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William Olmstadt

Washington University School of Medicine in St. Louis

Judy Hansen

Washington University School of Medicine in St. Louis

Robert J. Engeszer

Washington University School of Medicine in St. Louis

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The Mobile School Health Information Initiative:
Creating and Sustaining a Free Curriculum for P-12 Staff to Find Credible Health Information

(Corresponding Author)
William Olmstadt, MSLS, MPH, AHIP
Public Health Librarian
Washington University School of Medicine
Becker Medical Library
Campus Box 8132, 660 S. Euclid Ave.
St. Louis, MO 63110
Voice: 314-362-4734
FAX: 314-454-6606
olmstadtw@wustl.edu

Judy Hansen, MAEd, MLIS
Consumer Health Librarian
Washington University School of Medicine
Becker Medical Library
Campus Box 8132, 660 S. Euclid Ave.
St. Louis, MO 63110
Voice: 314-454-2350
FAX: 314-454-2323
hansenj2@wusm.wustl.edu

Robert J. Engeszer, MLS, AHIP
Associate Director
Washington University School of Medicine
Becker Medical Library
Campus Box 8132, 660 S. Euclid Ave.
St. Louis, MO 63110
Voice: 314-362-4735
FAX: 314-454-6606
engeszer@wustl.edu

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Running Head: Mobile School Health Information Initiative

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ABSTRACT

Three health sciences librarians created a curriculum to connect pre-school – grade 12 (P-12) personnel with credible health information. The course focuses on MedlinePlus® and KidsHealth.org®. They obtained external funding to deliver a revised curriculum for free throughout the metropolitan area. The funded portion of the project reached 93 people at 8 sites. Efforts to sustain the program beyond its funded cycle have reached another 33 people. Evaluations indicate the curriculum successfully equips staff to be health information champions within their schools. Participants report increased confidence locating credible health information. Written comments indicate both short-term gains and sustained use of the knowledge.

INTRODUCTION

Being health literate requires knowing where to locate credible information to answer health questions (Centers for Disease Control and Prevention 2011). Health science libraries have a long history of reaching out to communities to provide credible health information, typically through public libraries (Eakin, Hannigan and Jackson 1980). Comparatively less is written about medical libraries working directly with P-12 schools, staff, and students.

In early 2009, the authors received feedback during an outreach event at Becker Medical Library that a curriculum on locating credible health information would be beneficial for local school personnel. It was noted that school librarians, guidance counselors, nurses, and social workers were being asked complex questions about the health of students, though their training may not have included methods for identifying, evaluating and disseminating answers to such questions. Moreover, many of these professionals were practicing alone, with no extensive health resources to consult (Pasco 2011). This presented a unique opportunity to offer the expertise of the health science library to improve school health, while providing meaningful professional development and training for P-12 personnel.

After six months of collaboration with three local groups, a pilot curriculum was delivered for free in late 2009 to 22 people. Registrants were a mixture of school librarians and school health educators. The pilot was a half-day workshop covering credible sources of health information and health career guidance for students. Response to the pilot was overwhelmingly positive. The library received requests to deliver the curriculum locally.

The authors applied for funding from the National Network of Libraries of Medicine, and obtained a one-year grant (February 2010 – February 2011) to offset the costs of delivering the

curriculum, reproducing materials, travel, and salary support for additional staff time. Using data from public and private schools, an estimated 100 P-12 personnel were targeted for the course.

THE CURRICULUM

The pilot course had the luxury of hosting registrants for a half day. The revised curriculum needed to be more concise, and was renamed the Mobile School Health Information Initiative (MoSHI) as part of the grant's marketing plan. Authors reviewed the pilot content and decided on a curriculum for the grant that equally covered MedlinePlus® from the National Library of Medicine and KidsHealth® from the Nemours Center for Children's Health Media. The revised course could be delivered in 60-90 minutes, depending on the needs of the audience. If additional time was available, instructors could cover additional resources from the National Library of Medicine's suite of credible health information web sites, where to find sample free lesson plans, and how to evaluate a medical information web site. Hands-on practice was ideal, but not always available.

EVALUATION

For the grant, authors developed a logic model specifying both short-term (in-class) and near-term (3 month) outcomes. In-class evaluations were distributed with course workbooks and returned on-site (see Figure 1). Near-term evaluations were distributed via the SurveyMonkey® web application (see Figure 2). A 3 month follow-up period was chosen to allow for summer vacations of personnel with 9-month contracts. For the web evaluation, participants received one e-mail reminder if they had not responded.

The in-class evaluation focused heavily on retention of the material presented. The 3-month evaluation measured usage of specific health web sites in that time frame, completion or

planning of activities using the curriculum materials, and retention of confidence in locating credible health information.

Washington University's Human Research Protection Office approved all evaluations for exemption.

RESULTS

During the funded period, the authors trained 93 P-12 personnel at 8 different sites throughout the metropolitan area (see Table 1). The majority of participants were school librarians, though personnel with counseling, nursing, teaching and administrative responsibilities also took the class. Some participants had multiple roles, which posed challenges for evaluation. Sites comprised both public and private schools in urban, suburban and semi-rural areas.

Participants returned 85 in-class evaluations (91% response rate). The results from the in-class evaluation suggest that the curriculum met or exceeded its short-term goals of (a) providing credible health information to integrate into the curriculum and (b) correctly naming at least one credible health information source on the web.

Participants answered 47 web evaluations from 87 usable e-mail addresses (54% response rate). Some participants declined to provide an e-mail address. The average time between training and the invitation to the web evaluation was 88 days, or about 2.9 months. The average time between non-response and a reminder e-mail was 11.5 days. Web evaluation results suggest the curriculum met its near-term goals of continued confidence and usage of credible health information products after the curriculum. Sixty percent of those responding to the web evaluation reported being "very confident" locating credible health information. Eighty-four

percent of those responding to the web evaluation reported continued use of various credible health information sites.

Anecdotal evaluations were almost uniformly positive. Comments included:

- “Totally useable information.”
- “...we use this with health classes frequently - our teachers love this resource for all the right reasons...”
- “We have a tool to talk to our chemistry and physical education teachers now. I can’t wait to get back to my library.”
- “I am a middle school librarian and I teach a unit on heart health each semester to my health classes. I shared these resources with the students and teachers.”
- “...have shared it with my school nurse. I even shared it with my husband who is in the Worker's Compensation Claims profession.”

SUSTAINABILITY

When the grant that supported the project ended, it was decided that funding for the additional staff time needed would be covered internally so that the project could continue at a frequency of one session per month. Since then, staff have delivered the curriculum to a local university as part of a required course for education students prior to their student teaching. More recently, the project broadened its reach by presenting the curriculum at a regional educational technology conference. Efforts to sustain the project have reached another 33 P-12 personnel.

Project staff maintain a website about the project at <<http://becker.wustl.edu/moshi>> and an entry in the Library Success Wiki at <http://www.libsuccess.org/index.php?title=Services_for_Health_Information_Consumers>.

More recently, the staff hosted a well-received poster presentation at a 2012 campus community service fair <http://digitalcommons.wustl.edu/becker_pubs/24>.

IMPACT

MoSHI used a good working relationship with the campus Geographic Information Systems (GIS) office to create maps representing the geographic impact of the funded portion of the project, based on the number of participants in reported ZIP codes (see Figure 3). These maps provided a graphical representation of success to campus administrators, local nonprofits, and the National Network of Libraries of Medicine, all of which often measure results by ZIP code.

LIMITATIONS

The authors do not assert *causation* between our curriculum and efficient health information seeking. All evaluations were voluntary and self-reported.

MoSHI was not designed as an experiment, and permission was not sought from the Human Research Protection Office to link respondents with evaluations, use control groups, or obtain baseline data for future comparison. A true study in this population would require objective measures of health information literacy or P-12 staff knowledge, and might require permission to work with minors. Such research is beyond the general practice of the authors.

The project missed some key evaluation elements. Instructors gathered no data about the experience or age of the participants. There are no evaluation data to measure the use of health information resources by younger or newer P-12 staff. Noting personnel who were in a dual role (e.g., the nurse at a private school who was also a health teacher) was challenging.

Scheduling the course proved challenging. Some districts have had professional development days co-opted by mandatory state activities, leaving professional staff to do such

activities on their own time. This could contribute to the course not being embraced by some large urban districts targeted in the grant proposal.

CONCLUSIONS

Judging by the continued interest from local school districts, this curriculum appeals to diverse audiences. School librarians, guidance personnel, school nurses, school psychologists, student teachers, and teachers report benefit from formal training in locating and evaluating credible health information, led by experienced health science librarians. The curriculum is scalable and flexible, easily delivered in an hour, and responsive to the needs of the audience. The project and its continuation are examples of how the unique expertise of a health science library can help local schools promote a health-conscious generation of students.

References

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2. Eakin, Dottie, Gale G. Hannigan, and Sara Jean Jackson. 1980. Consumer health information: Libraries as partners. *Bulletin of the Medical Library Association* 68, no. 2: 220-229.
3. Pasco, Becky. 2011. Solo but not separate. *Knowledge Quest* 40, no. 2: 26-29.

Table 1

MoSHI participants during the funded portion of the project

Group	Site Description	Participants
Kirkwood School District	District office conference room	9
SLRLN Tech EXPO 5	Computer classroom	16
Mo. Assn. of School Librarians	Conference room at hotel	5
BJC Explore Health/Archdiocese	Computer classroom	17
MICDS	Upper school library	3
Parkway School District	Middle school library	22
Ft. Zumwalt West High School	High school library	3
Ft. Zumwalt North High School	High school library	18
		93

Figure 1

In-class evaluation included in all participant workbooks

Mobile School Health Information (MoSHI) Initiative
In-Class Evaluation

Please indicate the grade level(s) of library in which you work.

- ◇ Elementary
- ◇ Middle or junior high
- ◇ High school
- ◇ Other (please specify) _____

I am coming away from this course with at least one idea about how to integrate credible health information resources into the curricula at my school. (Circle one.)

No Yes

What is the most valuable information you gained about locating credible health information?

What constructive suggestions do you have for improving this curriculum?

Would you recommend this program to other schools (circle one)? No Yes

For the following, a rating of 5 is "very satisfied" and a rating of 1 is "very unsatisfied."

Rate your overall satisfaction with the course 1 2 3 4 5

Rate your overall satisfaction with the instructors 1 2 3 4 5

Additional comments or concerns:

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Figure 2

Follow-up survey for which participants received an e-mail invitation

Why we are contacting you

Approximately 3 months ago, you participated in the Mobile School Health Information (MoSHI) Initiative curriculum taught by Judy Hansen and Will Olmstadt of Becker Medical Library.

We are attempting to assess retention and use of the curriculum so that we can demonstrate its value. We would appreciate your candid responses to this brief questionnaire.

1. Please indicate the grade level(s) of library in which you work.

Elementary

Middle or junior high

High school

Other (please specify)

2. Since the MoSHI presentation, which of the following credible health information web sites have you continued to use, and for what purpose have you used them?

	Used for my school (teachers, students, administrators, parents)	Used for myself
MedlinePlus.gov	<input type="checkbox"/>	<input type="checkbox"/>
KidsHealth.org	<input type="checkbox"/>	<input type="checkbox"/>
AIDS Info	<input type="checkbox"/>	<input type="checkbox"/>
Genetics Home Reference	<input type="checkbox"/>	<input type="checkbox"/>
Household Products Database	<input type="checkbox"/>	<input type="checkbox"/>
NIH Senior Health	<input type="checkbox"/>	<input type="checkbox"/>
Partners in Information Access to Public Health	<input type="checkbox"/>	<input type="checkbox"/>
ToxMystery	<input type="checkbox"/>	<input type="checkbox"/>
ToxTown	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

***3. Please rate your confidence in identifying and locating credible health information on the web 3 months after participating in the MoSHI curriculum.**

Very confident

Somewhat more confident

About as confident

Less confident

4. Have you been able to use the principles of media literacy from the MoSHI curriculum to evaluate health information messages?

- No
 Yes

5. We are very interested in how you have used the MoSHI curriculum. Please feel free to describe projects started, assignments completed, or presentations given because of knowledge from MoSHI. We are also interested in ongoing or pending activities in which you are planning to use the knowledge from MoSHI, even if they are incomplete.

Thank you

Thank you for your time. Please contact Will Olmstadt at olmstadt@wusm.wustl.edu or 314-362-4734 with questions or concerns about the MoSHI curriculum.

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Evaluations declared exempt by Washington University Human Research Protection Office, HRPO #10-0075.

Figure 3

Impact of MoSHI by participant ZIP code in the St. Louis metropolitan area

