PS2-14:

Organizing and Tracking Multi-site Data Network Project Activities

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Background/Aims: Multi-site, multi-purpose networks such as the HMO Research Network consortia projects and the FDA Mini-Sentinel need an efficient mechanism to track project activities and specific queries, organize local resources, and create a searchable index to enable communication of lessons learned and re-use of resources. To this end, the Mini-Sentinel Operations Center (MSOC) has created the Mini-Sentinel Data Catalog (MSDC) to track all Mini-Sentinel projects. **Methods:** The MSDC is a system designed to capture and organize the key meta-data of all MSOC querying activities, to provide a catalog of all data partner (DP) activity, to allow rapid reporting of key metrics, and to enable Mini-Sentinel users to quickly identify the location and relevant information for all data queries. The system is integrated into the Mini-Sentinel secure file transfer system, so when new results for data queries are uploaded to the secure transfer site the MSDC processes an automatically generated email with the relevant information that is then incorporated into the tracker. The system allows MSOC to view the query responses and mark them as accepted or rejected. The MSDC allows users to create notes associated with all projects and sub-tasks, and enables easy filtering to track the status of results by query ID, DP or status, and the creation of reports on the history of each. The system incorporates role based access control with a variety of editing and reporting privileges that can be set by user. **Results:** The MSOC has completed beta-testing of the MSDC, and is using the system to track 25 individual projects facilitating rapid access to useful meta-data, providing MSOC with a simple tool to manage and track >250 individual DP responses. **Discussion:** MSOC plans to use the MSDC to track future projects submitted to DPs. It will be expanded to accommodate a more diverse set of project types and to more seamlessly handle uploads to the Mini-Sentinel secure file transfer system. The system will also be integrated into the Mini-Sentinel distributed query tool that is based on the PopMedNet software platform, creating an integrated distributed querying and management platform.

Keywords: Project Tracker; Distributed Database; Mega-epidemiology and Methods

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PS2-15:

Capturing Race and Ethnicity for Health Research

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Background/Aims: Racial and ethnic differences and disparities in health and healthcare are important issues that need to be documented in order for them to be adequately addressed. Yet, for a number of reasons, health plans often do not have such information at their disposal for a large proportion of their patients and are only now beginning to collect it more systematically. This study aims to document the current status of race and ethnicity data and provide guidance on methods for improving the measurement, quality, completeness, and analysis of this data for HMORN studies. **Methods:** Participating managed care organizations (MCOs) will be surveyed to document sources of race and ethnicity information in MCO datasets, programming and variable coding methods, and descriptive statistics on these variables in order to describe current practices, uncover gaps in existing data, and note areas where methods can be standardized across all sites. A review of the literature will be conducted to identify existing and potential sources of race and ethnicity data for healthcare organizations and the reliability of these sources; determine methods of improving access to and collection of race and ethnicity data; and select suitable techniques for indirectly estimating missing race and ethnicity. The additional sources and estimation methods identified will be applied to the Vaccine Safety Datalink data at Kaiser Permanente Georgia and assessed for validity, improvements in the completeness of race and ethnicity data, and ease of use and robustness in analysis. The results of this assessment will be used to develop best

practices that can inform the adoption of similar methods across HMORN sites.

Keywords: Race/Ethnicity; Data Quality; Mega-epidemiology and Methods

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PS2-16:

Surveillance for Anterior Cruciate Ligament Surgical Site Infections Using Claims Data

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Background/Aims: The infectious risk of human tissue allografts is unknown. Healthcare claims data from large populations may be useful for quantifying and monitoring rates of infection after tissue allograft transplantation, but require accurate algorithms to identify allograft implantations and infections. We explored the feasibility of identifying allograft implantations and infections using claims data. **Methods:** We identified all patients with procedure codes for anterior cruciate ligament (ACL) surgery within four HMO Research Network sites during calendar years 2000-2008. Charts were randomly selected for review to determine the frequency of allograft versus autograft use. We then flagged patients with claims-based indicators of possible infection including suggestive ICD9 diagnosis codes, procedures, antibiotic prescriptions, specialty consultations, emergency department visits, and readmissions within the 90 days following surgery. We reviewed charts of patients with and without infection indicators and calculated the sensitivity and positive predictive value of individual indicators as well as combinations of multiple indicators. **Results:** We identified 6,615 patients with codes for ACL surgeries in four HMO Research Network sites. On review of randomly selected charts, allografts were utilized in 128/536 (24%) surgeries and autografts in 392/536 (73%) surgeries. Implant type was inadequately documented in the remaining 16 charts (3%). Possible claims-based infection indicators were present in 1,827/6,615 (28%) surgeries. We reviewed 765 charts with indicators of possible infection and 475 charts without infectious indicators. There were 30 confirmed deep tissue infections, all amongst patients with possible infection indicators. Correcting for sampling weights, we estimated 1.6 versus 1.0 infections per 100 surgeries in allograft versus autograft implants (crude odds ratio 1.7, 95% CI 1.1-2.8). The sensitivity of individual indicators ranged from 0 to 70% and positive predictive value from 0 to 24%. Combining indicators increased sensitivity to >90% but positive predictive values remained poor. **Discussion:** Procedure codes for ACL surgeries are not specific for allograft versus autograft implants. Claims-based indicators of possible infections reliably capture all patients with serious infections but also flag many false positives. We are now validating the sensitivity and positive predictive value of claims-based infection indicators using data from two additional HMO Research Network sites.

Keywords: Human Tissue Implantation; Infection Surveillance; Mega-epidemiology and Methods

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CA5-02:

Assessing the Performance of Propensity Score Methods for Estimating the Probability of Receiving Cervical Procedures

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Background/Aims: Propensity scores provide an alternative to traditional regression modeling for assessing the effect of exposure on an outcome in the presence of confounders. We describe methods to establish propensity scores