Library support for clinical and translational research: research data management and data science

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## RESEARCHERS SUPPORTED BY CLINICAL AND TRANSLATIONAL RESEARCH AWARDS AND SCHOLARSHIPS

CTSA-funded research involves complex, multi-tiered projects implemented by staff with diverse tasks and skill sets. No one person can be expected to manage every step involved, and so librarians are natural partners. By providing targeted services and training, librarians can help CTSA staff do research better and faster.

To marry the needs of CTSA staff and the strengths of librarians involves wide-ranging conversations to identify strategic synergies between existing library services and pain points in CTSA projects. This partnership benefits immediate projects as well as the larger goal of translating new findings into practice.

## NEXT STEPS FOR CUSHING/WHITNEY MEDICAL LIBRARY AND YALE CENTER FOR CLINICAL INVESTIGATION

- Present at a Lunch and Learn session hosted by Yale's CTSA-funded translational science institute, YCCI
- Schedule follow-up training sessions based on researcher requests
- Conduct outreach
- Present a research data management training session
- Educate Yale librarians about CTSA-specific needs and how they can use their existing skillsets with this audience
- Create an online presence for the library’s CTSA program
- Continue to assess researchers’ needs and our program's impact

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### RESEARCH PAIN POINTS AND LIBRARY RESOURCES

<table>
<thead>
<tr>
<th>Data support</th>
<th>Common pain points</th>
<th>Relevant resources</th>
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<tbody>
<tr>
<td>LITERATURE SEARCHING AND RESEARCH QUALITY</td>
<td></td>
<td></td>
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<tr>
<td>Does mobility of study and look for similar studies</td>
<td>Mediated searches and sound training of relevant resources</td>
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</tr>
<tr>
<td>New researchers sometimes need guidance and training</td>
<td>Textbooks, manuals, handbooks, appropriate LibGuides</td>
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## PREPARING A PROTOCOL

- Developing which variables to use
- Literature searching, NIH Common Data Elements
- Finding appropriate instruments
- Literature searching in resources such as Health and Psychosocial Instruments
- Finding information about the reliability and validity of instruments
- Literature searching in resources such as Health and Psychosocial Instruments
- Investigating cost and benefits of different data collection instruments and devices
- Literature searching in resources such as guides

### DEVELOPING THE STUDY POPULATION

- Recruiting study participants
- Literature searching on behavioral psychology and training scenarios
- Articulating inclusion and exclusion criteria
- Literature searching, including grey literature from ClinicalTrials.gov
- Identifying instruments to assess study participants’ capacity to consent
- Literature searching, including grey literature from Federal registers
- Recruiting study participants from under-represented populations
- Centre data and statistical tools, including online mapping platforms and geographic information systems
- Retaining study participants
- Training research staff on high-quality consent and health information

### ONGOING STUDY

- Assuring neighborhood-level data such as socio-economic status or environmental exposures with individual research participants
- Geographic information systems
- Measuring distance to care or treatment
- Geographic information systems
- Predicting expected incidence of adverse events
- Literature searching, including Patient Volume Data

## COMPLIANCE

- Preparing the record of NIH approval by identifying the latest relevant literature
- Literature searching, including auto-alerts
- Preparing literature searches for protocol clarification in the Institutional Animal Care and Use Committee
- Mediated searches, weblogs, and LibGuides on IACUC, research, and search Illuminations

## SCHOLARLY COMMUNICATION

- Publishing
- Advice on scholarly communication, from predatory publishing to open-access article processing charges, from NIHIR to research impact, and NIH public access compliance
- Compiling with the data sharing requirements of foundations and institutes
- Advice about repositories outside Yale and referrals to the Yale Research Data Consultation Group
- Compiling with pre-registration requirements
- Advice on pre-registration

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**RESEARCH DATA MANAGEMENT AND DATA SCIENCE**

**GETTING STARTED AT YOUR INSTITUTION**

Identify individuals to approach with questions and offers of support—perhaps starting at the website of your institution’s CTSA-funded translational science institute. You can also use databases like NIH RePORTER and FEDRIP to identify grants and individuals whose experiences will help you understand the skills and needs of local CTSA researchers. Approach them with an open mind and learn about their workflows, frustrations, and needs. Use these conversations to develop relationships; “close the loop” by returning to these stakeholders for continuous feedback as you develop your program.

Conduct a literature review to determine how other libraries have worked with CTSA researchers at their institutions. Share information with colleagues; they may already be supporting some CTSA researchers as part of existing services. Consider the skills that librarians at your institution already possess that might help CTSA researchers solve problems.

**CITATIONS**


**ACKNOWLEDGMENTS**

Rosa McElheron, Yale University  
Mary Geda, Yale University, Program on Aging  
Sally Gore, UMass Medical School  
Cushing/Whitney Medical Librarians, Yale University