Developing an Information Infrastructure for Clinical and Translational Science Research

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INTRODUCTION

The collaborative and multidisciplinary nature of clinical and translational science (CTS) results in unique information needs for investigators. As clinical and translational science research becomes commonplace in academic medical centers and university campuses, biomedical research libraries endeavor to develop services and programs that will be relevant to these users. The interdisciplinary and collaborative nature of CTS challenges libraries, through the required subject and resource diversity (science and non-science) and information formats (literature, data, analysis tools). For example, the University of Florida's Clinical and Translational Science Institute is composed of researchers from all 16 colleges of the university – including all areas of the health sciences, but also from Liberal Arts and Sciences, Journalism, Education, Agriculture, and Law, among others. Librarians at the Health Science Center Library (HSCL) set out to answer two questions:

- What services do libraries at CTSA-awarded institutions currently provide or hope to provide to fill their CTS researchers' general information gaps
- What library-based services and instructional opportunities would be of benefit to University of Florida CTSI-affiliated faculty and their research team members

METHODS

- Two online assessments were created and administered; one targeted to librarians serving CTSA-funded institutions, and one targeted to University of Florida CTSI-affiliated faculty
- Both assessments were exempted by the University of Florida's Behavioral/Non-medical Institutional Review Board (IRB-02)
- Librarian Survey:
  - o Sent to numerous library association listservs, including MEDLIB-L, MolBio-SIG, Informationist SIG, CTSA-Lib, ACRL, SLA-DBIO, CANMEDLIB, the UK's LIS-MEDICAL; received 120 responses
  - o Objective questions concentrated on services currently offered
  - o Open-ended queries covered membership on CTSA or other non-library committees and research teams, and activities not currently performed and/or not included in the objective questions
- Researcher Survey:
  - o Sent to 814 affiliates of the University of Florida's CTSI, with 41 responses (5.03% response rate)
  - o Questions involved researchers' perceptions of the benefits of services and instruction/ workshops, for themselves and research team members
  - o Objective questions covered services and workshops mirroring those in the librarian survey, with additional questions informed by open-ended responses to the librarian survey

WHAT WE LEARNED: LIBRARIAN SURVEY

- 120 responses (including librarians from the UK, Canada, Serbia, Germany, Iran)
- 50.9% of respondents work in libraries affiliated with a CTSA institution (n=114)
- 88.9% of respondents serve CTS researchers (n=108)
- Of those in CTSA-awarded institutions, 8.6% were involved in the development of the institution's initial CTSA application (n=58)
- Of those in CTSA-awarded institutions, 22.8% of respondents reported being involved in renewal efforts (n=57; note 20% had not yet applied for renewal)
- 30.3% of respondents are "officially" affiliated with their CTSI (n=53)
- "Traditional" librarian roles such as expert searching and instruction are considered important services for translational researchers
- Although library support for bioinformatics, data management, and collaboration are seen as important, actual support is lagging
- New roles related to community engagement and research impact were identified
- Librarians are serving on numerous committees and teams related to CTS, including those related to tracking, evaluation, informatics, strategic initiatives, and governance

WHAT WE LEARNED: RESEARCHER SURVEY

- 41 respondents; 95.1% faculty, with one staff member and one resident also responding
- The majority of respondents (63.4%) were from the College of Medicine, with more than one respondent also from Dentistry (14.6%), Agricultural and Life Sciences (7.3%), and Public Health and Health Professions (7.3%)
- The top three beneficial services included performing IRB-related searches (69.2%), assisting/collaborating on systematic review (65.4%), performing general literature searches (61.5%) – all traditional library services
- The top three beneficial workshops included learning how to enhance research impact (82.6%), use the UF Institutional Repository (78.3%), and more effectively and efficiently search the scholarly literature (73.9%)
- In the majority of categories, respondents were generally more interested in learning how to perform activities than having librarians perform the same service for them, reinforcing the importance of library/information instruction
- Alternatively, more respondents were interested in having librarians submit articles to PubMed Central (57.7%) than in learning how to submit the articles (47.8%)
- More respondents were interested in having librarians assist/collaborate in the systematic review process (65.4%) than in learning the details of the process (60.9%)
- Respondents indicated that suggested services and learning opportunities were more important for them than for others in their laboratories

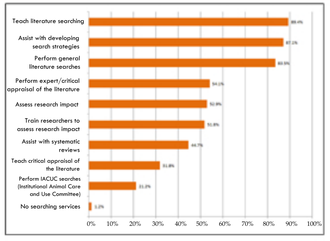

Figure 1: Library-based Literature Searching Services (n=85) for CTS Researchers

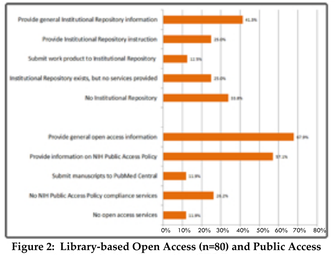

Figure 2: Library-based Open Access (n=80) and Public Access (n=84) Activities Supporting CTS Researchers

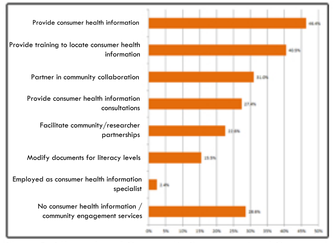

Figure 3: Library-based Community Engagement and Consumer Health Support (n=84) for CTS Researchers

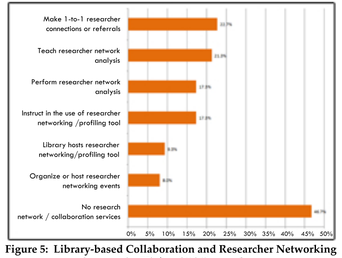

Figure 5: Library-based Collaboration and Researcher Networking Support (n=75) for CTS Researchers

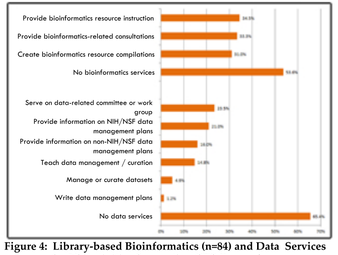

Figure 4: Library-based Bioinformatics (n=84) and Data Services (n=81) Activities Supporting CTS Researchers

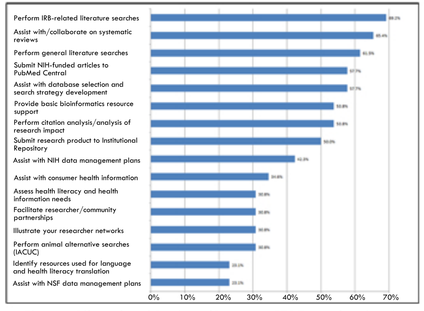

Figure 6. Library-based Services of Interest to CTS Researchers (n=26)

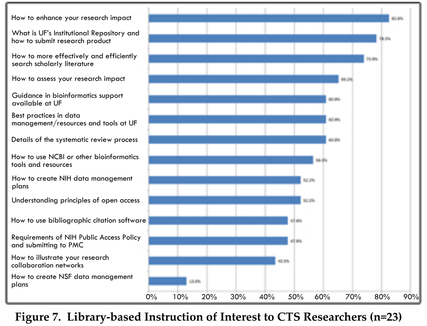

Figure 7. Library-based Instruction of Interest to CTS Researchers (n=23)

CONCLUSIONS

Traditional library services, particularly bibliographic instruction and mediated literature searching, continue to be valuable to this specialized patron group. New areas of interest include:

- instruction and increased collaboration in bioinformatics
- scholarly communication issues
- systematic review creation
- data management
- assessing research impact

This study found correspondence between services offered by librarians and those services considered beneficial by translational researchers (e.g. IRB-related searches, assisting/collaborating on systematic reviews, performing general literature searches)

As CTS researchers deeply value collaborative input from multiple disciplines, working with them provides librarians with valuable opportunities and new challenges. By seizing these opportunities, librarians can demonstrate the importance of their skills and expertise and become fully-integrated members of their institution's research enterprise

This project has been funded in part with Federal funds from the National Library of Medicine, National Institutes of Health, under Contract # HHS-N-276-2011-00004-C