Title: Teaching Research Data Management: An Undergraduate/Graduate Curriculum

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Objective: With funding from the Institute of Museum and Library Services, the University of Massachusetts Medical School Library and Worcester Polytechnic Institute Library collaborated on a plan to expand the scope of science library practices and promote, among medical and graduate/undergraduate science students, the preservation of scientific data in relevant repositories/archives. This poster identifies user requirements and interface design elements for a system that can host student research data; outlines curriculum frameworks and learning needs for research data management instruction that can be delivered through a variety of methods; and presents a communication plan to inform others about the curriculum planning process and results.

Methods: A steering committee and education board with representatives from each campus provided input into the new curriculum. Outside consultants also collected data from students at both schools via interviews, reviewed literature and course materials relevant to existing data management curricula, translated the findings into learning modules, and evaluated the planning process. Faculty with students doing research for capstone projects at both institutions will pilot the new curriculum in the spring of 2011. Student feedback will be recorded through pre- and post-testing and used to revise the curriculum prior to full scale implementation.

Results: The curriculum focuses in nine areas: the data life cycle, data sharing requirements, naming conventions, metadata, storage, data ownership, security, privacy, and long-term access. Learning objectives were identified for each focus area and modified for the appropriate audience (undergraduate, graduate). Course content has been revised to be delivered in person over fifteen weeks in a classroom setting and also online in short self-paced modules.

Conclusion: The need for research data management curricula was confirmed by students, literature review and external experts we spoke to. Collaboration pointed to a need for differing strategies as to how this curriculum and repository might be implemented successfully at the partner schools. Collaborative planning process can be strengthened via formative evaluation techniques.