INTRODUCTION

Global Health: Science and Practice (GHSP) (www.ghspjournal.org) is an open-access, peer-reviewed online journal that aims to improve health practice, especially in low-income and middle-income countries, emphasizing the details of how global health programs are implemented to help others replicate and adapt successful approaches. The journal is published by the Knowledge for Health Project at the Johns Hopkins Center for Communication Programs with support from the United States Agency for International Development. We began our systems review and selection process in February 2012, launched our online manuscript submission and peer review management system in November 2012, and published our inaugural issue in March 2013. We publish quarterly issues online but also individual articles in between the issues as the articles are finalized. All articles are licenced under the Creative Commons Attribution License. On average, we publish 15 articles per issue, including editorials, commentaries, and original articles, and we currently receive, on average, 35 submissions each month.

From the outset, we intended on using an online manuscript submission and peer review system to manage submissions. With a small number of editorial staff, all of whom had limited formal experience in the scholarly publishing industry, we deemed such a platform a critical component to facilitating management of the article workflow process and also to helping establish credibility of the journal.

This case study describes GHSP’s experience in evaluating and implementing a manuscript management system to help inform other journals – particularly new journals – as they embark on this process.
themselves. The case study also highlights, in our experience, key features of such a system that make it a worthwhile investment for not only large publishing operations but also small journals.

**PLATFORM EVALUATION AND SELECTION PROCESS**

As a new start-up journal, GHSP had no prior experience with manuscript management systems. In order to select the best platform to meet the journal’s needs, we followed a four-stage process:

- **Stage 1: Define internal requirements**
- **Stage 2: Explore platform options**
- **Stage 3: Select platform of choice**
- **Stage 4: Configure and test the platform**

**Stage 1: Define internal requirements**

We spent a few months learning about the publishing field to identify the systems and processes we needed to develop before we officially started the tendering process. Discussions with colleagues in the publishing field as well as a review of guides to assist new start-up journals were helpful in framing our general requirements for the needed platforms. Selected examples of such guides include ‘Publishing Open-Access Journals: A Brief Overview From the Public Library of Science’ (2004) and ‘Setting Up an Editorial Office’ (from the International Society of Managing and Technical Editors).

From this formative research, we developed a number of requirements of a manuscript management platform, including the following:

- Fee structure based on expected submission of 80–100 articles each year, with the potential for growth over time
- Short set-up time and low start-up fees
- Flexible length of contract
- Ability to handle a range of article types
- Ability to manage different review processes depending on article type (i.e. peer review vs. in-house editorial review)
- Flexibility to customize evolving workflow solutions
- Ability to deliver routine metrics, such as number of submissions and time to process articles through different points in the workflow
- Ability to integrate a database of peer reviewers and match reviewers to articles through keywords
- Ability for editorial staff to generate and modify email messages for authors and peer reviewers, to keep track of due dates, and to send out automatic reminders when appropriate

**Stage 2: Explore platform options**

Our discussions with colleagues in the publishing field directed us to a number of manuscript management systems to consider. In total, we considered 10 systems (Table 1). Starting around February 2012, representatives from each of the 10 vendors provided our staff an overview of their respective systems’ key features and capabilities via teleconference. Some provided live demos of the systems, which helped us become familiar with the interfaces and gauge which interface the staff (as well as authors and peer reviewers) would be most comfortable with.

To more easily compare the features and offerings of the platforms, we created a spreadsheet in Microsoft Excel to collect information acquired about the 10 platforms. With this information, we discovered that many of the manuscript management systems provided similar types of core features and functionality – for example, customization of the workflow per editorial office and per article type, delivery of routine metrics, and generation of automated reminders. We also realized, however, that the industry-leading systems provided the added value of continual investments in their systems both to ensure stability and to offer upgrades. They also offered more advanced functionality that could be particularly useful for journals as they grow their operations, for example, integration with data standards such as ORCID (registry of unique identifiers for authors).

Thus, we narrowed the options down from 10 to 3: Editorial Manager, EJPress, and ScholarOne. These were among the industry-leading manuscript management systems, had similar features and cost structures, and were deemed affordable by GHSP.

**TABLE 1** Manuscript submission and peer review systems evaluated by Global Health: Science and Practice journal.

| Manuscript system                  | Company               | Website                                      |
|------------------------------------|-----------------------|----------------------------------------------|
| Bench > Press                      | HighWire Press        | http://highwire.stanford.edu/publishers/benchpress.dtl |
| EdiKit                             | bepress               | http://www.bepress.com/editors.html          |
| Editorial Express                  | University of Maryland| http://editorialexpress.com/e-editor/        |
| Editorial Manager                  | Aries Systems         | http://www.ariessys.com/software/editorial-manager/ |
| EJPress                            | eJournal Press        | http://www.sjournalpress.com/ejpress.html    |
| epress                             | University of Surrey  | http://www.epress.ac.uk/                     |
| PeerTrack (powered by Editorial Manager) | Allen Press         | https://allenpress.com/services/publishing/peertrack |
| PowerReview                        | Aptara                | http://www.aptaracorp.com/                  |
| Rapid Review                       | Cenveo Publisher Services | http://www.kwglobal.com/rapid-review/         |
| ScholarOne                         | Thomson Reuters       | http://scholarone.com/                       |
Stage 3: Select platform of choice

One of the key differences between manuscript management systems is the design and usability of the interface – that is, how different elements of the interface, including input controls (e.g. buttons, text fields, checkboxes, and dropdown lists), navigational components (e.g. pagination and search field), and informational components (e.g. tooltips, progress bar, and notifications), act to help authors, peer reviewers, and editorial staff accomplish their respective tasks. In fact, many of our colleagues in the publishing field advised us that the final decision of which system to select often comes down to the comfort level of the editorial staff with a particular interface.

Global Health: Science and Practice ultimately chose Aries Systems’ Editorial Manager®. Editorial Manager grew out of Editorial Assistant, a desktop manuscript-tracking application used by journals since the early 1990s. Editorial Manager (the Web-based version) was launched in the spring of 2001, and it is currently deployed by nearly 7,000 scholarly publications, including journals and books.

We selected Editorial Manager because the editorial staff personally felt the interface was clean, simple, and easy-to-use. For example, the manuscript metadata that authors fill out are organized into short screens, usually with only one or two fields per page, and authors can see their progress as they complete the fields, allowing them to anticipate the types of additional information and time needed to complete the submission. ScholarOne and EJPress had similar manuscript submission forms. Because Editorial Manager was used by established global health and medical journals, we considered that some GHSP authors would already be familiar with the interface from their experiences with these other journals (many other medical journals use ScholarOne or EJPress). In addition, we appreciated that Aries offers free, regular upgrades to their clients. Furthermore, Aries representatives had proved to be exceptionally helpful to GHSP staff throughout the evaluation and implementation process.

In July 2012, GHSP signed a contract to partner with Aries Systems’ Editorial Manager. The tendering process – from the time GHSP started discussions with platform representatives and receiving proposals to the time of contract signing – took about 5 months, primarily because GHSP delayed the final decision until a managing editor was hired in June 2012.

Stage 4: Configure and test platform

The first of four trainings on Editorial Manager took place on 17 July 2012, and manuscript upload began on 26 November 2012 – a period of more than 4 months (Fig. 1). On average, journals take 2 to 3 months to conceptualize, configure, and test the system. Our ambitious goal had been to complete set-up within 45 days, but we had a steep learning curve to overcome; although we had a long history in the global health field, we had limited formal experience in the scholarly publishing field (from the publishers’ perspective). In particular, not only did the managing editors have to learn how to configure and use Editorial Manager but they also had to develop new workflows for receiving and reviewing manuscripts that fit the needs of the editorial staff and the goals of the journal.

In addition, we were simultaneously evaluating and implementing other needed systems, such as online hosting platforms and composition vendors. Established journals with workflows already in place could likely complete configuration of a new manuscript management system in a much shorter time frame.

As we were configuring Editorial Manager, we also were simultaneously managing and tracking new article submissions manually, using Microsoft Excel spreadsheets and personal e-mail accounts. The system’s content load of this existing manuscript pipeline was complete in November 2012, and the system was operational for manuscript submission by month’s end.

FEATURES OF MANUSCRIPT MANAGEMENT SYSTEMS CONSIDERED VALUABLE BY GLOBAL HEALTH: SCIENCE AND PRACTICE

While we used manual processes for only a few months prior to publishing the inaugural issue, and thus quantification of before-and-after improvements are not feasible or practical, the benefits of using an online system to manage manuscripts and peer reviews were immediately apparent to us, as the journal moved to more automated processes. In particular, six features of such a system have been key to helping us manage the journal’s processes, particularly with respect to peer review: (1) automated tracking of manuscripts through the peer review workflow; (2) selecting appropriate peer reviewers; (3) assigning alternative reviewers; (4) sending letters and reminder notifications; (5) facilitating the blinded review process; and (6) monitoring and evaluating journal processes. These core features are generally included in the standard set-up of any manuscript management system, but we refer specifically to Editorial Manager as that is the specific system with which we have experience.

![Timeline of Global Health: Science and Practice's manuscript management system evaluation and implementation process.](image-url)
Automating tracking of manuscripts through the peer review workflow

Deployment of Editorial Manager substantially reduced the amount of time we spent updating manuscript details and the progress of manuscripts through the peer review workflow by automatically tracking those milestones. For example, instead of keying into a spreadsheet detailed information about each manuscript, such as the article title, author names, and date submitted, Editorial Manager captures and stores all this information when the corresponding author submits the manuscript into the system. In terms of the peer review workflow, Editorial Manager tracks reviewers who have accepted as well as those who have declined the invitation to review, allowing us to see at a glance whether additional peer reviewers are needed for a particular manuscript. Editorial Manager also tracks how many peer reviewers have completed their reviews, how many reviews are still pending, and how many are late. Such efficiencies through automation have become even more important to us as the volume of submissions has increased since the launch our inaugural issue.

Selecting appropriate peer reviewers

During weekly meetings, the GHSP editorial team decides which manuscripts should move on to peer review and proposes appropriate peer reviewers with the necessary expertise and experience in the particular field of interest. GHSP also can search the internal database of reviewers in Editorial Manager for appropriate reviewers, using a taxonomy that classifies the reviewers’ areas of expertise. The internal database comprises reviewers we have used for previous articles as well as volunteer candidate reviewers who have expressed interest in reviewing articles for GHSP. Also, Editorial Manager added new functionality in spring 2015 that links to a URL of a hosted CV within a reviewer’s ‘people record’, making it possible to search for appropriate reviewers based on content included in the candidate reviewers’ CVs. Because GHSP’s taxonomy is broad, the ability to search for reviewers using more detailed keywords used in the CVs facilitates and expands our ability to search for appropriate reviewers. An additional and potentially useful feature of the internal database is the ability to review the past performance of existing peer reviewers in terms of number of recent reviews, overall turnaround time, and quality of peer reviews. This feature can facilitate choosing reviewers who will provide high-quality reviews in the requested time frame. As a relatively new journal, we have limited data on our pool of peer reviewers, but as we continue to grow, we anticipate using this feature more fully.

Assigning alternative reviewers

With Editorial Manager, a number of main and ‘back-up’ peer reviewers can be assigned to a manuscript so that when a main reviewer does not respond to, or declines, an invitation to review within a defined period of time, an alternative reviewer can be invited automatically. Given there are many manuscripts under consideration at different points throughout the peer review process (e.g. initial screening, peer review, and undergoing revision), automating peer reviewer assignments to the extent possible helps to ensure papers advance through the workflow as quickly as possible.

Sending letters and reminder notifications

Editorial Managers gives us the ability to send letters to authors and reviewers automatically with minor customization to existing templates. The system can also be configured to send out reminders to authors, peer reviewers, and editors of upcoming due dates for assigned tasks at predefined intervals (e.g. 5 days before the due date). We find the reminder letters to peer reviewers, in particular, serve as helpful triggers to peer reviewers to complete the assigned task (or to request an extension). Because GHSP reviewers are volunteers who have many demands on their time, it is understandable for such tasks to get pushed back until prompted with a reminder.

Facilitating the blinded review process

Global Health: Science and Practice operates a double-blind peer review process, in which the identities of both the reviewers and the authors remain anonymous to each other. Authors are instructed not to include any author-identifying information, such as author names, contact information, or organizational affiliations, in the main manuscript file. Instead, authors complete online forms in Editorial Manager that capture this type of information. Editorial Manager then sends blinded versions of any letters to authors and reviewers. Reviewers also receive a blinded version of the submission files, while editorial team members receive a version with an automatically generated cover letter that includes the author-identifying information to help facilitate editorial discussions.

Monitoring and evaluating journal processes

We strive to make the submission, peer review, and publishing process as efficient as possible, with the goal of initially screening submitted manuscript by the editorial team within 2 weeks of submission, completing peer review within 2–4 weeks, and issuing a final accept/reject decision on all manuscripts within 12 weeks of submission. Editorial Manager provides many reporting tools to measure such information, including the length of time from submission to first accept decision, from submission to first revise decision, and from submission to publication. With this information, we can identify bottlenecks in the workflow and develop appropriate solutions.

Of course, no system comes without its challenges. There are some instances in which the functionality is not as intuitive or seamless as we would prefer, for example, cancelling out of editing a submission or registration and confirmation of new co-authors. However, Aries continually makes improvements to the Editorial Manager system, taking into account user feedback and requests. Furthermore, Editorial Manager provides a number of ways for journal publishers to get ongoing support, including a built-in, searchable help system, a third-party facilitated listserv, annual user group meetings in Boston, Tokyo, and London, and, most importantly, direct contact with a nominated account coordinator.
CONCLUSION

Manuscript management systems can help improve efficiencies in journals' peer review processes by automating tasks and facilitating monitoring and evaluation of journal processes. With nearly 3 years of experience using Editorial Manager, GHSP has identified several key features of such a system that can facilitate management of peer-reviewed journals, including automatically tracking milestones in the peer review workflow, selecting and assigning reviewers, and sending letters and reminders based on templates that are customizable. Configuration and testing of manuscript management systems can take, on average, 2 to 3 months but potentially longer for new start-up journals - as was the case with GHSP - that also have to define submission and peer review workflows. While the rich functionality and features of manuscript management systems make the systems invaluable for publishers with large operations and many journals, GHSP has found that even the core functionality also makes the systems a worthwhile investment for small operations with single journals.

COMPETING INTERESTS

Alison O'Connell is the marketing manager for Aries Systems, the company that developed and maintains Editorial Manager. The other authors declare no competing interests.

ACKNOWLEDGMENTS

This case study was supported by the Knowledge for Health-II Project, funded by the Office of Population and Reproductive Health, Bureau for Global Health, US Agency for International Development, Cooperative Agreement No. AID-OAA-A-13-00068. The views expressed in this document do not necessarily reflect those of the US Agency for International Development or of the US government.

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