to track research specific activities for utilization management, for cost accounting, for study related reporting, and for reimbursement of ancillary departments for research services. We will discuss the documentation of regulatory and compliance requirements within a research encounter and link them to research related activities.

C-D1-01:
Moving From Island of Excellence in Oceans of Secrecy to Supporting Scientific Excellence as a Team

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Background/Aims: Group Health Cooperative has adopted the Lean management system as a key organizing methodology for eliminating waste and inefficiency in the healthcare environment by organizing the work around value provided to the customer. This poster presentation demonstrates how the Center for Health Studies, the research arm of Group Health Cooperative, applied Lean principles to the grant application submission process with the goals of improving quality and customer service by reducing waste and defining standard work. Before applying Lean methodology, the application submission process was inefficient, often requiring timeintensive, heroic efforts from project and administrative members to submit an application for funding on time. Roles were not clear and work was performed in isolation or silos. Duplicate and rework often occurred. This resulted in poor staff morale and customer requirements not being met. There were no established standards and best practices were often not shared resulting in different and inconsistent approaches to the work with variable outcomes. **Methods:** Using the two organizing principles of Lean, "continuous improvement and respect for people," as the foundation for this project, we used a combination of quantitative and qualitative research methods. We conducted a survey of key stakeholder groups and observed work processes during a major grant-application funding cycle. Once the data was collected, a cross-functional group of stakeholders held a rapid process improvement workshop over a period of one week to review data, develop improvement targets, and develop a standardized process. The process improvements were implemented over a period of three months. **Results:** By reducing waste and implementing standard work across the application submission process, the project and research teams improved their working relationships, improved stakeholder and customer satisfaction, improved workflow, eliminated significant non value added steps and improved their capacity to respond to fast turnaround requests. **Conclusions:** Lean tools and processes enabled the Center to reduce waste and inefficiency across the application submission process and grow internal capacity. Teams are better equipped to recognize and remedy daily work issues, increasing overall responsiveness to changes and challenges in the funding environment. Daily leadership and management is a critical element to succeeding in sustaining these improvements.

Virtual Data Warehouse

PS1-36:
VDW Pharmacy File: Strengths, Weaknesses, and Recommendations

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Background: The HMO Research Network (HMORN) Virtual Data Warehouse (VDW) is a series of dataset standards and automated processes designed to facilitate the process of multisite research. It is virtual in that there is no centralized database; data continue to reside locally. Our objective was to assess the cross-site availability and completeness of the outpatient prescription dispensing or Pharmacy file. **Methods:** The VDW Pharmacy Working Group created a data checking plan to assess overall data availability and completeness of the Pharmacy file. A distributed SAS program was run at each HMORN site with a VDW Pharmacy file (n=11), with de-identified summary count data returned for analysis. The key Pharmacy file variables were National Drug Code (NDC), days supplied, and amount dispensed. NDCs were considered nonstandard for these reasons: not having exactly 11 digits; containing a character; or consisting of a single repeated number (e.g., 99999999999). For days supplied and amount dispensed, values of < 0, 0, > 500, or missing and values of < 0, 0, > 1000, or missing were considered out of typical range, respectively. **Results:** Eleven sites have Pharmacy data from 2000 June 2007; some have data going back more than 10 years. There were 61 million dispensings in 2007, with an average 5.1 million monthly dispensings among 2 million monthly users. Average monthly dispensings per user was 2.5, and the range across sites was 2.2–2.9. Across all sites from 2000–2007, < 0.1% and 0.3% of dispensings had a missing or nonstandard NDC, respectively; and 0.1% and 0.3% had days supplied and amount dispensed out of typical range, respectively. Few dispensings were for over-the-counter medications (5%), medical supplies (2%), or infusions (0.1%). 89% of elderly (age > 65) with a drug benefit had at least 1 annual dispensing (average monthly dispensings per user, 3.5), compared to 52% of those without a benefit (average, 3.2). **Conclusions:** The VDW Pharmacy file has good overall data quality, with few problems found, especially since 2000. Investigators can have confidence in the data in the Pharmacy file but may choose to limit studies to more recent years.

PS1-08:
The VDW Census File: Strengths, Issues, and Recommendations for the Future

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Background/Aims: The VDW's Census file contains demographic and socioeconomic data not available anywhere else. This makes it a unique resource for VDW research including studies using Geographic Information Systems data. However, the extent and quality of Census file data at implementing sites has not been subjected to systematic scrutiny. The VDW Census Workgroup was formed under the auspices of the new HMORN governance of the VDW. This workgroup is charged with assessing the census file specification and the quality of the implemented files at HMORN sites. The objectives for the workgroup are to: 1) document area-level data that are currently available at each HMORN site; 2) determine the completeness and consistency of the data; and 3) provide recommendations for improving the scope and completeness of the data in the VDW Census file. **Methods:** The workgroup has prepared specifications for a set of descriptive tables, and a metadata survey inquiring how sites have implemented the current Census file. We are currently writing a VDW program to generate site-specific descriptive data. **Results:** Our report to the Operations Committee will focus on extent and quality of the Census file data at the various sites, and the consistency in implementation of the specifications across sites. The proposed poster will highlight our findings and provide a more comprehensive view of the available data. The workgroup is currently analyzing data from the metadata survey. A VDW program is being written to generate a rich set of site-specific data. The final report will serve as a basis for establishing the current state of the Census files at each site, and for making recommendations for future improvements. It will also serve as a useful reference for future grant writing efforts. **Implications:** We anticipate that the products will facilitate use of the Census File data within and across sites to augment and/or generate research within the CRN that requires detailed geographic data. Our data completeness and quality summaries will enable researchers to assess the feasibility and potential utility of the Census File within their research projects. **Conclusions:** We expect to conclude that the data are of general high quality at the sites, but that current ambiguities in the specification will need to be remedied.