

Poster Presentations

Abstract PS1-01

The 21st Century Research Library: An Evolutionary Model for the Diffusion of Knowledge

Virginia D. Scobba, MLS, MA, *Group Health Center for Health Studies*

Background/Aims: The past decade has been a time of tremendous social, economic, and institutional change for the research community. Transformations in libraries mirror these transitions as libraries embrace new technologies and adjust to the shifting priorities of parent institutions. In the process, research libraries are becoming more committed to the creation and dissemination of knowledge through collaborative development, interdisciplinary scholarly alliances, open access measures, and user participation, reflecting a reversal from traditional proprietary operations. Through this evolutionary path, research libraries are emerging as more effective agents for the diffusion of knowledge in the research community. **Methods:** Within the changing environment of the 21st century, research libraries are seeking to understand the new ways in which clients search for and use information. Emerging web technologies and digital information resources have created an expanding base of users and have generated new service demands. Libraries are facing these challenges through more efficient resource sharing arrangements and by targeting and creating new user groups via digitalized content and electronic services. **Results:** Significant change and innovation are occurring in research libraries of all sizes and characteristics. These transformations can be summarized as: the expansion of electronic resources and Web 2.0 technologies; a redefinition of collection development; the development of tools to enhance user access; reconfiguration of library space to support learning and research; an emphasis on instructional technology services and information literacy; and the assumption of leadership in scholarly communication and publication issues. **Conclusions:** The extraordinary pace of the information technology evolution is likely to continue and accelerate, resulting in new opportunities for information dissemination. The research community will benefit from an awareness of and support for the library's innovative efforts.

Abstract PS1-02

A Database-Driven Approach to Producing PHS-398/2590 Other Support and Biosketch Research Support

Paul Steele, MPH, *Center for Health Research Northwest*; Martin Simer, BS, *Center for Health Research Northwest*; Hannah Cross, MPH, *Center for Health Research Northwest*; John Moore, BA, *Center for Health Research Northwest*; Kathy Pearson, BA, *Center for Health Research Northwest*; Krista Huffman, MS, *Center for Health Research Northwest*

Background: Preparation of timely and accurate PHS-398/2590 Other Support (OS) and the Research Support component (Section C) of the PHS-398 biosketch can be challenging. Project information for investigators needs constant updating as projects are funded and completed. Responsibility for creating and maintaining Other Support and Research Support information typically spans multiple individuals and departments, including the investigator, administrative and project support staff, and business services, and generally no one has all the required information. Although there are commonalities between Other Support and Research Support, there are also significant differences and the two are not directly interchangeable. **Methods:** Center for Health Research (CHR) enhanced an existing Microsoft Access database used for project lifecycle tracking to collect the common elements for investigator Other Support and Research Support. The enhanced database includes: PI, project title and alias, funder, grant number, a concise project description, annual project dates and direct costs, roles and yearly FTE for key personnel associated with the project, and overlap statements. Also included is an entry screen that captures and allows editing required information, and queries to produce formatted MS Word output for Other Support and Research Support. **Results:** CHR will make available a CD-ROM version of the database preloaded with sample data, entry screen, queries, and examples of formatted output to HMORN members. A summary discussion of NIH policy and guidelines for Other Support and biosketches, along with use of tools such as the eRA Commons, CRISP, and the Notice of Grant Award to populate fields will also be presented. **Conclusions:** A database-driven strategy allows key project information to be entered and

maintained in a single location. Accurate and correctly formatted Other Support and biosketch Research Support can then be generated for multiple investigators with a touch of a button. Programming logic separates projects as active, pending, or completed within 3 years of the query date. MS Access and MS Word are common business tools at most sites, so this system is essentially cost-free and can easily be maintained and modified by persons without extensive programming expertise. After an initial time investment in populating the database, significant labor savings and an increase in accuracy can be expected compared to a manual system.

Abstract PS1-07

A Laboratorian's Lamentations Over LOINC

Richard J. Krajenta, BS, *Henry Ford Health System*; Lois E. Lamerato, PhD, *Henry Ford Health System*

Background: The increasing need to transfer data from the performing laboratory to hospitals, clinics, utilization management reviewers, clinical researchers, public health workers and others that use laboratory data requires a level of standardization that is inherent in neither data traditionally produced by the laboratory nor reporting information system. Portability and merge-ability of the data is essential to conduct multi-site clinical trials and epidemiological studies. Comparing or combining lab results performed in different laboratories, which is integral to the Virtual Data Warehouse (VDW) of the Cancer Research Network (CRN), is challenging. Barriers include locally defined test codes. Most codes are easily recognized, such as K+ for potassium, others are less intuitive. It is also common to find normal ranges of different labs to be significantly different. This creates difficulties when trying to combine into one dataset for analysis as the values are not necessarily equivalent. This was historically addressed by using indirect criteria to compare data from different sites instead of absolute criteria. The INR for prothrombin time (PT) is an exception as the World Health Organization directed a massive standardization effort for PT in 1983. LOINC was designed to address these relational issues. The feasibility of using LOINC for the standardization of lab tests in the VDW is being explored. This report describes the strengths and limitations of using LOINC at Henry Ford Health System (HFHS). **Methods:** Regenstrief Institute's RELMA program was used on lab data to test LOINC implementation. The process of mapping test code to LOINC was manual and iterative, but the resulting file contains sufficient detail to create a one-to-one relationship between data sources. **Results:** The introduction of LOINC to laboratory databases allows the known methodological nuances to become part of the reported lab result. Nearly 31,000 of the 41,000 LOINC observation codes pertain to laboratory testing. **Conclusions:** It is advantageous to model the VDW databases to conform to LOINC in structure and nomenclature. Designing our data to universal standards will facilitate use in healthcare informatics. This process will require a person with considerable laboratory knowledge to accomplish accurate LOINC implementation. Coding complexities and redundancies require thorough investigation to determine appropriate LOINC codes are selected for data retrieval.

Abstract PS1-08

Using the Virtual Data Warehouse for a Multi-Site Study to Examine the Association Between Chemotherapy and Stroke

Lois E. Lamerato, PhD, *Henry Ford Hospital*; Diana Buist, PhD, *Group Health Cooperative*; Kimberly Bischoff, MHSA, *Kaiser Permanente Colorado*; Maqdooda Merchant, *Kaiser Permanente Northern California*; Jeanne Darbinian, MPH, *Kaiser Permanente Northern California*; Ann Geiger, PhD, *Wake Forest University*

Background: The Cancer Research Network (CRN) developed the Virtual Data Warehouse (VDW), a locally maintained dataset with consistent data content and structure across the CRN member sites. The VDW was used to conduct the multi-site study, 'Is Stroke a Late Effect of Chemotherapy?' The administrative and data extraction processes used to conduct the study are described. **Methods:** Four CRN sites participated in this 'data-only' study: Henry Ford Health System (HFHS) in Detroit, MI, Group Health Cooperative (GHC) based in Seattle, WA, Kaiser Permanente Colorado (KPCO) in Denver, CO, and Kaiser Permanente Northern California, with overall efforts led by a non-CRN site, Wake Forest University in Winston-Salem, NC. Four sites contributed data, HFHS served as the programming site, and WFU

served as the data coordinating and analysis center (DCC). Sites obtained Institutional Review Board (IRB) approval. The VDW tables accessed included Tumor Registry, HMO Enrollment, Diagnoses, and Pharmacy. The CRN study programmer wrote SAS programs for identification of cancer cases, covariates, and stroke outcomes. The VDW programs were beta tested by a second study site. After testing, the programs were provided to the remaining two sites for data retrieval. The programs transformed the data into an entirely de-identified dataset by calculating cancer diagnosis date and all other dates to 'age in days'. The resulting data files were transferred to the DCC using the CRN secure file transfer protocol. **Results:** Four different levels of IRB approval were necessary across the five sites, indicating local differences in interpretation of human subjects' requirements. The VDW program development period at the lead programming site required two months, after which data were available. Beta testing took two days to complete. The third site, which ran as a 'plug and play' after beta testing worked out some additional issues requiring slight program modifications. The time from posting the final VDW program to upload of study data took less than one week for the two sites with mature VDW structures. The fourth site delivered data within three months. Preliminary analyses were generated within one month. **Conclusions:** Using the VDW provided efficiency for labor, cost, and time. Such studies increase the overall value of the VDW as the skills of users improves.

Abstract PS1-09

The Feasibility of a Feasibility Study: Using the VDW to Assess the Diffusion of Ovarian Cancer Treatment

Leah Tuzzio, MPH, *Group Health Center for Health Studies*; Erin J. Aiello Bowles, MPH, *Group Health Center for Health Studies*; Andrea Altschuler, PhD, *Kaiser Permanente Northern California*; Andrew E. Williams, PhD, *Kaiser Permanente Hawaii*; Debra P. Ritzwoller, PhD, *Kaiser Permanente Colorado*; Larissa Nekhlyudov, MD, MPH, *Harvard Pilgrim Health Care*

Background: The Virtual Data Warehouse (VDW) has potential for studying diffusion of proven cancer treatments within the Cancer Research Network (CRN). Assessing the feasibility of VDW diffusion studies is important in guiding the development and conduct of future studies. The purpose of this study was to assess the feasibility of a low-budget, multi-site CRN feasibility study using the VDW to evaluate the diffusion of intraperitoneal chemotherapy among women with ovarian cancer. **Methods:** Using an online open-ended survey, project staff answered eight questions about the issues and challenges they experienced in conducting the study, including VDW-related data pulls and medical chart abstractions. For each question, we asked whether and how they resolved these challenges. **Results:** We received responses from staff at all eight sites (n=19). Having one macro VDW program developed at one site and run at the other sites was recognized as an efficient process. Issues related to the VDW included site-specific homegrown codes, limited data sources, and source data values. Some sites did not have VDW formatted data. Concerns related to the chart abstraction included the lack of a separate instruction guide and having numerous site specific data sources. Insufficient funding was cited often and some sites overspent their budgeted allowance (mostly for chart abstraction). The responses included issues related to the scientific aspects of the study that the respondents felt were not adequately resolved, partly due to lack of regular communication and conference calls. Several respondents commented that the project team did the best they could under the financial and time constraints. **Conclusions:** A low-budget, multi-site feasibility study using the VDW may be feasible, but has a number of significant limitations. The utility of the VDW remains variable across sites and data sources are not uniform; the inclusion of chart abstractions for validation required more effort than anticipated; and scarce project team conference calls limited discussion of methodological and scientific aspects of the study. Future VDW studies should carefully assess the data available from automated sources at each participating site, budget sufficient time for medical record abstraction and provide adequate funding for investigators, programmers, and medical record abstractors.

Abstract PS1-10

Impact of Pre-incentives on a Web-Based Follow-Up Survey

Cheryl Wiese, MA, *Group Health Center for Health Studies*; Sarah Greene, MPH, *Group Health Center for Health Studies*; Jennifer McClure, PhD, *Group Health Center for Health Studies*; Emily Westbrook, BA, *Group Health Center for Health Studies*; KatieRose Oliver, BA, *Group Health Center for Health Studies*; Julia Anderson, MA, *Group Health Center for Health Studies*; Roy Pardee, MA, *Group Health Center for Health Studies*; Mick Couper, PhD, *Center for Behavioral and Decision Sciences in Medicine, University of Michigan*; Peter Ubel, MD, *Internal Medicine, University of Michigan*; Rosemarie Pitsch, MPH, *Center for Behavioral and Decision Sciences in Medicine, University of Michigan*; Sharon Hensley Alford, MA, *Henry Ford Health Systems*; Richard Krajenta, BS, *Henry Ford Health Systems*; Mike Nowak, BS, MILS; *Center for Behavioral and Decision Sciences in Medicine, University of Michigan*; Brian Zikmund-Fisher, PhD, *Internal Medicine, University of Michigan*; Dylan Smith, PhD, *Internal Medicine, University of Michigan*; Holly Derry, MPH, *Center for Behavioral and Decision Sciences in Medicine, University of Michigan*; Angela Fagerlin, PhD, *Internal Medicine, University of Michigan*

From many previous studies, we have learned that sending a \$2 bill in an invitation letter to participate in health research increases the likelihood of participation. In the Guide to Decide Study, thousands of women were invited to log on to a Web site to answer a baseline questionnaire, and they were mailed \$10 as a thank you when it was complete. Most of the women were exposed to a decision aid that gave them risk information about using tamoxifen or raloxifene as a prophylactic for women with increased risk for breast cancer, and they were asked to return to the Web site 3 months later to complete a follow-up survey. A control group of women were promised access to the decision aid if they returned to the Web site to complete a follow-up survey 3 months after enrollment. One theory would suggest that women who received access to the decision aid at baseline would be more engaged and therefore more likely to return to the Web site to complete the 3-month follow-up questionnaire. Another theory would suggest that women who were not given access to the decision aid would be most inclined to return after 3 months to do so. This poster will illustrate whether there is a difference between a \$2 and \$5 pre-incentive when mailed in a letter to participants inviting them back to answer survey questions 3 months following their enrollment. Further, we will test whether the amount of the pre-incentive and the corresponding response rates differ between the intervention group and the control group.

Abstract PS1-11

Patient-Centered Communication Research in Integrated Delivery Systems

James W. Dearing, PhD, *Kaiser Permanente Colorado*

Background: Considerable differences exist between the ways in which communication is conceptualized in the academic field of communication studies, on the one hand, and in clinical practice, on the other. Theorists in the field of communication studies have conceptualized communication as (1) mutual and interactive, (2) concerning the establishment of shared meaning, and (3) multilevel and embedded in organizational and institutional systems. Healthcare practitioners have tended to operationalize communication as (1) directional, (2) concerning the transmission of information, and (3) dyadic in terms of physician-patient consultation. **Methods:** A literature-based theoretical review focusing on the academic field of communication studies. **Results:** Loosely-coupled organizational systems can excel at locale-specific innovation while failing at horizontal coordination and organizational learning. Bureaucratic tendencies of complex organizations are inherently dehumanizing. In integrated healthcare delivery systems, attaining and maintaining a state of patient-centeredness will require continual vigilance. **Conclusions:** Patient-centered communication extends beyond the context of physician-patient interaction to include provider-to-provider communication, healthcare team coordination, applications of electronic medical records, intraorganizational issues of continuity of care, and interorganizational issues of patient-centered communication policy dissemination. A research agenda about patient-centered communication for integrated delivery system researchers is proposed as a means for systematically improving patient-centered communication.