

# Publication rate of abstracts of papers and posters presented at Medical Library Association annual meetings\*†

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**Objectives:** This study sought to ascertain the publication rate of abstracts presented at the annual meetings of the Medical Library Association (MLA) for the years of 2002 and 2003. The secondary objectives were to examine possible reasons for non-publication and factors influencing publication.

**Methods:** A total of 442 abstracts from both meeting years, consisting of presented papers and posters, were examined. The 2 methods used to obtain a publication rate were literature searches and an online questionnaire sent to first authors. The questionnaire also asked abstract authors about reasons for non-publication and other factors that might have influenced their decisions about whether or not to submit the project for publication.

**Results:** The overall publication rate from the survey was 26.5%, and the publication rate found via literature searching was 27.6%. The most common reason given for non-publication was time restrictions. Also notable was the large proportion of abstracts written by librarians working at universities and those having 25 or more years in the library profession.

**Discussion:** Publication rates for abstracts presented at the Medical Library Association meetings for the years studied rank at the low end in comparison with other medical professional associations. Further research into factors affecting publication may reveal ways to increase this rate.

## INTRODUCTION

Evaluating the impact of meetings held by a professional organization can be difficult. One measure being utilized in the medical community is quantification of the publication rates of abstracts presented at meetings. It can be argued that ideas and research presented at conferences but not published in the formal literature are effectively lost to posterity. Additionally, low publication rates could lead attendees at the conferences to base decisions and practice on preliminary results or investigations that have not been put through the more rigorous peer-review process of formal publication, running the risk that subsequent studies could contradict the initial findings. Determining the factors that affect publication might also illuminate possible bias. If certain geographic regions or types of organizations, for example, are routinely publishing the majority of papers, evidence-based practice could become skewed.

The medical profession has been studying publication rates of meeting abstracts and the various possible factors affecting these rates for several years. A 2007 Cochrane systematic review analyzed seventy-nine biomedical research studies about publication of

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A supplemental appendix is available with the online version of this journal.

## Highlights

- Publication rates from posters and presentations at the Medical Library Association's 2002 and 2003 annual meetings were estimated at less than 28.0% using data from an author survey and literature search. In contrast, a Cochrane systematic review of 79 similar biomedical research studies found a mean publication rate of 44.5%.
- Respondents listed time restrictions as their primary reason for not submitting their presentations for publication.

## Implications

- Compared to biomedical conferences, relatively little of the information presented at Medical Library Association annual meetings is available as peer-reviewed evidence in the published literature.
- Each profession has different norms for the nature and style of information in presentations at meetings. The further presenters get from basic research, the more difficult it may be for them to conceptualize a presentation as a formal paper. Diverse publication rates between professions are likely to remain.
- Additional study could be aimed at further clarifying the reasons for non-publication and possible means to ameliorate them.

articles originally presented as meeting abstracts [1]. Results revealed that basic science experiments and randomized controlled trials were published more often than other types of studies and that studies with

positive results were more likely to make it into print. Length of time from presentation to publication was also examined, showing that the rate of publication for all articles was highest in the first three years after the meetings.

Additionally, the Cochrane review looked at the methods used in order to determine publication rates in the studies. Conducting a literature search was the most popular technique, although seventeen of the included studies used author questionnaires. Ten used both methods. Utilizing an abstract author survey allowed those researchers to ask about reasons for non-publication.

In surveying professional literature beyond the Cochrane review, numerous studies of publication rates were found for several different medical specialties, including radiology [2], urology [3], and orthopedics [4]. Studies were done about US associations and conferences, as well as European and Canadian ones. Some investigators searched the literature and surveyed those who successfully submitted posters or papers, hereafter referred to as abstract authors, and other investigators only searched the literature. Analyzed factors varied somewhat from study to study, with some disciplines finding such aspects as study design, podium versus poster, or time to publication worthy of analysis.

Overall publication rates of the reviewed studies varied considerably, from 24.0%–81.0%, although the majority fell in the 30.0%–60.0% range. The Cochrane review found a mean publication rate of 44.5% and projected a publication rate of 52.6% at 9 years [1]. Hashkes and Uziel surveyed abstract authors from the “Park City IV” pediatric rheumatology meeting, and their literature review of similar studies reported publication rates varying between 25% and 78% [5].

The pediatric rheumatology meeting is international in scope and takes place approximately every 5 years. The investigators of that study searched MEDLINE for evidence of publication and mailed out a survey to authors of abstracts. They found that geography, study topic and design, positivity of results, and study novelty had significant effects on rate of publication. Their overall publication rate was 36%. When respondents were asked why they did not submit abstracts for publication, the main reasons given were a lack of time, low priority given to writing a paper, or a desire to expand the study before submission. Lack of time was the greatest barrier.

The design of this Medical Library Association (MLA) study was based largely on the 2003 Park City rheumatology meeting paper. Although numerous publication rate studies were found for medical professional organizations, no comparable studies were found for MLA or other library science organizations. The MLA study sought to ascertain the publication rate of abstracts presented at MLA annual meetings for the years of 2002 and 2003. The secondary objectives were to examine possible reasons for non-publication and factors influencing publication.

## METHODS

Abstracts of both papers and posters presented at MLA '02 and '03, the annual meetings in 2002 in Dallas, Texas, and 2003 in San Diego, California, were examined for subsequent publication. Two years were selected for study to allow for an adequate sample size and comparisons between results of two different conferences. Choosing 2002 and 2003 permitted sufficient time for abstract authors to have had their papers published.

In 2002, according to the MLA abstract supplement, 101 posters and 88 papers were presented, and in 2003, 155 posters and 98 papers were presented, for a grand total of 442 abstracts. Some authors had more than 1 abstract, either in the same year or at both meetings, and there were a total of 396 first authors. Presentations clearly labeled in the program as being by invited guest speakers were excluded from these totals. A small number of invited speakers might have been included in the sample when there was no accurate way of determining status from the program.

Two methods were selected to estimate the rate of publication: a literature search and an online questionnaire. In February and March of 2008, investigators searched MEDLINE and CINAHL from 2002 to the current date. Queries were run for each first author's last name and first initial. If dozens or hundreds of author citations appeared, subjects or keywords were added to refine results.

A questionnaire was also designed to send to the first author listed for each abstract to ascertain self-reported publication rates and factors affecting publication. Contact information was found for 346 of the first authors. Most email addresses were found in the MLA membership database. If unavailable, an email address was sought from the authors' institutions' websites. Further investigation was done online with Google, searching for an author's name and “librarian” or “library.” With this method, some who have more unique names or who are actively involved in library committees were also located. Missing from the set of respondents were those who had changed their names since the meeting. Also, perhaps slightly underrepresented, were those who had changed jobs and did not have a visible online professional presence.

In January 2008, the first authors were emailed a SurveyMonkey questionnaire (Appendix, online only) modeled on that which Hashkes and Uziel used for the Park City rheumatology meeting. A reminder was sent after four weeks to encourage more responses. Abstract authors were asked not just about whether or not they had ever published their results, but also about basic demographic information and any possible reasons for not submitting manuscripts. While the Hashkes and Uziel study concentrated on factors such as study topic and positivity of results, the MLA questionnaire collected data from all respondents about MLA chapter affiliation, years in profession, and type of institution where the presenter was employed at time of the meeting. After being asked

whether or not their abstracts resulted in publication in either a peer-reviewed or non-peer-reviewed journal, published authors were asked to state the journal in which their paper was published. The remaining respondents were asked whether or not they had submitted their abstracts for publication. Those who did not were queried about the reasons they chose not to submit articles.

The abstract authors were first asked to select the main reason they did not submit articles for publication, and next asked to choose any secondary reasons. Selections listed on the questionnaire were a wish to more fully expand the paper or project, methodological problems, fear of rejection, time restrictions, and change in status such as moving or leaving a sponsoring institution. Respondents also had the option of writing in other reasons. By asking for more than one explanation, yet requiring a determination of which factor had the most influence, the investigators endeavored to promote more thought-out responses than a single-multiple choice question might have generated.

## RESULTS

Of the 346 surveys emailed, 155 were returned, for a response rate of 44.8%. Forty-one respondents (26.5%) reported that articles based on their abstracts had been published. Of the 442 papers and posters presented at the 2002 and 2003 MLA meetings, 122 citations were found in either MEDLINE or CINAHL, demonstrating an overall publication rate of 27.6%. These similar results suggest that author surveys and literature reviews are both indeed helpful ways to estimate publication rates.

The numbers broken down by specific years were as follows: Of 189 papers and posters presented at MLA '02, 47 were found to be indexed in either MEDLINE or CINAHL, for an overall publication rate of 24.9%. Likewise, for MLA '03, of 253 papers and posters presented, 75 were found in MEDLINE or CINAHL, for an overall publication rate of 29.6%. Note that all abstracts were checked for indexing in CINAHL and MEDLINE; however, if abstract authors had more than 1 abstract, they were asked to reply based on only the first abstract, chronologically. Links to the online meeting abstracts were included in the email instructions for reference.

Among the 41 respondents who had subsequently published papers based on their meeting abstracts, 30 reported publishing in peer-reviewed journals, 6 in non-peer-reviewed journals, and 5 in both. The most common periodical was the *Journal of the Medical Library Association (JMLA)*, followed by the *Journal of Hospital Librarianship* and *Medical Reference Services Quarterly*. A few other library publications and medical and nursing journals were also represented.

At the time of the survey in January of 2008, almost five to six years after the meetings, among those who had not yet had papers published, two respondents had submitted their papers for publication and were waiting for approval, and three more had been

accepted and were waiting for publication. Only one respondent reported that a paper had been rejected, and the reason given was that the topic had already been covered. Note that abstract authors whose articles had been accepted and were still in the prepublication process responded "yes" to having published and were counted that way.

Approximately three-quarters of the respondents had not submitted their abstracts. The most frequent reason selected for not submitting the project for publication was time restrictions, at 43.8% (Table 1). As expected, for those who could envision turning their presentations into articles, just like abstract authors from the Park City rheumatology meeting, MLA abstract authors considered lack of time to be their greatest barrier. For some, this was the only stated factor. Others wished to expand the project further or had moved on to other projects.

The next most frequent reason selected was "Other," at 37.5%. Responses in this category varied from simply never intending to publish the results of the project to not believing the project was substantive enough to merit a journal article. Eight percent had moved or were no longer with the sponsoring institution, and 7.1% wished to expand the paper or project further.

Fear of having a paper rejected was a real concern for a few presenters, but it was less of a detriment than for the Park City rheumatologists. Two MLA abstract authors listed fear of rejection as their primary reason for not submitting a paper, and 5 listed it as a secondary reason, for a total of 4.5%.

When asked to supply any secondary reasons for not pursuing publication, time restrictions continued to be the main explanation for 28.0% of the respondents. Here, 24.4% indicated that they wished to expand the paper or project further, and 13.4% admitted to methodological problems. Of the 28.0% who answered "Other," many said there were no secondary reasons or that they had moved on to other projects.

The demographic data of all abstract authors was also of some interest. The survey collected information about each respondent's place of employment, years of employment, and MLA chapter affiliation. Seventy percent of all respondents were from universities, in contrast to only 15.0% of respondents from hospital libraries. Some of the hospital library respondents were from university hospitals, leaving only 9.0% from other types of hospitals (Figure 1). This differed from the MLA 2003 Membership Survey, which had a distribution of 48.8% of respondents from academic libraries and 34.8% from hospital libraries [6].

More than half of the total respondents reported being in the library profession for more than 20 years, including 34.0% who indicated they had been in the field for 25 or more years (Figure 2). Having 51.0% of the respondents in the profession for 20 years or more indicates that many of the abstract authors possess a wealth of experience. The MLA 2003 Membership Survey reported that 52.6% of responding members

**Table 1**  
Reasons authors did not submit abstract for publication

Reasons authors did not submit abstract for publication	Main reason: number of responses (n=112)	Secondary reasons: number of responses (n=82)
Wish to expand paper/project further	8	20
Methodological problems	2	11
Fear of rejection	2	5
Time restrictions	49	23
Moved/no longer with sponsoring institution	9	5
Other: Not suitable for publication	19	4
Other: Never intended publication	10	—
Other: Lost interest	3	—
Other: Lost support	2	4
Other: Moved on to other projects	1	5
Other: Miscellaneous	7	6
No other reason	Not applicable	7

\* Total number of "Other" responses for the main reason was 42, with some responses falling into more than 1 category. Respondents could also list more than one secondary reason.

had been in the library and information field for more than 20 years [6], which indicates that the experience level of abstract authors was representative of the profession.

The number of respondents varied by region: 51% came from MLA chapters on the east coast, 31% from chapters in the center of the United States, and 18% from west coast chapters. This was slightly different from the current distribution of MLA members (38%, 47%, and 15%, respectively) (Figure 3).

**LIMITATIONS**

Limitations of the study include an imperfect sample of abstract authors due to the inability to locate some of them, the possibility that some invited speakers were included in the sample, and the fact that some study participants had more than one meeting abstract. To minimize bias in the latter case, abstract authors were asked to respond regarding only their first abstract. These limitations mean the literature search results could be more representative; however, limitations exist there as well. Due to time constraints,

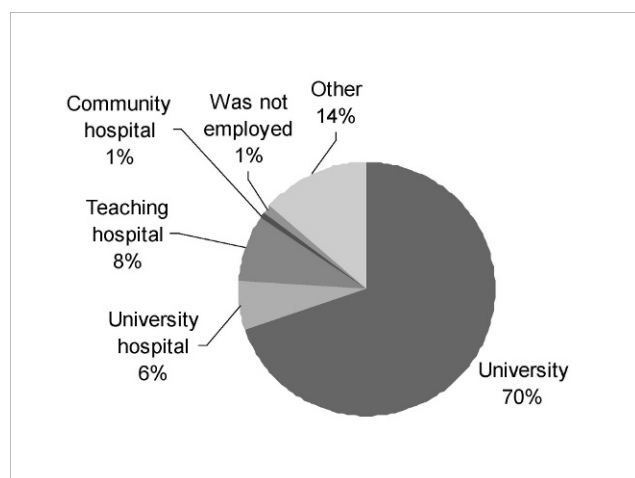
MEDLINE and CINAHL were the only bibliographic databases searched for evidence of publication. The more general Library and Information Science Abstracts database might have revealed additional citations, and some articles might not be indexed at all.

**DISCUSSION**

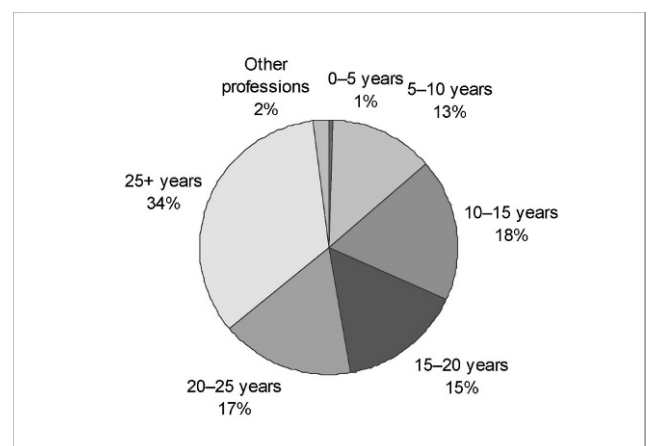
The publication rates of abstracts from the 2002 and 2003 MLA annual meetings were 24.9% and 29.6% respectively, for a mean of 27.6%, when measured by independent searching of the literature. The self-reported publication rate was 26.5% overall. The most frequent reason selected by MLA abstract authors for not submitting their projects for publication was time restrictions at 43.8%.

The publication rates from both the MLA author survey and from the literature searches revealed that the MLA rates were within the range of medical professional associations' reported publication rates; however, the MLA rates were well below the mean rate of 44.5% that the Cochrane systematic review found [1]. The type of abstract might be a factor.

**Figure 1**  
Place of employment of survey respondents

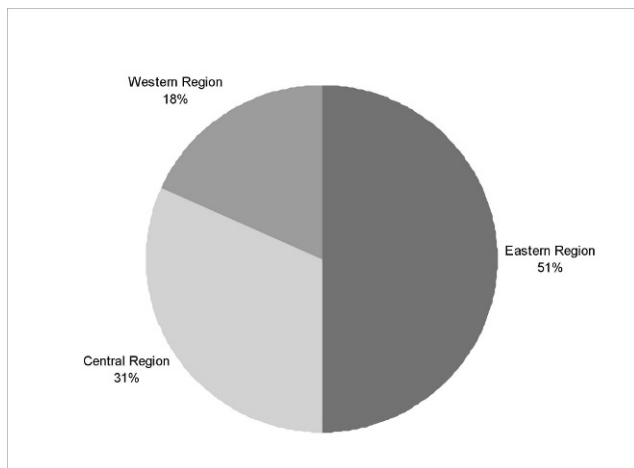


**Figure 2**  
Years in profession of survey respondents





**Figure 3**  
Respondents' chapter affiliations\*



\* Eastern=Mid-Atlantic Chapter, North Atlantic Health Sciences Libraries, New York-New Jersey Chapter, Philadelphia Regional Chapter, Pittsburgh Regional Chapter, and Upstate New York and Ontario Chapter; Central=Midcontinental Chapter, Midwest Chapter, South Central Chapter, and Southern Chapter; Western=Hawaii-Pacific Chapter, Medical Library Group of Southern California and Arizona, Northern California and Nevada Medical Library Group, and Pacific Northwest Chapter.

Medical abstracts usually report research studies, with randomized controlled trials and basic science studies having the highest rates of publication. Library science posters and papers presented at meetings are often designed to share successful projects and may not always follow strict research design. As professionals accustomed to seeking the best possible evidence in the area of medicine, perhaps some medical librarians are so aware of any methodological limitations that they minimize the value that their investigations could contribute to library scholarship. An analysis of topics and study design of abstracts compared to other professional organizations might be revealing.

Alternatively, perhaps a sense of completion follows presentation at a meeting, and librarians may be intrigued about pursuing something new. Also, unlike a meeting, which has a strict timeline to follow, writers may be tempted to keep postponing manuscript submission until the next issue deadline. Some abstract authors might be more apt to self-publish summaries of their presentations in an online format, which takes less time than writing for a professional journal does. Although blog postings and other online social networking communications are now quickly spreading word about exciting professional developments, they are no replacement for more complete reports from the original source.

Fear of rejection did not seem to be a major factor influencing non-publication for the MLA survey respondents. Two MLA abstract authors listed fear of rejection as their primary reason for not submitting

a paper, and 5 listed it as a secondary reason for a total of 4.5%. In contrast, 13.4% of the rheumatologists reported a fear of rejection. It is possible that medical journals have stricter submission policies as well as greater competition.

Some of the "Other" responses suggest that some abstract authors perceive different purposes between MLA presentations and published papers. For example, presentations may have been overviews or non-research-based education described by authors as "descriptive," "entertainment," or "visual." One respondent wrote, "It was never intended for publication. It was intended for discussion and provocation—as a poster."

The percentage of abstract authors from universities compared to abstract authors from other institutions suggests that work environment plays an important role in determining who presents papers or posters at MLA annual meetings. The proportion of university staff to hospital staff between this questionnaire and the MLA membership survey suggests that MLA presenters are not representative of the general membership. If published articles are also dominated by authors from universities, hospital librarians may have a proportionally smaller research base to draw from when looking for studies about institutions similar to their own. Although hospital and academic libraries share many of the same challenges, each type has unique needs. Extrapolating ideas for evidence-based practice from another setting could have limitations.

Academic librarians may write articles that report research results or descriptions of new initiatives as part of their pursuit of tenure. Thus, some academic librarians may have more institutional support for research and writing than hospital librarians, who are often solo librarians. Time set aside for research activities and encouragement from supervisors, peers, and mentors can make a difference. Hospital librarians constantly reappraise how to spend time as they give priority to meeting requests for information and research related to patient care, as well as library administrative duties, technology updates, collection development, and management. Especially in periods of understaffing, research may be neglected unless it is a workplace or personal priority. Presenting a poster or paper or writing an article for publication are related, yet widely different, activities. With limited time available for professional development, personal values, motivation, interests, and skills influence involvement in writing and research.

## CONCLUSION

The impact of professional meetings can be measured by the publication rate of abstracts presented at those meetings. Publication of meeting abstracts is affected by many factors, which in turn can have their own impact on a profession and its practice. The MLA study reported here found time to be the most important factor influencing publication rates and type of institution the factor most related to who

presents abstracts or papers at MLA meetings. Other medical professional organizations have found that geography, study topic and design, positivity of results, or study novelty had a significant effect on rate of publication. Further research could explore how topics and study design may influence publication rate. A qualitative study could expand on what factors facilitate or impede the path to publication and examine whether or not the writing and publishing process gets easier with experience. One of the main questions is not just what discourages some abstract authors from writing papers after presentations and getting them published, but what may be different about published authors that prompts them to pursue publication. Becoming aware of those differences may provide clues about more ways to motivate and, perhaps, educate others.

Encouraging the eventual publication of meeting abstracts in formal literature is a worthy goal for MLA members. Publication helps assure better access to the information, and a further vetting of the content can better hone the quality of reported results. The *JMLA* Guidelines for Converting an Oral Presentation to a Manuscript for Publication are an attempt to assist members in this endeavor [7]. To maintain momentum, perhaps some abstract authors might be inspired by a post-meeting note encouraging pursuing publication to reach a broader audience. Regardless of studied factors, further research on publication rates from MLA meetings from past or future years would verify if the rates from this study are indicative of the norm in the medical library profession or if the rates change over time for reasons not yet revealed.

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