Biofeedback 101 - May 2014

Welcome to the 101st issue of the Biofeedback!

- Director's Notes
- Off-Campus Login Changes
- Increasing Value and Reducing Waste in Research
- Librarians' Roles in Producing Systematic Reviews
- Healthcare Information for Seniors (HCIS) Project
- Create Your ClinicalKey Personal Account
- Electronic Versus Print: Which is Better for Cognition?
- Canopy Medical Translator
- ClinicalTrials.gov
- MeSH on Demand: Get Subject Headings from Abstracts
- Faculty Publications: March-May 2014

photo: "Gulf Shores Shrimp Festival 1973" from the Press Register collection of The Doy Leale McCall Rare Book and Manuscript Library, University of South Alabama
**Director's Notes**

Each year the Biomedical Library surveys segments of its user population to determine satisfaction with services, resources and facilities. For the first time this year, the College of Medicine clinical faculty and 4th-year medical students have been surveyed a second time, the first time four years ago. So not only will data and responses from this year be reviewed, they will be compared to data from four years ago. Future issues of *Biofeedback* will focus on data results and comparison, but in this issue, I would like to address some of the comments included by our users.

**College of Medicine Clinical Faculty**

- **Several asked for more interaction with the BL librarians so they could keep up to date with the resources the BL provides and the best way to utilize them.** -- We continue to try and reach out to our users and appreciate any suggestions you may have for doing so. Some of the suggestions from the survey included unsolicited contact from liaisons, more interactions with residents and attending. We will work on these ideas.

- **It was suggested that we purchase Teaching and Learning in Medicine and Medical Teacher and another asked for more Pediatric Hematology Oncology journals.** -- We will explore that possibility. Remember to contact us if you have resources that would enhance our collection and we will try to purchase, if it meets our collection development criteria and if it is not cost prohibitive.

- **One respondent noted a delay in loading and accessing Clinical Key.** -- If you have problems accessing a resource, please give us a call so we can troubleshoot the problem.

- **Some noted that articles could not be printed in pdf in Clinical Key** -- in order to control abuse of printing entire documents, Clinical Key requires that users log in before being to print in pdf format. You can follow the instructions in this article about creating a ClinicalKey Personal Account. If you have need help with this process, contact the Reference Desk, 6-7044.

- **Someone suggested that we emphasize the venue for the visual arts.** -- We have lots of bare walls and would love to display student or faculty art work. Please contact Judy Bumham, jburnham@southalabama.edu if you have some you would like to display.

- **Several people asked that UpToDate be reinstated.** -- This was not a resource provided by the BL as the cost is prohibitive for the library budget. The resource was provided by the health system which decided to discontinue the subscription because of the increasing cost each year.

We thank those who had some very positive comments about the Biomedical Library, including “superb service” and “good experience with the interlibrary loan service and the chat program.”

**4th Year College of Medicine Students**

- **Suggestion to add more board prep books in print.** -- One BL electronic resource, Exam Master, has recently added additional board prep tools. See also “Exam Prep & Cases” on http://biomedicallibrary.southalabama.edu/library/?q=Medicine.

- **Another suggestion was to redesign the building and make it more attractive to students.**

- **One respondent suggested longer hours.** -- With the available staff, we cannot lengthen our regular hours. We do, however, have extended hours during exams. Also, keep in mind that the Health Information Resource Center at the Medical Center is available 24/7 for some users with appropriate ID.

- **There were some suggestions for improvement of the web page.** -- This is a goal for the coming year and if you would like to contribute suggestions for the redesign, please contact Andrea Wright, Technology Librarian, awright@southalabama.edu.
• One student noted some access problems with the electronic resources. – Be sure and call when you have the problem. It is much easier if we can troubleshoot when the problem is occurring.

• There was also a suggestion that librarians meet with students each year to quickly show them resources that are available. – Thanks for that suggestion. We will work on this.

Students also added some positive comments: “GREAT staff,” “Keep up the good work,” “always satisfied with the library staff and available resources during my 4 years at USACOM.”

Off-Campus Login Changes

The USA Computer Center recently changed the library login process over to their LDAP authentication system to increase security and consolidate university website logins. For students, staff, and faculty on the academic side of campus, this should be an easy transition, since users will use Jag numbers as usernames and the password that they use for JagMail and/or USA Online/Sakai. However, many health system employees do not have JagMail or USA Online passwords, and so will need to create university LDAP passwords for the first time.

Health System Employees

When logging in to the library from off campus, click the link under the "Health Systems Employees" heading just beneath the login box or use this link to create your new password. You will be able to create a password using either your health.southalabama.edu email address or your Jag number and PAWS PIN. If you have never used your PAWS PIN it should be your 6-digit birthday. If you have changed it and forgotten it, you can reset it on the PAWS login page.

Recent Graduates

If you are a resident, staff, or faculty member who recently attended the university, you will need to use your new employee credentials, rather than your old student login that is not associated with an active account. If you have not yet created a faculty or staff account you will need to do so. For academic employees, you can do so on the JagMail Admin page. Clinical employees can sign up for a health.southalabama.edu account by accessing the hospital intranet, and choosing “General Links” followed by “Informs,” and filling out and submitting a “Computer Access Request.” To set up a library password after receiving an email address, follow the Health Systems Employees link above.

Unpaid Adjuncts and Affiliated Researchers

Jag numbers beginning with a V are being created for those not employed by or attending the university who need library access. Those who are already set up with library accounts will be contacted in the coming weeks, but can receive their V-number now by contacting the Biomedical Library at 251-460-7044 or medlib@southalabama.edu. Those who have not yet set up access should contact Donna Ladnier about setting up a library account with the same contact information.

Anyone needing assistance with their library login should contact the Biomedical Library via email at medlib@southalabama.edu or 251-460-7044.
Increasing Value and Reducing Waste in Research

Here's a shocking bit of information: there is potentially an 85% rate of loss when it comes to dividends received from the billions of dollars (almost $240 billion in 2011) invested worldwide in supporting biomedical research. Factor in that these losses are due to correctable problems happening in each stage of the research and reporting process, and the complexity and widespread nature of the issues begins to emerge. As identified by Chalmers and Glasziou in their 2009 *Lancet* article “Avoidable waste in the production and reporting of research evidence,” the four stages of waste are:

**Figure:** Stages of waste in the production and reporting of research evidence relevant to clinicians and patients.

Some highlights:

- Research questions are often not relevant to clinicians and patients. One study showed that only 9% of patients with osteoarthritis of the knee and the clinicians who treated them wanted more research on drugs, instead preferring more evaluations of physical therapy and surgery and assessments of educational and coping strategies. Yet over 80% of randomized controlled trials in this patient population were drug trials.

- Too many unnecessary and poorly designed studies are being conducted. Is there existing evidence that already satisfactorily answers the research question? Many researchers are not conducting comprehensive literature reviews and are not aware of the relevant systematic reviews when they design their new studies.

- Inadequate attention to study design or conduct is another area of waste in new research. Concealment of treatment allocation was often inadequate (18%) or unclear (26%) in a sample of 234 clinical trials reported in four major general medical journals. Furthermore, an assessment of diagnostic accuracy in 487 primary studies found that 20% used different reference standards for positive and negative tests, and only 17% used double-blind reading of tests.
• There is a failure to publish relevant research promptly, or at all. Studies with disappointing results are less likely to be published promptly, are more likely to be published in the harder-to-access grey literature, and are less likely to proceed from abstracts to full reports. There is a push worldwide for prospective, public registration of all clinical trials, and the US now requires all tax-funded research studies to publish the results of their research.

• Reports of research remain much less useful than they should be due to biased reporting or inadequate information on the interventions used. It is also difficult to judge the relevance of new research if it is not set in the context of updated systematic reviews or meta-analyses.


**Paper 1.** Chalmers I, Bracken MB, Djulbegovic B, Garattini S, Grant J, Gülmezoglu AM, Howells DW, Ioannidis JP, Oliver S. How to increase value and reduce waste when research priorities are set. *Lancet*. 2014;383(9912):156-165. PMID: 24411644


In the next issue of *Biofeedback*, we will look more closely at some of the identified problem areas discussed in these five articles and how librarians can support researchers in their efforts to increase value and reduce waste in research.

by Clista Clanton, MSLS


Librarians’ Roles in Producing Systematic Reviews

As clinicians look to improve patient health care outcomes, they rely on the principles set forth by the practice of evidence-based medicine. Evidence-based medicine is “the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients... integrating individual clinical expertise with the best available external clinical evidence from systematic research.”

To gather this most current and best clinical evidence, researchers use the process of systematic review. Systematic review is a type of research that summarizes medical reports and studies on a very specific clinical question. The process of systematic review merges data from separately conducted studies, which sometimes reveals conflicting findings, and then synthesizes those results. Systematic reviews can help determine whether scientific findings are consistent across different populations, settings, and treatment variations, or whether findings vary significantly by particular subgroups.

Contrary to narrative reviews, which are based on implicit research methods, systematic reviews begin with an explicit, structured plan and comprehensive search strategy that has well-defined inclusion criteria for determining which articles to include or exclude from synthesis. These “systematic” methods are designed to reduce bias, which can sometimes exist in narrative reviews as a result of incomplete literature searches and the author’s personal opinion. Systematic reviews usually include a meta-analysis, which is simply a statistical method of combining data from associated quantitative studies (e.g., randomized control trials, controlled clinical trials or observational studies) to produce a single quantitative estimate or summary effect size.

Librarians and Systematic Reviews

Systematic reviews are rigorous in nature and usually require a team of professionals to bring to fruition. Librarians play an important role in the process of systematic review, functioning as expert searcher, organizer, and analyzer. In 2011, the Institute of Medicine (IOM), the health arm of the National Academy of Sciences, released guidelines for researchers interested in conducting systematic reviews. On conducting comprehensive systematic searches for evidence, standard 3.1.1 states, “Work with a librarian or other information specialist trained in performing systematic reviews to plan the search strategy,” and standard 3.1.3 states, “Use an independent librarian or other information specialist to peer review the search strategy.”

Librarians serve as expert searchers and search strategists in the systematic review process, using their expertise to choose the appropriate databases to search based on the scope and subject content of the study. The MLA Task Force on Expert Searching defines the expert search as “a mediated process in which a user with an information need seeks consultation and assistance from a recognized expert.” The task force describes the skills and knowledge required to be considered an expert, explaining that the searcher is usually a highly trained and experienced librarian with a master’s level degree from a library school program accredited by the American Library Association.
12 Reasons to include a librarian on your next systematic review:

1. To determine if your proposed systematic review has been done before
2. To help formulate your clinical question(s)
3. To clarify and refine your search strategy
4. To help define your inclusion and exclusion criteria
5. To determine which databases are appropriate to search based on the scope, date range, and subject content of your systematic review
6. To avoid potential problems with nomenclature in your search strategies
7. To have an expert on hand with knowledge on individual database accessibility and of the different search syntax/truncation requirements for each database
8. To have an expert on hand with knowledge on searching not just published journal articles, but also areas of grey literature like book chapters, ongoing trials, conference abstracts, white papers, and even unpublished studies
9. To collect and file the “yes” articles from the initial search screening, either manually or through interlibrary loan
10. For help in writing the “methodology” section of the systematic review
11. To generate the final bibliography
12. To give your systematic review the added credibility of including a librarian as part of the research team, as recommended by the Institute of Medicine, the Cochrane Collaboration, and the Medical Library Association

(CC Image, Courtesy of JISC)
Healthcare Information for Seniors (HCIS) Project

The HCIS Project will target seniors attending the Senior Activities for Independent Living (SAIL) Centers in the Mobile area and the seniors participating in the ten churches, which are part of the Empowering Health Ministry Leaders project, funded by SE/A NNLM in 2009. Area SAIL Centers are located throughout Mobile County and provide meals and social activities for participants. Three of the SAIL Centers are located in one of three zip codes of highest health disparities in Mobile County and all ten churches are all located in the three zip codes of the highest health disparities.

Using demonstration and one-on-one training, when possible, the seniors at the target locations will be introduced to quality health care information provided via MedlinePlus, SeniorHealth, and other National Library of Medicine and National Institutes of Health resources as well as other appropriate sites. A minimum of two training sessions will be held at each site.

Training will further help seniors discern between quality and inaccurate web sites. Training will also include information on how to talk to their health care provider using resources like Ask Me Three.

Evaluation of the success of the HCIS project will be based on the number of outreach contacts made, and both events and individuals reached. Additionally, representatives of the various agencies and organizations for whom programming is provided will be asked to provide feedback on information presented and ideas for improvement.

The HCIS program will be administered by Christy Kent, Information Services and Outreach Librarian at the Biomedical Library and will take place beginning in June.

For more information on area SAIL Centers, visit the Area Agency on Aging webpage about SAIL.

(CC Image, Courtesy of the Senior Americans Association)
Create Your ClinicalKey Personal Account

In ClinicalKey, you must have a personal account to download PDF files, save searches, download FirstConsult mobile, build personal reading lists, collect and save images to present, and earn free CME credit for searches conducted.

Follow these steps to get started:

1. Open ClinicalKey.
2. Click the Register link near the top right hand corner.
3. Fill out the registration form. (Your email address will be your username.)

Start Here for Personal Access

Create your ClinicalKey account for exclusive benefits.

> Saved Searches
Store frequently used search terms for fast, easy access later.

> Mobile Access
Use ClinicalKey on-the-go with a site optimized for your mobile device.

> Personal Reading List
Build your own collection of books, journals and articles to read at your leisure.

> CME Credit
Earn free CME credit for searches conducted.

> Presentation Maker
Collect and save images to present.

To Create Your Personal Account
Follow These Steps.

1. Visit ClinicalKey.com within your institutional network or IP range.
2. Click the “Register” link.
3. Enter required data – your email address will be your username.
4. Confirm your password by re-entering it.
5. Congratulations! You’ve created a new personal account!

If you require remote access, contact your institutional administrator.
Electronic Versus Print: Which Is Better For Cognition?

Despite years of warnings about the inevitable demise of the print medium at the hands of the electronic, the print is alive and well. In a recent article in Wired Magazine entitled “Why the Smart Reading Device of the Future May Be ... Paper,” the author argues that the print medium is better for deep reading and that material read in electronic form isn’t retained as clearly. He cites both personal experience as well as recent studies which delve into the topic. In the author’s experience, screen-read material seems “slippery” and that his brain retains material read in print form more easily. Indeed, some of the early studies he cites showed that students do not retain material read on screens as well as what was read in print material. It seems that scrolling, despite being a relatively simple and quick function, adversely affected short-term memory.

Additionally, reading print material offers tactile cues that reading experts say give readers a sort of mental scaffold of a text. These tactile cues are simply not possible with current electronic reading media. And to quote Harper Lee, “Now, 75 years later in an abundant society where people have laptops, cell phones, iPods, and minds like empty rooms, I still plod along with books. Instant information is not for me. I prefer to search library stacks because when I work to learn something, I remember it.” The science suggests that there is more to this sentiment than mere Luddism or nostalgia.

On the other hand, the author also cites research which says that personal preference between the two media is a major factor. For students who prefer reading from a screen, they learned less when required to read a print copy, and vice versa. And there are numerous studies which have shown no significant differences in comprehension of narrative or expository text. One study even found that “students who chose e-textbooks for their education courses had significantly higher perceived affective learning and psychomotor learning than students who chose to use traditional print textbooks.” Also, for readers with dyslexia the small sections of text presented by e-readers are often easier to concentrate on. It seems that the research has not reached a consensus as to the effectiveness of one medium over another, and that a more comprehensive, long-term study is needed.

Another interesting question that the author raises is how much of the comprehension of electronically-read material is hindered merely by the presentation of the technology? In other words, can the engineers who design the interfaces come up with ways to work around the limitations of e-readers? Also, how much of the preference, and thus effectiveness in comprehension and retention, is tied to the medium an individual grew up with? These are interesting questions to consider as we move forward with the new reading technology.

Article link: http://www.wired.com/2014/05/reading-on-screen-versus-paper/
Canopy Medical Translator

Canopy Medical Translator is an NIH-funded app to help providers communicate with patients in any language instantly - Spanish, Chinese, Arabic, and more. Watch the video below.

Use this access code in the next week to get the app free - first click here or search for "Canopy Medical Translator" on the Apple App Store. After downloading the app, contact the Biomedical Library, 460-7044 or medlib@southalabama.edu to get a code to unlock it.

If you're searching for Canopy using an iPad, switch to IPHONE ONLY at the top of the App Store search results.

ClinicalTrials.gov

ClinicalTrials.gov is a registry and results database of clinical studies of human participants, both publicly and privately funded. The database is designed for both patients and researchers. Searches on the database can be conducted by multiple criteria including topic, intervention, outcome measure, etc. Searches can be limited to open/closed, age, gender, as well as limited geographically. Results give details on the study including criteria, location of study sites, and contact information.

Section 801 of the Food and Drug Administration Amendments Act (FDAAA 801) requires that Responsible Parties register their clinical trials and that they submit summary results of those trials with ClinicalTrials.gov. The law applies to certain clinical trials of drugs (including biological products) and medical devices. Another agency requiring registration is the International Committee of Medical Journal Editors (ICMJE) that requires trial registration as a condition for the publication of research results generated by a clinical trial.

To be notified of clinical trials added on a particular topic, RSS feeds can be set up. A page showing trends is also included. For example, 80% of the studies included in ClinicalTrials.gov are interventional studies. The number of registered studies has grown from 5636 in 2000 to 159,137 in 2013.
<table>
<thead>
<tr>
<th>Rank</th>
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<th>Condition</th>
<th>Interventions</th>
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<tbody>
<tr>
<td>1</td>
<td>Recruiting</td>
<td>Cardiovascular Risk Reduction Study (Reduction in Recurrent Major CV Disease Events)</td>
<td>Atherosclerosis</td>
<td>Drug: Caraknumat; Drug: Placebo</td>
</tr>
<tr>
<td>2</td>
<td>Active, not recruiting</td>
<td>Evaluation of Cardiovascular Outcomes in Patients With Type 2 Diabetes After Acute Coronary Syndrome During Treatment With AVE0019 (Lisinatide)</td>
<td>Acute Coronary Syndrome</td>
<td>Drug: Lisinatide (AVE0019); Drug: placebo</td>
</tr>
<tr>
<td>3</td>
<td>Completed Results</td>
<td>Apixaban for the Prevention of Stroke in Subjects With Atrial Fibrillation</td>
<td>Atrial Fibrillation; Atrial Flutter</td>
<td>Drug: warfarin; Drug: apixaban</td>
</tr>
<tr>
<td>4</td>
<td>Recruiting</td>
<td>ODISSEY Outcomes: Evaluation of Cardiovascular Outcomes After an Acute Coronary Syndrome During Treatment With Alirocumab SAR23653 (REGN727)</td>
<td>Acute Coronary Syndrome</td>
<td>Drug: Alirocumab SAR23653 (REGN727); Other: placebo</td>
</tr>
<tr>
<td>5</td>
<td>Recruiting</td>
<td>Cardiovascular Safety of Febuxostat and Allopurinol in Patients With Gout and Cardiovascular Comorbidities</td>
<td>Cardiovascular Disease</td>
<td>Drug: Febuxostat; Drug: Allopurinol</td>
</tr>
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MeSH on Demand: Get Subject Headings from Abstracts

MeSH on Demand is a new tool from the National Library of Medicine. With MeSH on Demand, the user can enter an abstract or other text into the “Text to be Processed” box (up to 10,000 characters) and the tool will return relevant MeSH headings, Publication Types, and Supplementary Concepts, but not Qualifiers (Subheadings). The text should be in complete sentences, not in bullet form phrases. Results are usually returned in 30-45 seconds, but may take longer if the abstract is long. The green question mark button next to the MeSH term or the MeSH term itself can be used to open a new window with the MeSH Browser for that MeSH term. One thing to keep in mind is that the terms are generated by a machine and not by human review, so there may be some unexpected terms included. MeSH on Demand will soon be available from the MeSH Browser homepage.

For example, the abstract from this article by Estis and Beverly was pasted into Mesh On Demand.
Faculty Publications: March-May 2014


Cash BD. Emerging role of probiotics and antimicrobials in the management of irritable bowel syndrome. Current Medical Research and Opinion. 2014 Apr 14;[Article in press].


Shokolenko IN, Wilson GL, Alexeyev MF. The “fast” and the “slow” modes of mitochondrial DNA degradation. Mitochondrial DNA. 2014 Apr 14;[Article in press].


