

PS1-30:

### O Say Can You C(ER) – An Inventory of Comparative Effectiveness Research Capacity in the HMO Research Network

Ella Thompson, BS<sup>1</sup>; Sarah Greene, MPH<sup>1</sup>; Eric Larson, MD, MPH<sup>1</sup>

<sup>1</sup>Group Health

**Background and Aims:** The HMO Research Network (HMORN) is uniquely positioned to conduct Comparative Effectiveness Research (CER). The 2009 health care reform debate; Recovery Act legislation and funding mandates; the Institute of Medicine (IOM) report of Initial National Priorities for Comparative Effectiveness Research and other forces have all worked to focus attention on CER as never before. We present results from a survey of HMORN leadership which explored the Network's perceived competitiveness in responding to the IOM-generated top 50 priority topics in CER. The survey results are cross-referenced with research interests of HMORN scientific staff. We also review existing methodological and administrative HMORN resources available to assist with proposing, launching and carrying out CER projects. Finally, we briefly summarize initiatives spearheaded by HMORN leadership to build additional CER capacity across the Network. **Methods:** HMORN Board members were asked to complete an online survey, rating their perceptions of the Network's competitiveness in responding to the top two quartiles of initial national CER priorities outlined by the IOM. Response options were not competitive, a little competitive, somewhat competitive, quite competitive, very competitive and unsure. The initial survey link was sent July 17, 2009. Reminders were sent to non-responders on July 29 and August 14. The survey was completed by 88% of Network leaders (14 of 16). We cross-referenced CER priorities with research interests expressed by Network investigators in the HMORN Researcher Directory, available at [www.hmresearchnetwork.org](http://www.hmresearchnetwork.org). **Results:** Overall, respondents view the HMORN as very well positioned to respond to the top two quartiles of IOM Comparative Effectiveness priorities. While some priorities align well with established Network collaborations (e.g., cardiovascular disease, cancer) the HMORN has not yet fully capitalized on other IOM CER priorities, even though capacity appears to exist (e.g., care coordination, inflammatory diseases, bone health, shared decision making, dissemination techniques). **Conclusions:** In the CER arena, the HMORN has significant potential, with numerous opportunities to capitalize on its scientific and collaborative expertise. The Network is further improving its ability to respond to emerging CER funding opportunities by proactively inventorying scientific and methodological expertise, enhancing data capabilities, training staff and developing tools.

**Keywords:** Comparative Effectiveness, HMO Research Network, Enhancing data capabilities

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PS3-05:

### Electronic Data Collection for a Clinical Trial Conducted within a Health System

Tessa Kerby, BA<sup>1</sup>; Nicole Schneider, BA<sup>1</sup>; Stephen Asche, MA<sup>1</sup>; Linda Loes, MD<sup>1</sup>; Michael Maciosek, PhD<sup>1</sup>; Peter Meyers, BS<sup>1</sup>; Derek Michalski<sup>1</sup>; Karen Margolis, MD, MPH<sup>1</sup>

<sup>1</sup>HealthPartners

**Background/Aims:** Designing a seamless data collection tool for a research study across multiple physical locations within a health care system is challenging. Paper-based data collection is prone to data entry errors, subject to delays in availability of data, and environmentally wasteful. Web-based data collection tools are costly, time consuming to produce, and have security issues. We used Microsoft Access to create an efficient, low-cost electronic data collection tool for a clinical trial that required availability at numerous locations in the HealthPartners system. **Methods:** The research study required data collection entry points at ten different locations for different types of users, all linked into the HealthPartners computer network. A single Access database with linked modules for recruitment, tracking, eligibility determination and data collection was designed. **Results:** The recruitment

module used at the research department integrated data on recruitment mailings and telephone screening of interested respondents, and used an automated algorithm to perform eligibility checks. The research clinic module for clinic visits was populated with eligible participants as determined by the recruitment module. This clinic module included further eligibility checks, data collection and treatment assignment. Participants then became available in the intervention module to pharmacist case managers located at 8 HealthPartners primary care clinics to collect data for the intervention. Based on study entry date, Access created a visit log to aid the case managers with timely adherence to the trial protocol. The database is stored on a secure server that is accessible only to authorized study team members, with further restrictions on data entry and access determined by study team role. **Conclusions:** The disadvantages of Microsoft Access (lack of flexibility, "bugginess", older technology) are counterbalanced by many advantages (ready availability, inexpensiveness, security, the ability to analyze data in real time). Research teams should consider these factors when designing electronic data collection tools.

**Keywords:** Electronic data collection, Data collection tools, Clinical trials  
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### Early Career Investigator Awardees

Plenary III-01:

#### A Methodology for Quantitative Measurement of Quality and Comprehensiveness of a Research Data Repository

Vojtech Huser, MD, PhD; Marshfield Clinic Research Foundation

**Background and Aim:** With the existence of research over federated repositories, it is desirable to utilize high quality integrated data repositories (IDRs). IDR can be defined as a data warehouse optimized for research purposes rather than clinical care, which contains clinical, administrative, trial, and -omics data. In this work, we focus on the quality of clinical and administrative components of IDRs. There is no standardized methodology which could quantitatively evaluate the quality of an IDR (e.g., 'Does a given IDR have at least 2000 adult diabetic patients (type 1) with complete pediatric history?'). With the increased interest in research of existing data (such as comparative effectiveness research) and increasing number of institutions with an comprehensive IDRs, it is important to have a mechanism for selecting quality IDRs. **Methods:** Our poster will present a set of IDR quality measures which can compare IDRs in size and completeness. We considered the following criteria for a good measure: the measure is intuitive to interpret; facilitates monitoring improvement; and does not place any arbitrary value on individual measure components. Our methodology proposes a hierarchy of definitions of minimum EHR elements and uses a simple count of each level to quantitatively evaluate an IDR (e.g., count of patients with at least one diagnosis and one laboratory result). **Results:** We have applied our methodology to an IDR at Marshfield Clinic. Our poster will list all measures and results. Selected results were: 1.7M unique patients (level G1), 0.4M patients with at least one diagnosis, lab and prescription (level D3). To facilitate evaluations at other institutions, we have created an ANSI-SQL script which can compute all measures in a single execution. **Conclusion:** Our evaluation methodology provides a quick way to compare IDRs at different institutions. It can be applied to institutions contributing to a virtual warehouse. Our goal was to arrive at a pragmatic set of measures operating on an easy-to-implement event schema. The limitations are: focus on general research idea and event types and criteria included in some level definitions. We plan to conduct a Delphi study involving informatics experts to arrive at an improved consensus set of measures.

**Keywords:** Integrated data repositories, Quality measurements, Data evaluation methods

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