LIBRARIAN LEADERS REPRODUCIBILITY GUIDE
Studies show that 60-90% of published scientific research is not reproducible. This leads to delays in the development of new medicines and technologies, decreases research productivity, and stunts the careers of many scientists.

So, what can librarians do to help?

“Do what you can, with what you have, where you are.”
—THEODORE ROOSEVELT

Around the world, librarians like you are working to increase reproducibility at their institutions using nothing more than the skills that make them great librarians: clear communication, transparency, organization, and a passion for helping their patrons.

In this guide, you’ll meet librarians who are increasing reproducibility using familiar initiatives including libguides, presentations, classes, workshops, and conferences. Each initiative has been tested, tried, and proven to succeed thanks to dedicated librarian leadership.

With this guide, you have everything you need to tailor these initiatives for your library and your patrons. Find the project(s) that best suit your institution, and join your peers in becoming part of the solution to science’s reproducibility crisis.
I co-planned the Research Reproducibility 2016 conference with my colleagues. This inaugural event brought together internationally renowned speakers, journal editors, federal funders, campus and clinical researchers, university administration, students, and others to learn about reproducibility issues.

Additionally, I helped develop our Reproducibility of Research LibGuide, joined a panel of local experts to promote our Systematic Review Core as a tool for improved reproducibility, and helped coordinate a post-conference workshop, led by a visiting instructor from the Community of Science.

To incentivize attendance, I coordinated Continuing Medical Education (CME) credit for all attendees.

Following the conference we solicited participant feedback, both on the event and on the need for future activities addressing the issue, via a survey. The conference received rave reviews, and attendees noted a need for more awareness, increased education on campus, and continued action by the university administration. To that end, I am part of an interdisciplinary, cross-campus committee tasked with developing programming and opportunities to address research reproducibility issues.

In addition to my recent symposium for MLA 2017 on “Librarians’ Roles in Research Reproducibility”, my colleagues and I plan to host a quarterly seminar series on campus about reproducibility issues in 2017, leading to a second conference - Research Reproducibility 2018.

Mellanye Lackey is the Associate Director for Education & Research at the Spencer S. Eccles Health Sciences Library at the University of Utah. Professionally, she is interested in demonstrating the value of libraries in health sciences education, and building capacity at health sciences libraries.
The workshop series has been a great success at OHSU. If this success continues and patrons continue to find value in the workshops they will be expanded into a University course that anyone on campus can take for credit toward their academic and professional development!

Letisha R. Wyatt is the Basic Science Liaison and Research Data Management Librarian at Oregon Health & Science University. She holds a Ph.D. in Molecular Pharmacology & Toxicology from USC. As a new Librarian, she supports the information needs of the OHSU community, facilitating efficient, impactful research practices.
I’ve taken a three-pronged approach to increasing reproducibility awareness. I am the course director for *Mastering Scientific Information (IND 420)*, a required course at our *School of Medicine and Dentistry*. A significant portion of the class is dedicated to reproducibility, the reproducibility crisis, and the tools available to standardize laboratory procedures. We also teach the important role protocols like JoVE and Current Protocols play in facilitating peer review, the calculation of results and the standards of reporting, including statistical analysis and rules for documenting excluded data to avoid bias.

I helped launch our [Data Management Service](#), that offers a *workshop, libguide, and in-person consultation*. Through these services I provide instruction on organizing, storing, and documenting data. These tools give researchers the resources they need to maintain the integrity of their data and increase reproducibility rates.

Lastly, my colleagues and I created a centralized [Methods and Protocols libguide](#). In the past these resources have been buried in the catalog and difficult to find. This libguide includes detailed information about JoVE and Current Protocols and links to each resource. We believe that *keeping this information together and easily accessible is key* to improving reproducibility.

**WHAT’S NEXT?**

We’ve had a lot of success connecting with graduate students through our current initiatives. I would like to *expand further and reach out to our faculty*, as well. I think new faculty and new postdocs will be especially receptive to these initiatives and will play a key role in helping to spread the importance of reproducibility to a broader community.
WHAT'S NEXT?

I feel the best way for me to increase reproducibility awareness from my role as an academic medical librarian is to be involved in the creation of new research. Helping with searches, but also teaching others how to search and how to assess tools such as Google Scholar and Microsoft Academic. These latter tools are very useful as browsing tools and to help in "pre-searching" activities but should not be used on their own. I would like to continue to work closely with UBC medical faculty and post-graduate residents in systematic reviews and other forms of evidence synthesis.

PROCEDURE

To highlight the importance of reproducibility, both in research and in literature searches, I engage with medical librarians and medical students through a wide variety of different platforms. I manage an international wiki for medical librarians that has been growing since 2007 as a communal resource that's publicly available. I maintain an active presence on Twitter (particularly through the grey literature hashtag #greylit). Additionally, at the University of British Columbia I hold frequent presentations for peers on the subject of reproducibility, many of which are now available through Slideshare for others to learn from and distribute.

RESPONSE

My primary focus in all the teaching I do in the medical school and in postgraduate medicine is to help medical students and residents use UBC Library’s resources to be the best researchers and clinicians possible. My initiatives have been highly successful in this pursuit. The HLWIKI is now the world’s most consulted medical librarian wiki and my workshops and presentations are viewed and used around the world.

TOWARDS GREATER REPRODUCIBILITY IN GREY LITERATURE SEARCHING

Dean Giustini | Medical Librarian
UBC Biomedical Branch Library | University of British Columbia

Dean Giustini is a medical librarian at UBC Library’s Biomedical Branch Library located at Vancouver Hospital. He operates one of the largest librarian-led wikis in the world, HLWIKI International. In 2017, he won the Margaret Ridley Charlton Award of Outstanding Achievement which recognizes a librarian who has made a significant contribution to the field of health sciences librarianship in Canada.
In an effort to increase reproducibility awareness, I’ve partnered with the University of West Florida’s College of Nursing in a year-long user experience (UX) pilot study that will inform the start of an Embedded Librarian Program. The goal of this pilot is to establish an embedded librarian program in the core courses of the BSN program in order to create a culture where all BSN students demonstrate information skills needed for the nursing field by the end of their program.

To that end, I’ve developed a system through which faculty can request an embedded librarian to provide a more active presence in their courses. Additionally, I’ve created course-specific libguides that align with student assignments. Topics addressed in these guides include finding appropriate resources, developing PICO(T) questions and searching for appropriate literature, and applying scholarship to research.

To evaluate whether or not students are developing the information literacy and critical thinking skillset necessary, I have designed a pre and post-test that examines the students’ confidence and their ability to correctly apply information by completing a task. Every single test I’ve received back, the student has felt more confident after the library session.

I want to make sure that this partnership with the College of Nursing is sustainable and then focus on how other librarians can adapt it in a way that’s optimal for their different programs and their specific patrons. I’m working with a colleague now with a special focus on how we can bring the benefits of this initiative to our online learners.

Additionally, I’m now developing a toolkit for librarians interested in replicating this type of program at their institution. It will contain the materials and resources I used so that other librarians can reuse, repurpose, and reproduce a similar program for their own patrons.

Hillary Fox is the Health Science Librarian and Collection Development Coordinator at the University of West Florida. Prior to UWF, she was a library research assistant at the US-EPA Library and at the UNC-Chapel Hill library system as well as a research assistant at the Southeast Regional Climate Center. Her research interests include user experience and mindfulness initiatives within the library.
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