

SYSTEMATIC REVIEW TASK FORCE REPORT
University of Maryland Libraries
January 2020

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EXECUTIVE SUMMARY

Short Term Recommendations for UMD Libraries

Services:

1. Offering systematic review service using some of the following strategies:
 - a. Transition Systematic Review workshops currently offered through Research Commons from regularly scheduled to “by request.”
 - b. Work with the Teaching & Learning Transformation Center (TLTC) to offer Systematic Review workshops for the campus.
2. Develop a robust intake form or protocol to help filter requests.
 - a. Create standardized language or labels to add to LibAnswers data collection.
3. Identify a point-person on the systematic review team to coordinate scheduling, marketing and data gathering and delegating routine requests. The team preferably consists of more than two STEM librarians as the majority of the requests come from their subject fields. It may include liaison librarians from other subject disciplines if there is an increased number of systematic review requests.
4. Add information to the [Systematic Review Libguide](#) about deciding if a systematic review is needed vs. other types of comprehensive literature reviews or data analyses (see [Cornell example](#))

Target Audience:

1. Define an audience for services as UMD affiliated faculty, staff, graduate and undergraduate students. Update Libguide and website to reflect these changes.
2. Articulate service structure for directing International groups and non-UMD researchers to outside resources. These services will highlight relevant resources, such as Cornell University for International groups.

Resources:

1. Add criteria to Ref Analytics to better record Systematic Review consultations.
2. Involve the subject librarian in the systematic review process when it is requested outside of the systematic review team’s disciplinary areas.
3. Add systematic reviews to UMD Libraries’ CORE competencies for librarians as appropriate.
4. Communicate the systematic review reflector (systrev@umd.edu) to UMD Libraries so that patrons can contact with questions.
5. Conduct internal training for librarians - offer these sessions in conjunction with the Fearless Teaching Institute.
6. Add systematic review responsibilities to the job descriptions of relevant librarians, including an estimate for the percentage of the total job responsibilities

Marketing:

1. Send a short email to subject librarians at the beginning of each semester promoting the service in addition to the existing marketing mechanisms through Research Commons.

Long Term Recommendations for UMD Libraries

1. Evaluate reference analytics and other data over the next 1-3 years to determine if UMD Libraries would benefit from a dedicated Systematic Review Librarian.
2. Explore the development of a Canvas Open Source course with graduate students as an audience. Allow having a certificate upon completion.
3. If/as systematic review services increase, explore options for licensing comprehensive subject databases (such as CAB and Embase) possibly with support from the BTAA or UMD academic departments.
4. Allocate resources for systematic review tools (such as DistillerSR or Covidence) to support systematic review data and decision management as well as project workflows to enhance collaboration between librarians and systematic review teams from the academic departments.
5. Explore possibilities of service collaboration with BTAA liaison librarians and institutions.
6. Evaluate and assess existing staffing needs to determine if additional assistance is needed for the systematic review initiative.

INTRODUCTION

There has been an increase in requests by researchers for Systematic Review Services from librarians at UMD, which has prompted an evaluation of the service and what will be offered in the future. The UMD Libraries Systematic Review Task Force was charged to evaluate the feasibility of offering Systematic Review Services to the campus community and beyond (Appendix A).

We investigated systematic review services at other institutions of similar size and composition as the University of Maryland, focusing on the following areas:

1. Services
2. Audience
3. Resources
4. Marketing

We first conducted a literature review of published articles relating to Systematic Review Services at academic libraries (Appendix B). Important considerations to take into account when developing a systematic review service are outlined in the “Primer for Managers” by Gore and Jones.¹ They discuss issues related to training and mentoring, time commitment, tenure and promotion, workload, research support to faculty and students, and funding.

Over the course of two months, the task force interviewed four groups of librarians responsible for providing systematic review services in their libraries via WebEx. Institutions interviewed included University of Minnesota, University of Nebraska and University of Iowa, all Big Ten Alliance (BTAA) universities, as well as Cornell University. A list of questions and interview contacts are available in Appendix C.

With the exception of the University of Iowa, all librarians we spoke with were not affiliated with medical schools (though some were public health librarians). Our goal was to determine where Systematic Review Services were headed at comparable research institutions for non-medical departments.

CAMPUS ENVIRONMENTAL SCAN

From the data (Appendix D) we have been gathering through various platforms since starting our limited Systematic Review Services at the University of Maryland in 2017, we identified several interesting trends:

- **According to Wufoo and LibAnswers** data we have collected, before the launch of the Systematic review in the fall of 2018, we see a steady increase of requests over time, starting in 2017. Most of the requests come from graduate students, though nearly a quarter of the requests are from faculty and visiting researchers. Many of the consultations completed are via email, though in-person consultations also take up a large portion of the time. Over 70% of requests (82 out of 111) come from the School of Public Health, though we are seeing interest from Business, Social Sciences, and Education, as well as Engineering and Agriculture.
- **According to LibCal** data with registrants’ affiliations for workshops, the schools leading the list are the School of Public Health (43.33%, 65 out of 150), Clark School of

Engineering (10.67%, 16 out of 150), and College of Agriculture and Natural Resources (10.67%, 16 out of 150). It is probably due to the initial outreach done by liaisons to these schools and have close relationships with respective departments.

SYSTEMATIC REVIEW SERVICES

Literature Review

Our literature review revealed several service models:

- Team-based model^{2,3} - in this model members have various levels of expertise with a lead expert, a subject liaison, a reviewer, and an apprentice. The team preferably consists of more than two librarians and may include liaison librarians from different subject disciplines and with a diverse set of skills. The team is the central point of contact and service. It will involve subject librarians whenever the research topic deals with a specific subject discipline.
- Tiered model² - this model helps to filter the requests coming from researchers who are not truly committed to the process of a systematic review and just want to conduct a literature review in a more efficient way.
- Fee-based model⁴⁻⁶ - this model is suitable for medical and health sciences libraries as a coping mechanism to alleviate the overwhelming demand for systematic review service.

Environmental Scan

Several trends in Systematic Review Services were identified in the interviews including:

- Systematic Review Teams consisted of 5+ librarians from Research Institutions, mostly from the Big Ten Academic Alliance (See Appendix C). The goal was to talk to librarians at similar institutions to gain a better understanding of where they were in terms of systematic review support.
 - Most teams had a point person who was responsible for identifying a lead for systematic review requests. Often, the lead would partner with a subject specialist if the request came from outside their area of expertise.
- There was an intake form that alerted the team to a systematic review request. An initial consultation helped establish if a systematic review was in order.
- While workshops were developed, these were most often conducted by request.
- Most of the work was conducted through individual consultations, and occasionally by email.
- Where this work fit in the librarian's job (co-authorship, acknowledgment, or part of librarianship) varied widely and depended on faculty status, liaison model within the library itself, and individual ethical considerations.

Short Term Recommendations for UMD Libraries

1. Offering systematic review service using some of the following strategies:
 - a. Transition Systematic Review workshops currently offered through Research Commons from regularly scheduled to “by request.”
 - b. Work with the Teaching & Learning Transformation Center (TLTC) to offer Systematic Review workshops for the campus.
2. Develop a robust intake form or protocol to help filter requests.
3. Identify a point-person on the systematic review team to coordinate scheduling, marketing and data gathering and delegating routine requests.
4. Add information to the [Systematic Review Libguide](#) about deciding if a systematic review is needed vs. other types of comprehensive literature reviews or data analyses (see [Cornell example](#))

TARGET AUDIENCE

Literature Review

Some universities offering systematic review services provide a clear description of the audience for their service.^{7,8} Depending on the status affiliations, service level differs between students and faculty. For students, it is more like a research consultation with the librarian providing guidance throughout various stages of the research. Whereas for faculty, the service boundaries spread out from the librarian providing an initial consultation through executing the search to writing the Methods section for the manuscript.

Environmental Scan

Nearly all librarians contacted focused their services on researchers, including graduate students and faculty. Undergraduates who were sent to the librarian at the request of a faculty member, or for a specific class, were also assisted. Undergraduates were not the focus of these services.

Requests originating from outside the campus community or international requests were not pursued. Cornell University was the only institution that consistently pursued programs outside their campus community, and have even established international workshops and webinars.

Short Term Recommendations for UMD Libraries

1. Define an audience for services including UMD affiliated faculty, staff, graduate and undergraduate students. Update Libguide and website to reflect these changes.
2. Develop a policy addressing International groups and non-UMD researchers. The policy will highlight relevant resources, such as Cornell University for International groups.

RESOURCES (databases, tools, staffing, training, etc.)

Literature Review

Systematic reviews involve a rigorous process of identifying, appraising, and synthesizing a large number of findings. This is a time-consuming process and while some open-access tools can assist researchers in managing the vast amount of data, some subscription-based tools can considerably speed up the process.⁹ Bramer et al.¹⁰ suggest searching at least Embase, Medline, Web of Science and Google Scholar for optimal searches in systematic reviews.

It is also important to note the different roles of librarians in the systematic review process. Townsend et al.¹¹ identified a set of six core competencies for librarians who are involved in systematic reviews including (1) Systematic review foundations, (2) Process management and communication, (3) Research methodology, (4) Comprehensive searching, (5) Data management, and (6) Reporting. To address the acquisition of these skills, training opportunities are available through various models ranging from peer-to-peer coaching,³ webinars, day-long workshops¹², to virtual mentoring.¹³

Environmental Scan

Nearly all institutions interviewed felt comfortable conducting systematic reviews with the free services offered, though several identified software and databases that were helpful (or essential).

- EndNote Desktop: Librarians on the Systematic Review Team often required EndNote to complete the review process.
- Covidence: One library had Covidence based on one department's request.
- CAB Database: Agricultural Librarians were unsure how they could complete a systematic review without access to this database.
- Embase: Two library groups mentioned the use of Embase, though it was not purchased specifically for systematic reviews.

None of the teams had a dedicated space for systematic review work, aside from consultation spaces required for traditional reference interviews.

Many of the librarians had systematic review work built into their job descriptions. This took up anywhere from 5-30% of their time, depending on need and faculty status.

Short Term Recommendations

1. Add criteria to Ref Analytics to better record Systematic Review consultations.
2. Involve the subject librarian in the systematic review process when it is requested outside of the systematic review team's disciplinary areas.
3. Add systematic reviews to UMD Libraries' CORE competencies for librarians.
4. Communicate the systematic review reflector (systrev@umd.edu) to UMD libraries so that folks can contact with questions.

5. Conduct internal training for librarians - offer these sessions in conjunction with the Fearless Teaching Institute.
6. Add systematic review responsibilities to the job descriptions of relevant librarians, including an estimate for the percentage of the total job responsibilities

MARKETING

Literature Review

Several vehicles for promoting the service exist in the literature. Some strategies include email announcements sent to faculty, a news entry on the library's website, at subject department meetings, and graduate student orientations.^{6,12,14} Another promotion technique is targeting faculty who have published systematic reviews.¹⁴ These faculty can be identified through Elsevier's Pure database and Clarivate's Web of Science.

Environmental Scan

Nearly all the groups mentioned that, while they had a marketing blast or at least a preliminary introductory email when they first set up their service, they have not pursued further marketing opportunities since. Advertising became unnecessary due to high demand and no capacity for more requests once the service was established.

Short Term Recommendations

1. Send a short email to subject librarians at the beginning of each semester promoting the service in addition to the existing marketing mechanisms through Research Commons.

LONG TERM RECOMMENDATIONS FOR ALL AREAS

1. Evaluate reference analytics and other data over the next year to determine if UMD Libraries would benefit from a dedicated Systematic Review Librarian.
2. Explore the development of a Canvas Open Source course with graduate students as an audience. Allow having a certificate upon completion.
3. If/as systematic review services increase, explore options for licensing comprehensive subject databases (such as CAB and Embase) possibly with support from the BTAA or UMD academic departments.
4. Allocate resources for systematic review tools (such as DistillerSR or Covidence) to support systematic review data and decision management as well as project workflows to enhance collaboration between librarians and systematic review teams from the academic departments.
5. Explore possibilities of service collaboration with BTAA liaison librarians and institutions.
6. Evaluate and assess existing staffing needs to determine if additional assistance is needed for the systematic review initiative.

APPENDIX A: Charge

Background

In today's busy research university library, many advanced level researchers need specialized research support. Literature review workshops have been very popular at the UMD Libraries in the last couple of years. Systematic reviews, originally relevant for research in medical research, are a type of literature review that is getting increasingly commonly used in all other sciences where data are collected and published in the literature.

Problem Statement

UMD Libraries would like to evaluate the feasibility of offering Systematic Review services to the UMD community and beyond.

1. Services – What type of services would be provided within Systematic Review service at STEM and the UMD Libraries? How would these services be provided (for example, by appointment, via workshops, online, etc.)? Who will be providing them? How will these services work in conjunction with existing library services?
2. Target audience – Who will be the primary audience for this service. Are there any plans to serve other constituencies and if so define them.
3. Resources needed for providing the services – Space, equipment, labor, etc. What are the resources we currently have in place for this purpose? What additional resources needed? Free or cost is involved? Are there things that will need to be moved around?
 - a. If cost involved, is it recurring? Will there be cost recovery?
4. Marketing and promotion -- How do we raise awareness of the new service? Who should we advertise it to and how?

Environmental Scan

Provide Environmental Scan for the issue at hand. Review Systematic Review workshops offered at other academic libraries, with a special emphasis at institutions that do not offer a medical degree. This report should be very short, no longer than one page.

Duration

1. Work to commence in June 2019
2. Mid-term meeting should be set up around August 15 to discuss progress
3. Report due to Nevenka Zdravkovska and Yelena Luckert by October 1, 2019.

Deliverables

A short report (bullet points preferred) that should incorporate the following:

- short term plans - next two academic years
- long term plans - 3-5 years

For each of these plans, please include:

- Service model – a detailed plan of services to be offered and how they will relate to existing services. The model should also include information on needed partnerships with other units inside and outside of the Libraries, when applicable.
- Preliminary Marketing Plan – how will the Libraries promote this new space and suite of services? Who is our targeted audience?
- Web presence
- Space and equipment needs
- Staffing needs -- who will do what, including FTE equivalent time (if 4 people dedicate 25% of their time, that accounts for 1 FTE), existing and new positions.
- Cost -- Resources needed including equipment; training needs; staff salaries; Please clarify: free, one-time purchase or continuing cost for each of needs.

Contact persons: Yelena Luckert and Nevenka Zdravkovska

APPENDIX B: References

1. Gore, G. C. & Jones, J. Systematic reviews and librarians: A primer for managers. *Partnership: The Canadian journal of library and information practice and research* **10**, (2015).
2. Jewell, S. T., Foster, M. J. & Dreker, M. The art of puzzle solving: Systematic review services. in *Assembling the pieces of a systematic review: Guide for librarians* (eds. Foster, M. J. & Jewell, S. T.) 183–201 (Rowman & Littlefield, 2017).
3. Roth, S. C. Transforming the systematic review service: a team-based model to support the educational needs of researchers. *Journal of the Medical Library Association: JMLA* **106**, 514–520 (2018).
4. Beasley, G. & Rosseel, T. Leaning into sustainability at University of Alberta Libraries. *Library Management* **37**, 136–148 (2016).
5. Kung, J. Y. C. & Chambers, T. Implementation of a fee-based service model to university-affiliated researchers at the University of Alberta. *Journal of the Medical Library Association* **107**, 238–243 (2019).
6. Knehans, A., Dell, E. & Robinson, C. Starting a fee-based systematic review service. *Medical Reference Services Quarterly* **35**, 266–273 (2016).
7. Himmelfarb Health Sciences Library, George Washington University. Systematic Review Service. https://himmelfarb.gwu.edu/services/system_review.cfm.
8. Rutgers University Libraries. Systematic Review Service. https://www.libraries.rutgers.edu/health_sciences/SRS.
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10. Bramer, W. M., Rethlefsen, M. L., Kleijnen, J. & Franco, O. H. Optimal database combinations for literature searches in systematic reviews: a prospective exploratory study. *Systematic Reviews* **6**, (2017).
11. Townsend, W. A. *et al.* A competency framework for librarians involved in systematic reviews. *Journal of the Medical Library Association* **105**, 268–275 (2017).
12. Ludeman, E., Downton, K., Shipper, A. G. & Fu, Y. Developing a library systematic review service: A case study. *Medical Reference Services Quarterly* **34**, 173–180 (2015).
13. Fyfe, T. & Dennett, L. Building capacity in systematic review searching: a pilot program using virtual mentoring. *Journal of the Canadian Health Libraries Association/Journal de l'Association des bibliothèques de la santé du Canada* **33**, 12–16 (2012).
14. Riegelman, A. & Kocher, M. A model for developing and implementing a systematic review service for disciplines outside of the health sciences. *Reference & User Services Quarterly* **58**, 22–27 (2018).

APPENDIX C: Librarian Interviews

Librarians contacted for WebEx interviews

Name	Position	Affiliation	Email
Chris Fournier	Life Sciences Librarian	Cornell University	ctf43@cornell.edu
Megan Kocher	Science Librarian Food Science and Nutrition, Animal Science, and Soil Water and Climate	University of Minnesota	mkocher@umn.edu
Leslie Delserone	Associate Professor Agriculture, Plants, & Animals; Data Services; Entomology; Food Science & Human Nutrition; Government Information; Plant Pathology; Political Science, Government & Law	University of Nebraska	ldelserone2@unl.edu
Jennifer DeBerg	Clinical Education Librarian Nursing, Communication Sciences, Music Therapy, Rehabilitation Therapies	University of Iowa	jennifer-deberg@uiowa.edu

Interview Questions

Services

1. What type of services are provided within the Systematic Review service at your library/libraries?
2. How are these services provided (for example, by appointment, via workshops, online, etc.)?
3. Who provides them?
4. How do these services work in conjunction with existing library services (reference consultation, instruction, etc.)?
5. Do you have an “in-take” process? If yes, do you use a standard questionnaire with questions like these ones from the University of Pittsburgh’s library?
6. Optional: How did/do they expand capacity?

Target Audience

1. Who is the primary audience for your service?
2. Do you have any plans to serve other constituencies and if so who are they?
3. How can we increase the researcher’s accountability when committing to an SR project with a librarian?

Resources

1. What resources do you currently have in place for your systematic review services (Space, software, equipment, labor, databases, etc.) ?

2. What additional resources were needed when you established the service?
3. Do you still need additional resources after the initial implementation (unicorn wish list)?
4. Is your service free or is cost involved?
5. If cost is involved, is it recurring?
6. Is cost recovery a factor?

Marketing and Promotion

1. How did/do you raise awareness of your new service?
2. Who did/do advertise it to and how?

Anything else you'd like to share?

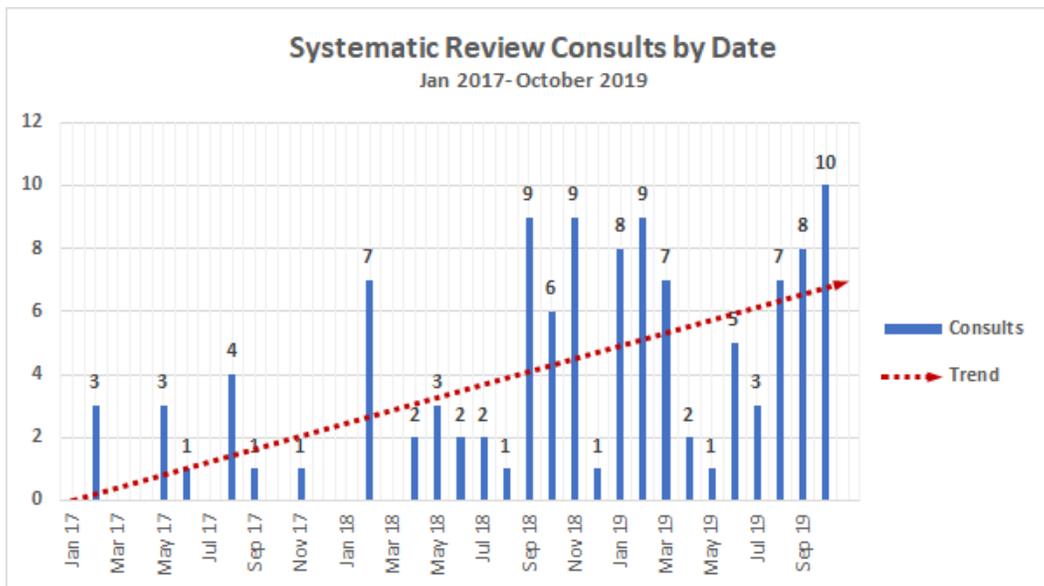
APPENDIX D: Systematic Review Internal Analysis and Environmental Scan

I. Systematic Review Consultations

Systematic Review Consultations by Date

Systematic review consultations (from the systematic review form and direct/referred inquiries) have been increasing over time. Skips and dips in the data correspond to the academic calendar. The overall trend shows a continued increase.

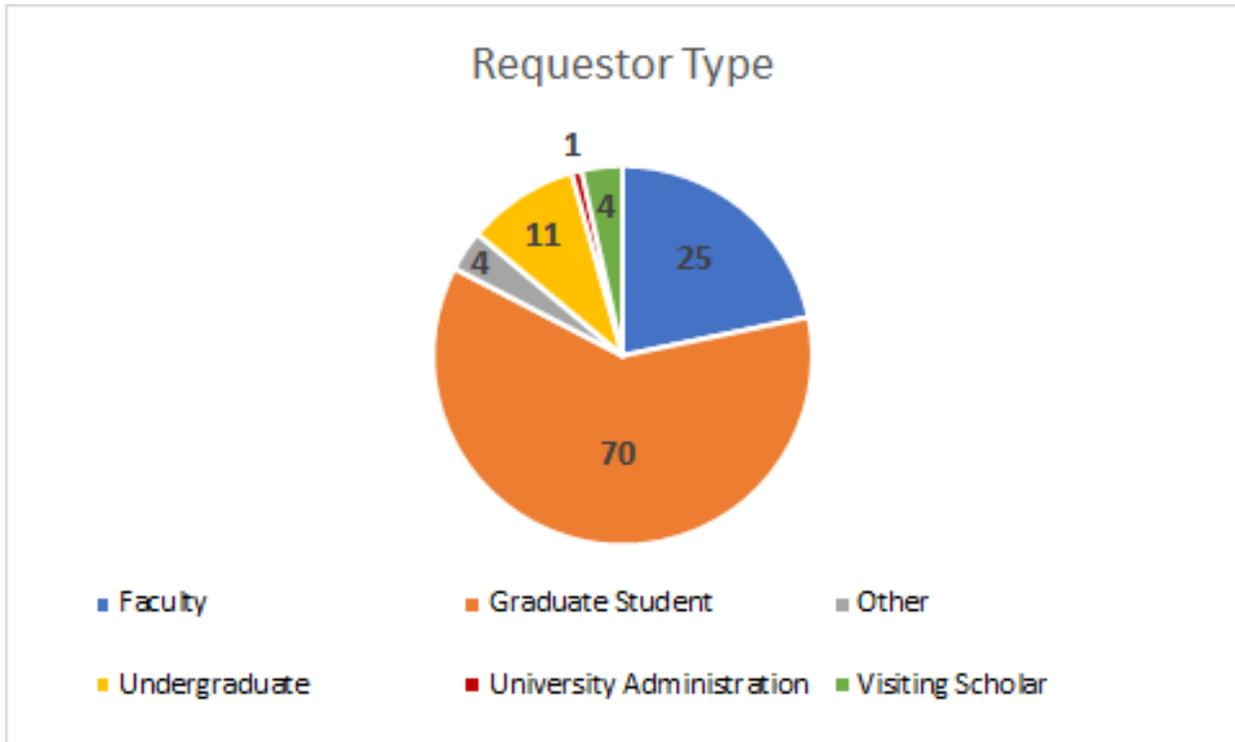
We did not differentiate between consultations that resulted in full systematic review projects versus other types of reviews or no resultant review. Future data collection efforts could possibly obtain this type of data if desired.



2017	Count	2018	Count	2019	Count
Jan 17	0	Jan 18	0	Jan 19	8
Feb 17	3	Feb 18	7	Feb 19	9
Mar 17	0	Mar 18	0	Mar 19	7
Apr 17	0	Apr 18	2	Apr 19	2
May 17	3	May 18	3	May 19	1
Jun 17	1	Jun 18	2	Jun 19	5
Jul 17	0	Jul 18	2	Jul 19	3
Aug 17	4	Aug 18	1	Aug 19	7
Sep 17	1	Sep 18	9	Sep 19	8
Oct 17	0	Oct 18	6	Oct 19	10
Nov 17	1	Nov 18	9		
Dec 17	0	Dec 18	1		
Total	13		42		60

Systematic Review Consultations by Requestor Type

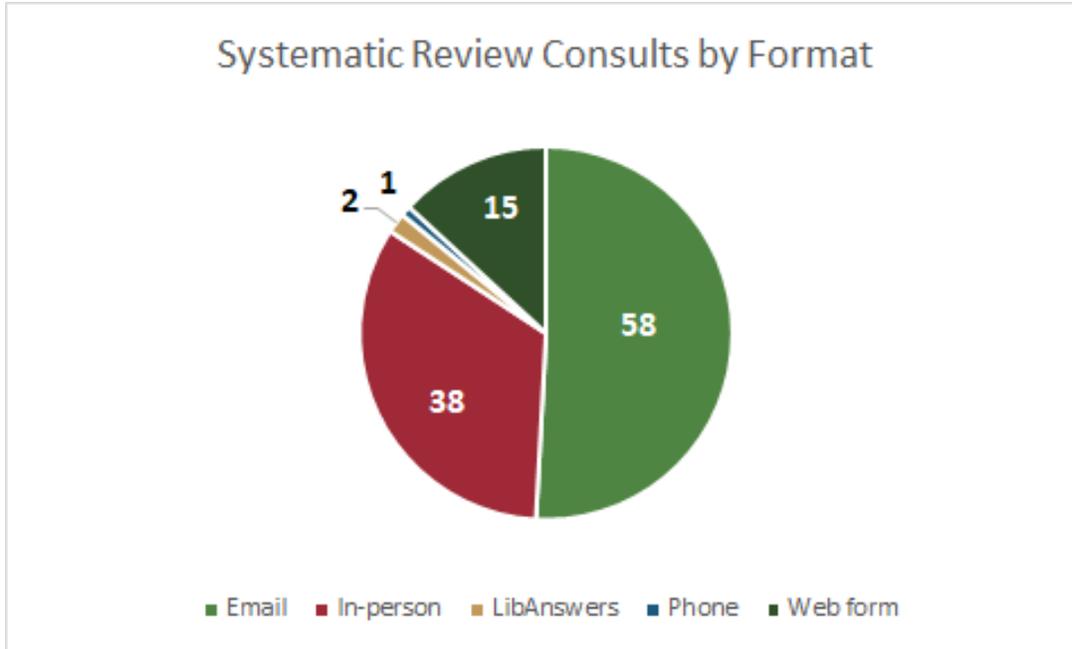
From January 2017 to October 2019, graduate students make up the majority of the requestors of consultations to support systematic reviews. The next largest set of requestors are faculty. These two groups are our target audience for this service and the data indicates that we are successfully reaching this audience. Many of the undergraduate students indicated that this supported their role as research assistants, or they were majoring in fields that widely use systematic reviews.



Requestor	Count	Percentage
Faculty	25	22%
Graduate Student	70	61%
Other	4	3%
Undergraduate	11	10%
University Administration	1	1%
Visiting Scholar	4	3%
Total	115	100%

Systematic Review Consultations by Format

The majority of 114 systematic review transactions are through email, in-person consultations or the web form. Some initial virtual contacts are followed-up by in-person appointments.

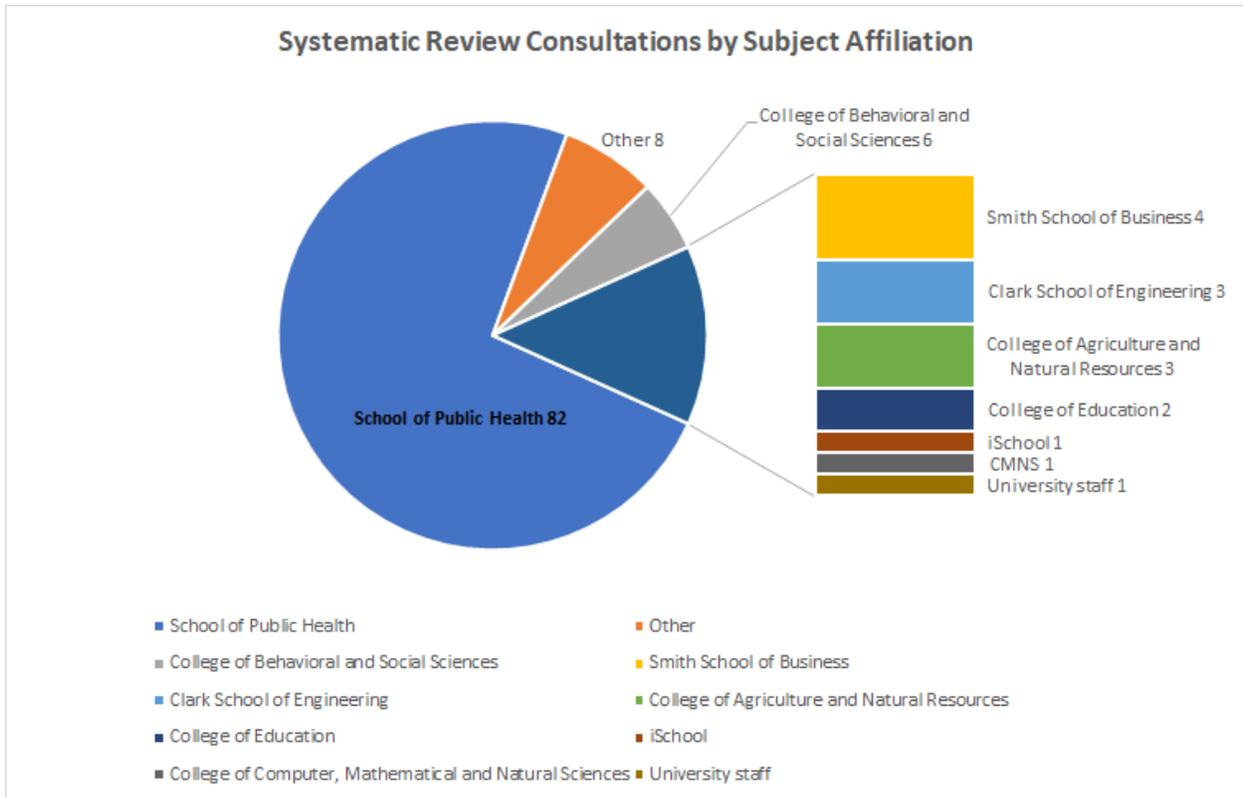


	UMD Libraries Total		SR Service	
	Count	%	Count	%
In-person	2350	28%	38	33%
Phone	433	5%	1	1%
Email	3361	41%	58	51%
LibAnswers	1117	13%	2	2%
Web form	118	1%	15	13%
Chat	680	8%	0	0%
Social media	21	0%	0	0%
No Data	217	3%	0	0%

When the systematic review service is compared to all transactions across UMD Libraries from January 2017- October 2019, we find that the percentages for each format vary only by a few percentage points. Web forms and LibAnswers (essentially a web form) are conversely related and have nearly the same amount of engagement across the SR services and in total. Chat has diverted a percentage of regular email messages for overall services, which are handled through email for the systematic review service. Conversational formats (phone and in-person) account for roughly the same percentage of transactions for the SR service compared to the total.

Systematic Review Patron Subject Affiliation

The highest percentage from 111 consultations come from the School of Public Health, but with small amounts of interest scattered across other colleges and schools. This indicates emerging interest in systematic reviews from outside of the health sciences disciplines.

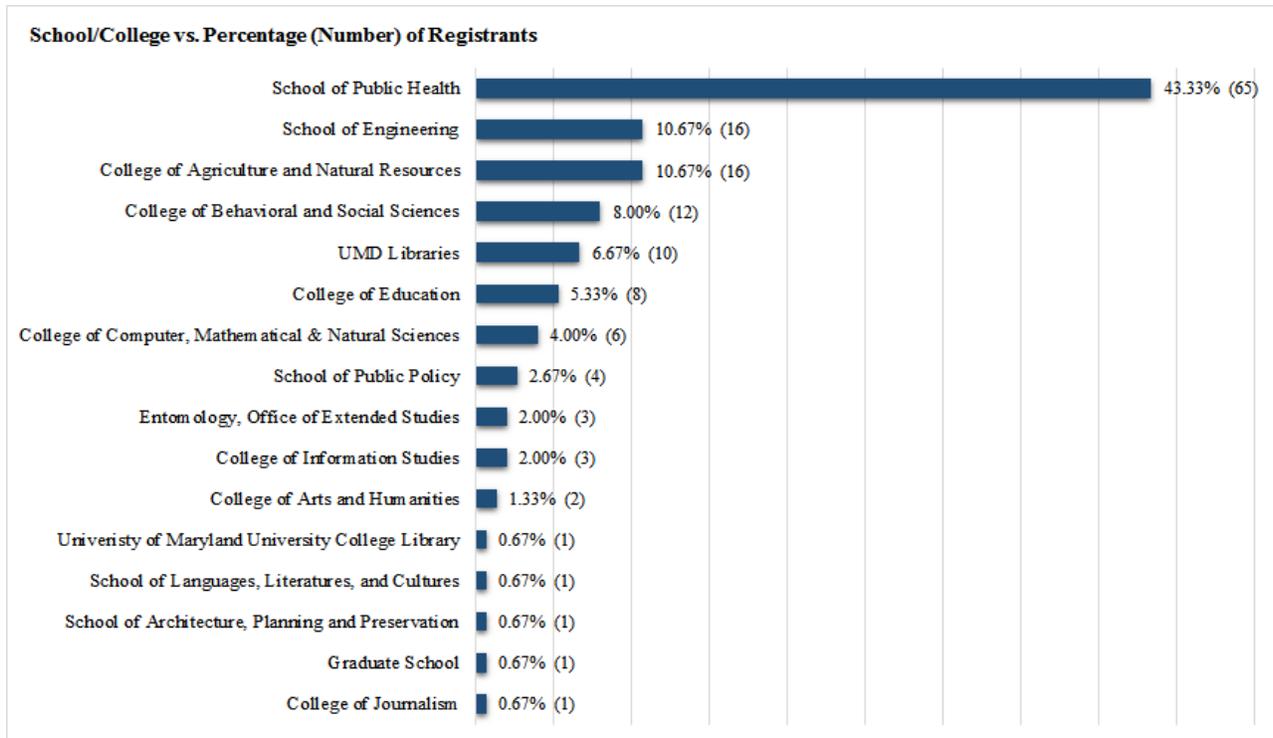


Affiliation	Count	Percentage
School of Public Health	82	73%
Other	8	7%
College of Behavioral and Social Sciences	6	5%
Smith School of Business	4	4%
Clark School of Engineering	3	3%
College of Agriculture and Natural Resources	3	3%
College of Education	2	2%
iSchool	1	1%
College of Computer, Mathematical and Natural Sciences	1	1%
University staff	1	1%

II. Systematic Review Workshops

Systematic Review Workshops by Registrants' affiliations and count

The highest percentage from 150 registrants come from the School of Public Health, Clark School of Engineering, and the College of Agriculture and Natural Sciences due probably of the fact that current Systematic Review team members have liaison responsibilities and have close relationships with these departments.



Affiliation	Count	Percentage
School of Public Health	65	43.33%
College of Agriculture and Natural Resources	16	10.67%
School of Engineering	16	10.67%
College of Behavioral and Social Sciences	12	8.00%
UMD Libraries	10	6.67%
College of Education	8	5.33%
College of Computer, Mathematical & Natural Sciences	6	4.00%
School of Public Policy	4	2.67%
College of Information Studies	3	2.00%
Entomology, Office of Extended Studies	3	2.00%
College of Arts and Humanities	2	1.33%
College of Journalism	1	0.67%
Graduate School	1	0.67%
School of Architecture, Planning and Preservation	1	0.67%
School of Languages, Literatures, and Cultures	1	0.67%
Univeristy of Maryland University College Library	1	0.67%