotation in rural practice in Eastern Tennessee, I saw my information make real differences in diagnosis and treatment every day. At this point, it was not yet in a sophisticated system but I realized that doctors and physician assistants needed this kind of resource, and I have been working to serve that need ever since. In creating *DynaMed* (Dynamic Medical Information System), a clinical reference tool designed to provide the most useful information to health care professionals at the point of care, I created a systematic way to monitor current literature and continuously update *DynaMed* based on the best available evidence. For years *DynaMed* was free and clinician-users volunteered as reviewers, authors, and editors.

In 2004, *DynaMed* received a grant from the National Science Foundation (NSF) to research its usefulness and ease of use for clinicians. The grant was designed to systematically prioritize user interface improvements by working with a spectrum of representative users, and to determine the feasibility of using *DynaMed* to provide rapid access to valid clinical knowledge in primary care. These NSF-funded research results contributed to the continued improvement of the database and supported a rigorous randomized trial demonstrating that *DynaMed* was more effective than usual information sources.

In mid-2005, *DynaMed* became a member of the EBSCO Publishing family. I saw this union as the best way to continue the *DynaMed* mission of providing the most useful information to health care professionals at the point of care. As part of EBSCO Publishing, *DynaMed* has been able to grow and improve while still providing the best available evidence updated daily for its worldwide community of users.

EBSCO Publishing is a division of EBSCO Industries, Inc. which has over 60 years of experience in the library community. EBSCO Publishing has more than two decades of experience with libraries. EBSCO Publishing is expanding its medical product line and *DynaMed* is an important part of that growth. Being part of a growing company gives us an opportunity to benefit from EBSCO's technological strengths. EBSCOhost is the proprietary search system at EBSCO Publishing and one of the best know research interfaces in the world. *DynaMed* recently introduced a new Web interface powered by EBSCOhost and we are just starting to see how that will impact *DynaMed's* ability to grow. This is a very exciting time.

Now that *DynaMed* is part of EBSCO Publishing, there are benefits for libraries as well. Because EBSCO Publishing has such strong medical

databases, librarians are able to package products together, which saves them money and gives them a strong set of research offerings including *CINAHL® Plus with Full Text*, *SPORTDiscus™ with Full Text*, and *MEDLINE® with Full Text*.

*DynaMed* started as a grassroots effort to provide health care professionals with the information they need to make clinical decisions. The company has grown slowly but with EBSCO Publishing behind *DynaMed*, we are able to get the word out to a larger audience. We believe *DynaMed* is a great resource for librarians and hospitals looking for the best content and the best design at the best price.

**Question:** *What distinguishes DynaMed from MDConsult, UpToDate, AccessMedicine, or other point-of-care resources?*

**Alper:** *DynaMed* (see Figures 1 and 2) is able to distinguish itself in a number of areas. The database is the only point-of-care tool that is truly

FIGURE 1. *DynaMed* Start Page



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FIGURE 2. *DynaMed* Alphabetical Listing

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evidence-based and updated daily. The term “evidence-based” is used to describe medically-related reference resources. Unfortunately, the term is often used indiscriminately and without merit. *DynaMed*'s editorial processes rely on a strict set of evidence-based medicine standards.

Evidence-based medicine is about integrating the **best current evidence** with clinical expertise and patient values. For a clinical reference resource to be called evidence-based, conclusions must be based on the **best available** evidence. Conclusions can be based on the best available evidence only if the evidence is consistently and systematically identified, evaluated, and selected. *DynaMed* has seven standards.

1. Systematic identification of evidence.
2. Systematic selection of the best available evidence from that identified.
3. Systematic evaluation of the selected evidence (critical appraisal).
4. Accurate summarization of the evidence and its quality.

5. Making conclusions dependent on the evidence.
6. Synthesizing multiple bits of evidence for overall conclusions.
7. Changing the conclusions when new evidence alters the best available evidence.

Key evidence is given one of three “Level of Evidence” labels:

**Level 1 (likely reliable) Evidence**—represents the most valid reports addressing patient-oriented outcomes. Examples include randomized trials with at least 80% follow-up, inception cohort studies for prognostic information, and systematic reviews of level 1 evidence reports. These examples are only presented as brief examples. Achieving a level 1 evidence label means that specific quality criteria were met based on the study type.

**Level 2 (mid-level) Evidence**—represents reports addressing patient-oriented outcomes, and using some method of scientific investigation, yet not meeting the quality criteria to achieve level 1 evidence labeling. Examples include randomized trials with less than 80% follow-up, non-randomized comparison studies, and diagnostic studies without adequate reference standards. Level 2 evidence does not imply reliable evidence.

**Level 3 (lacking direct) Evidence**—represents reports that are not based on scientific analysis of patient-oriented outcomes. Examples include case series, case reports, expert opinion, and conclusions extrapolated indirectly from scientific studies.

Recommendations are labeled based on the Strength Of Recommendation Taxonomy (SORT) as one of the following:

- **Grade A recommendation** (consistent high-quality evidence)
- **Grade B recommendation** (inconsistent or limited evidence)
- **Grade C recommendation** (lacking direct evidence)

Most point-of-care resources use variations of the traditional textbook approach in which authors who are selected for their content expertise write chapters or pages. There may be additional layers of peer review and editing but this usually follows the same expert author model. Expert authors are not typically experts in finding, selecting, or interpreting the best available evidence. This content does not reach the same standards for evidence-based medicine that we impose on *DynaMed*.

*DynaMed* has been proven to answer most clinical questions during a randomized trial. An article published in *Annals of Family Medicine*<sup>1</sup>

established *DynaMed* as the only evidence-based reference that answers most clinical questions in primary care. *DynaMed* was shown to answer approximately 70% of unselected clinical questions in actual use during practice. *DynaMed* was compared to four other clinical reference tools, and *DynaMed* was shown to provide answers with a level of evidence that meets or exceeds the other tools combined, 87% of the time.

*DynaMed* is the only point-of-care clinical reference tool to be updated daily. For the first time, information that needs to be accessed quickly can be the best, most accurate information available. These **Recently Updated** summaries have their own link on the *DynaMed* interface.

EBSCO Publishing has strong interfaces and users know what to expect. A lot of attention was paid to the new interface features so that browsing is intuitive. There is a structure for finding information that is consistent from summary to summary (see Figure 3). Each disease or

FIGURE 3. *DynaMed* Carpal Tunnel Syndrome (CTS) Summary

The screenshot shows the DynaMed interface for a Carpal Tunnel Syndrome (CTS) summary. At the top, there is a search bar with the text "Find:" and buttons for "Browse Topic" and "Search Text". Below the search bar is an alphabetical index "A B C D E F G H I J K L M N O P Q R S T U V W X Y Z" and a "Browse by Category" link. The main content area is titled "Topic: Carpal tunnel syndrome (CTS)" and includes a disclaimer: "You are viewing a DynaMed summary. Use of DynaMed indicates acceptance of DynaMed Terms of Use. Limitations of DynaMed are contained in the DynaMed Terms of Use. To search within this summary, click Expand All, and then Edit - Find (Ctrl-F) in your browser." The summary title is "Carpal tunnel syndrome (CTS)". Below the title, there is a list of references and a table of contents with expandable sections: "General information (including ICD-9 Codes)", "Causes and Risk Factors", "Complications and Associated Conditions", "History", "Physical", "Diagnosis", "Prognosis", "Treatment", "Prevention and Screening", "References including Reviews and Guidelines", "Patient Information", and "Acknowledgements". On the left side, there is a navigation menu with options like "Expand All" and "Collapse All".

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condition summary includes: **General Information** (including ICD codes), **Causes & Risk Factors**, **Complications & Associated Conditions**, **History**, **Physical**, **Diagnosis**, **Prognosis**, **Treatment**, **Prevention & Screening**, **References including Reviews and Guidelines**, **Patient Information**, and **Acknowledgements**. The summaries are easy to search making the information easy to find and questions easy to answer. Within the standardized template, with up to 65 subheadings, the content is written in outline form with conclusions first so readers do not need to skim the text just to find out if they need to read it.

At *DynaMed*, the process is designed to be transparent. The Web site lists which journals are read cover to cover. Users are invited to contribute to the database, and feedback is a vital part of the *DynaMed* system. We solicit the opinions of our users, and those opinions have become an essential part of updates and enhancements. For instance, suggestions from users have led us to add specific conditions and to make certain improvements such as the *ICD-9 Codes* and *Patient Information Handouts*. As we continue to build *DynaMed*, those comments serve as an important foundation and help us determine where we need to go next.

ICD-9 codes are used in the United States for medical billing and are also necessary to justify lab tests and x-rays, so many clinicians need these codes in their daily workflow, and we responded by adding them throughout *DynaMed*. With growth across the world, we are now adding ICD-10 codes as these are used in many other countries.

*DynaMed* also provides citations with links including free full-text links integrated into the content as well as links to patient handouts.

Now that we are a part of EBSCO Publishing, *DynaMed* will be able to take advantage of the EBSCO suite of full-text medical databases as *DynaMed* becomes fully powered by EBSCOhost.

**Question:** *DynaMed covers more than 500 medical journals from AIDS Research and Therapy to Immunity and Ageing to World Journal of Surgical Oncology, secondary sources such as review articles and journal review services, practice guidelines and systematic reviews, and drug information. Please describe the distinctions that you make among these different sources.*

**Alper:** These sources are part of *DynaMed's* systematic literature surveillance. The list of content sources that are read cover-to-cover is listed on the *DynaMed* Web site <<http://www.dynamicmedical.com>>. More than 500 journals, either directly or indirectly through many journal review services, are evaluated systematically by *DynaMed* editors.

All entries, including letters to the editor and features that cover articles from other publications, are evaluated first for clinical relevance. All clinically relevant items are then evaluated for validity relative to existing *DynaMed* content. The best available evidence then gets selected systematically for inclusion. (This overcomes biases that occur when expert authors selectively cite articles without systematic searches or protocol-driven selection process.) Information included in *DynaMed* is then critically appraised and the easy-to-interpret levels of evidence labels are applied.

As to the distinction between sources, *Primary Medical Literature* lists journals which publish original research and for which we directly monitor the entire journal cover-to-cover with each issue. *Secondary Medical Literature* is used for both journals that serve as sources for review articles (but not original research) and journals or journal review services that selectively report on important research published elsewhere. We use these sources to widen our net for capturing the most relevant and valid original research articles. In addition, there are many resources that are not classified as primary or secondary medical literature but are valuable for keeping a clinical reference resource current. These include sources of systematic reviews (such as *AHRQ Evidence Reports* and *Cochrane Database of Systematic Reviews*), the *National Guideline Clearinghouse*, and drug information sources.

**Question:** Please describe your typical *DynaMed* customer.

**Alper:** There is no “typical” user. *DynaMed* users include primary care physicians, physician specialists, physician assistants, nurse practitioners, nurses, pharmacists, physical therapists, librarians, educators, and veterinarians. Customers include individuals, community health centers, physician groups, residency training programs, medical schools, hospitals, universities, and statewide networks. Our customer base is worldwide.

Anyone who needs to find the most accurate information quickly and easily is going to be a successful *DynaMed* user. The database was initially designed to support a general physician with limited specialist back-up. But even more specialized information can be added without interfering with navigation, so we have detailed summaries on topics like Cyclosporine for rheumatoid arthritis and for Posner-Schlossman syndrome (a rare ophthalmologic condition). Electronic technology allows users to choose the depth so content of special interest can be available to those who need it without being in the way for those who do not.

**Question:** Do you have any dramatic examples of DynaMed in use in a patient care setting?

**Alper:** A patient asked her doctor if she should take Avlimil for low libido. The doctor had not heard of Avlimil so he searched *DynaMed* and found the summary on hypoactive sexual desire disorder which reported that Avlimil was promoted on the Web and through television commercials, but the only efficacy data was based on a single unpublished trial of 65 women who were “healthy experimenters.” In addition to answering the specific question, the doctor also found evidence regarding bupropion and testosterone so learned about other treatments for this patient. This example shows the benefit of synthesizing information from multiple sources.

In a recent case, a doctor had a patient who had a breast biopsy (benign) in the past and whose mother had breast cancer. The doctor estimated the patient’s five-year risk at 3.1%, which he believed was high enough to consider medication. At the time, the doctor had access to a *JAMA* early release article posted June 5, 2006<sup>2</sup> which stated that raloxifene 60 mg once daily was as effective as tamoxifen 20 mg once daily in reducing risk for up to five years. The *JAMA* study compared the two medications and showed their effectiveness to be similar but did not discuss whether the risks/side effects outweighed the benefits of the medication in the first place.

For the background, the doctor turned to the *DynaMed* summary for *Chemoprevention of breast cancer*. *DynaMed* provided the numbers needed to treat or harm (NNT/NNH) that the doctor used when discussing whether the patient should go on either medication. The *DynaMed Evidence Overview* listed increased risks for other conditions as well as possible side effects for each medication. The doctor was able to cite these risks and side effects during his discussion with the patient, which helped her have more information on which to base her decision whether or not to go on a preventative regimen.

As another example, Figures 4 and 5 show a treatment overview and treatment detail for Carpal Tunnel Syndrome.

Given the importance that *DynaMed* editors place on providing the best information as quickly as possible, the information from the original *JAMA* study was incorporated into the *DynaMed* summary within three days of its early online release and reviewed by up to 28 editors.

**Question:** Please describe individual, group, and site licensing options for DynaMed users.

FIGURE 4. *DynaMed* Carpal Tunnel Syndrome (CTS): Treatment Overview

The screenshot shows the DynaMed website interface for Carpal Tunnel Syndrome (CTS). The main content area is titled "Topic: Carpal tunnel syndrome (CTS)" and "Treatment overview:". The overview is organized into three main categories of evidence:

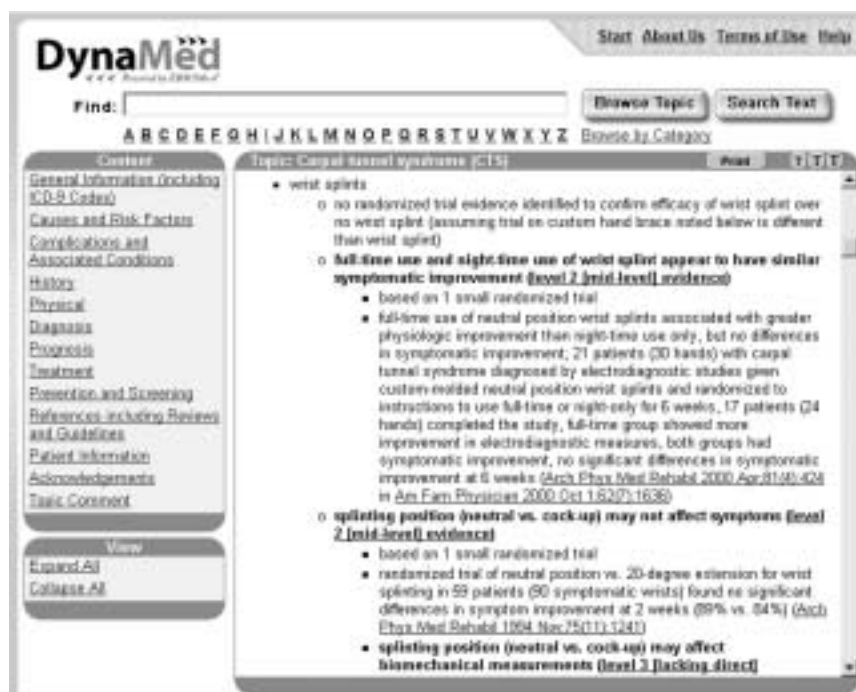
- treat any underlying disorder**
  - avoid, reduce or modify exacerbating activities (including ergonomic changes)
- treatments with randomized trial evidence for short-term efficacy**
  - local corticosteroid injection - systematic review of 4 trials (level 1 [likely reliable] evidence)
  - oral corticosteroids - 2 trials (level 1 [likely reliable] evidence)
  - zinc - 1 trial (level 2 [mid-level] evidence)
  - carpal bone mobilization - 1 trial (level 2 [mid-level] evidence)
  - lidocaine patch 5% - 1 trial compared to injection (level 2 [mid-level] evidence)
  - local insulin injection - 1 trial in patients with diabetes (level 2 [mid-level] evidence)
- treatments with inconsistent evidence for short-term efficacy**
  - splinting (hand/wrist) (level 2 [mid-level] evidence)
  - vitamins (vitamin B6) - likely ineffective (level 2 [mid-level] evidence)
  - therapeutic ultrasound (level 2 [mid-level] evidence)
  - ergonomic keyboards (level 2 [mid-level] evidence)
- treatments unlikely to be beneficial - ineffective in randomized trials**
  - NSAIDs (level 2 [mid-level] evidence)
  - exercise (level 2 [mid-level] evidence)
  - magnet therapy (level 2 [mid-level] evidence)
  - chiropractic care (level 2 [mid-level] evidence)
  - external neurology in conjunction with open carpal tunnel release

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**Alper:** The goal of *DynaMed* is to provide an exceptional point-of-care tool but to do so at an affordable price. Individual clinicians may subscribe along with licensed health care professionals and students. Set pricing is available for individuals. Institutional access is offered and includes unlimited access for affiliated users with remote access included. Pricing is provided on an institution by institution basis and takes a number of factors into account including simple estimates of size (number of physicians, number of beds, etc.) based on type of institution (group practice, hospital, etc.).

Individuals who are practicing clinicians may earn free access by serving as a reviewer or author. This ensures that the content is focused on the needs of users in clinical practice. Trainees may serve as reviewers and authors with faculty co-review.

Groups or institutions of any size (from two clinicians to entire countries) can subscribe. Access is provided through IP recognition, proxy

FIGURE 5. *DynaMed* Carpal Tunnel Syndrome (CTS): Treatment Detail

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server access, pass-thru URL, or group username/password. Again, access is unlimited, i.e., no need to be concerned about concurrent users, which is especially important for a point-of-care reference. Costs are affordable and tailored to group size, with no extra cost for remote access or PDA downloads.

**Question:** *DynaMed* offers unique opportunities for clinician reviewers and authors. Please describe these opportunities and how peer review is conducted for database content.

**Alper:** Practicing clinicians serve an important role as *DynaMed* reviewers to ensure that it meets the primary goal—providing the most useful information during practice. Reviewers are asked to consider comprehensiveness, conciseness, and readability. Reviewers may also consider validity, but can rely on *DynaMed* editors for validity and style concerns. Reviewing for *DynaMed* is easier than for most journals as

we provide streamlined methods for review and rapid, detailed feedback. Reviewers have found the process educational, and residency programs have used this process (with faculty co-review) to support resident education and faculty development. After a reviewer has completely reviewed a *DynaMed* summary, they will participate in continuous peer review. Whenever systematic literature surveillance identifies new content for that summary, *DynaMed* editors will add content and mark it for additional review. Reviewers are then notified quickly as new evidence occurs. Contributing to *DynaMed* has helped practicing clinicians stay current in their fields.

As *DynaMed* covers all aspects of medicine, there are always additional opportunities for reviewers and authors with special interests. Anyone interested in contributing to *DynaMed* can contact <editor@dynamicmedical.com>.

**Question:** *How often is DynaMed content updated?*

**Alper:** Many times every day. In an average week, the *DynaMed* editorial team reviews about 600 articles and about 200 meet criteria (clinically relevant, best available evidence) for inclusion in *DynaMed*. A single article often relates to more than one *DynaMed* summary. Other *DynaMed* updates include continuous peer review of the information added by the *DynaMed* editorial team and the creation of new summaries. All together about 500 *DynaMed* summaries are updated each week. Updates are made in real-time as they occur and can be tracked through the **Recently Updated** link.

**Question:** *Please explain how DynaMed is available for Web and PDA users.*

**Alper:** The new *DynaMed* system has taken the database from its foundation in Lotus Notes and placed it on the EBSCOhost platform, which is one of the most powerful search systems available. The new interface allows for more intuitive browsing. A lot of thought and user feedback has gone into the *DynaMed* interface, and users agree that the database is easy to use, allows for consistent searching and makes finding the answers to clinical questions easier than ever.

Given that portability is a trend in medicine, we have made *DynaMed* available for PDA users. The PDA version is provided at no additional cost, and we invite users to make the most of the information in the best

way they know how. The PDA version allows health care providers to bring this clinical reference tool to the very tip of the point-of-care.

*DynaMed* is “portable” in another way. The database is available via remote access. This feature allows users to access *DynaMed* regardless of where they are—which is a key feature when doctors want to work from home or have questions outside the clinical setting. Remote access is also provided at no additional cost.

**Question:** *Do you think that handheld devices will assume a larger role in bedside teaching and evidence-based medicine?*

**Alper:** It is hard to know. On one hand, handheld devices are improving in their capacity. They can now hold sufficient data with enough readable information on the screen to allow rapid access to information to answer most questions. *DynaMed* is available in full on the PDA and takes 17-18 MB of space. Some medical schools have specifically obtained funding to provide PDAs for their students, and those schools then teach students how to use the PDA in medical practice. On the other hand, the availability of desktop, laptop, and tablet PCs in locations such as exam rooms or other clinical areas is also increasing. In hospitals that are well equipped with portable solutions (e.g., wireless Internet access and laptops on portable carts), *DynaMed* is used without requiring PDA downloads. Ultimately we aim to provide the best available evidence in whatever formats the clinicians are using.

**Question:** *Please describe DynaMed’s efforts to provide point-of-care information beyond PCs and PDAs. Are there other devices that you are considering?*

**Alper:** We see changes in the way information is delivered, and we realize it is essential to develop technologies that keep up with those changes. We are actively engaged in discussions with the leading electronic medical record (EMR), electronic health record (EHR), and computerized physician order entry (CPOE) companies to enter partnerships by which *DynaMed* content will be presented to users in a useful manner—integrated at key points in their usage experience. We have customer advisory boards guiding us through this as well as the EBSCO and partner technology teams.

*DynaMed* is accessible via PC and Palm, and the database can be used on handheld, wireless, browser-based devices as well. The functionality of the database is improving on these less traditional handhelds. Another

emerging trend is the use of iPods for access to clinical information. Again, if our customers confirm this to be a need, we will be sure to develop for that technology as well.

**Question:** *Please describe/explain the usage statistics and statistical reports available to institutional customers.*

**Alper:** *DynaMed* currently offers session-based statistical reporting. As of summer 2006, *DynaMed* is in the first phase of its integration into the EBSCO*host* search system. As the database is further merged into the EBSCO*host* infrastructure, users will see increased statistics and administrative configurations. The unique content that makes up *DynaMed* will require specific administrative designs that EBSCO Publishing will incorporate into future releases.

EBSCO Publishing's administrative module (EBSCO*admin*) provides the foremost statistical reporting for databases. EBSCO*admin* allows administrators to generate a variety of statistical reports and customize aspects of the search experience. In the end, a medical library using *DynaMed* in conjunction with more than one EBSCO Publishing database will be able to coordinate the statistical data to get a better sense of who is using which databases to what effect. The system is designed to meet the needs of libraries and allow administrators to be as hands-on or hands-off as they like.

**Question:** *Do you have any predictions for the future of electronic publishing in the next three to five years? Ten years?*

**Alper:** I try not to make general predictions, but I can say that, since joining EBSCO Publishing last year, better linking and more coordination between databases will create better access to information for medical institutions.

EBSCO Publishing is always looking to improve databases and add value for the end user. Because EBSCO Publishing's suite of biomedical products is growing in terms of numbers and quality of resources, medical institutions are able to leverage the economies of scale by packaging EBSCO's hospital/medical databases. Librarians have access to a full-spectrum of E-Journals and renowned databases in a recognizable platform at significant cost savings.

A library could offer a suite of resources ranging from a point-of-care reference tool in *DynaMed* plus consumer health information for hospital Web sites in *Health Library* while keeping administrators aware of

the latest health care business information with *Health Business(tm) Elite*. These resources, combined with popular, traditional databases such as *CINAHL(r)*, the most widely used nursing and allied health database; *MEDLINE(r) with FullText*; and *SPORTDiscus with FullText*, greatly improve research opportunities throughout a facility. Institutions can even fill specific needs with databases such as *GIDEON*, a highly touted infectious disease and epidemiology database, or the *Science and Medical ART Imagebase*, a database of medical images from Nucleus Medical Art. These are just a few databases but they show the broad range of medical resources that EBSCO Publishing provides.

Looking forward, technology will pave the way for improved usability between databases, which will further improve the user experience and broaden the scope of the databases in a collection.

**Question:** *Are there any predictions that you have made in the past that have not come true yet? What are they?*

**Alper:** Again, I don't like to make predictions. Initially I planned on practicing full-spectrum family practice in a rural community. But now I'm talking to you about a clinical reference database I built that is helping doctors all over the world in everyday medical practice.

**Question:** *Is there a question you would like to answer that was not asked?*

**Alper:** I suppose a good question would be "other than structure, interface, content and transparency, what sets *DynaMed* apart?" An important part of *DynaMed* is its responsiveness to its users. We want people to know that their opinions matter. *DynaMed* has always encouraged user feedback, and our users are a significant part of *DynaMed* itself since users actually contribute summaries and reviews.

As I have mentioned, *DynaMed* was a grassroots effort brought to its present form by the involvement of our *DynaMed* editors, authors, reviewers, and users. Part of staying involved and true to our beginnings means understanding the current medical conversations taking place. Product improvements come through specific user feedback, but we also pay attention to the medical library field through advisors, customer feedback, blogs, and social networking. We believe that being involved in the discussion is essential. People have a lot of great ideas and suggestions that they may think we don't want to hear. I hope we can show them that we are interested and that we do respond. Some of our

greatest innovations started with a customer saying, “Why can’t you do this?” or “Wouldn’t it be great if *DynaMed* could...?”

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## PRODUCT REVIEW

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