> 85%, while the completion rate for anticonvulsants ranged from 30-75%. The lowest test completion rate was for phenobarbital levels to monitor phenobarbital (30%). For all cardiovascular and anticonvulsant drugs, the proportion of recommended tests not ordered by the clinician ranged from 5% to 60%. The lowest test order prevalence was for phenobarbital level for phenobarbital use (35%), followed by valproic acid level for valproate use (48%), and carbamazepine level for carbamazepine use (60%). Rates of patient noncompletion of ordered tests for all drugs was generally <10%. **Conclusion:** Completion of laboratory monitoring tests for high-risk cardiovascular medications was higher than for high-risk anticonvulsants according to HEDIS guidelines. Clinician ordering behavior exhibited more variation than patient adherence to test orders. Underestimation of HEDIS quality of care monitoring due to patient non-adherence is minimal for cardiovascular medications, but higher for anticonvulsants.

Keywords: Pharmacology, Epidemiology, Adherence

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C-C5-04:

Can Claims Data Accurately Identify Graft Type and Infections Following Anterior Cruciate Ligament Repairs?

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Background: The frequency of human tissue allograft contamination leading to infection is unknown. Attributing infections to allograft contamination versus surgical factors is elusive. National claims data may facilitate study of allograft-associated infections but first require accurate algorithms to identify implantations and infections. We explored the feasibility of using claims data to identify anterior cruciate ligament (ACL) allograft implants and infections. **Methods:** We selected candidate diagnosis, procedure, visit type, and antibiotic prescription criteria to identify ACL allograft repairs and infections. Candidate criteria were categorized by likelihood of infection and putative pathogen type. Criteria were then applied to HMO Research Network Virtual Data Warehouse files for 2000-2008 from six sites. We defined the infection risk period as 90 days following ACL repair. We reviewed charts flagged by each criterion to determine implant type and to assess for infection. Sensitivity and positive predictive values (PPV) were calculated. **Results:** Preliminary results are available from five of six sites. Procedure codes 29888 and 81.45 (ACL repair, unspecified) flagged 11,202 episodes of care. Diagnosis codes compatible with infection flagged 139 episodes (1.2%) of which 71 were categorized as high probability (0.63%). Microbiology and infection management procedure codes flagged 1,029 episodes (9.2%) and 68 episodes (0.6%) respectively. Antibiotics were prescribed for 1,523 episodes (14%) of which 580 were deemed high likelihood prescriptions (5.2%). There were 1011 hospitalizations within 90 days of ACL implantation (9.0%), 787 emergency department visits (7.0%), and 43 infectious disease specialist visits (0.4%). Over 1500 chart reviews are planned of which 107 have been completed thus far. The PPV for allograft implantation is 33% (95% CI 25-43%). Sufficient data are currently available to confirm 14 infections. Antibiotic prescribing was the most sensitive criterion while infectious disease visit had the highest PPV (sensitivities 86% and 7%, PPVs 35% and 100% respectively). **Conclusions:** Claims data do not discriminate between allografts and autografts in ACL repair but do identify a subset of patients with possible infections. Once chart reviews are complete we will assess whether combinations of criteria can increase accuracy.

Keywords: Allograft, Infection, Epidemiology

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C-A4-05:

Design for Identification, Retrieval and Adjudication of Acute Myocardial Infarction Cases in the Mini-Sentinel Distributed Database

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Background/Aims: The goal of the FDA's Mini-Sentinel pilot is to inform development of an active safety surveillance system, the Sentinel System, for monitoring medical product safety. Mini-Sentinel is a collaborative endeavor by Data and Academic Partners including the HMORN and Kaiser, designed to evaluate barriers to the creation of this surveillance system. Orchestrated via the Mini-Sentinel Coordinating Center (MSCC), the Acute Myocardial Infarction (AMI) Validation project is a test case for medical outcome validation within a distributed system designed for medical product safety surveillance. **Methods:** A 3-component process for validation of medical outcomes was used: (1) Case definition and identification: Development of a clinical definition of AMI, an algorithm for identifying likely AMI from Mini-Sentinel Distributed Databases (ICD-9 code-based) and a sampling strategy to select approximately 100 likely AMI cases for chart retrieval; (2) Chart retrieval: Agreement between the MSCC and Data Partners regarding: (a) amount of de-identified medical information to be extracted; (b) mode of data transfer to the MSCC; and (c) approach to maintaining the privacy and security of protected health information; (3) Abstraction and Adjudication: creation of (a) abstraction forms for use by trained nurse abstractors; and (b) an adjudication process for cardiologist reviewers. **Results:** Challenges encountered to date include: (1) the number of participating Mini-Sentinel Data Partners; (2) decision-making surrounding centralized vs. decentralized abstraction; and (3) concerns over privacy of transmitted health information and medical record de-identification for centralized review. Ultimately, concern over quality and variability of abstraction at the Data Partners' sites, together with small numbers of charts requested from each Data Partner, led to selection of a centralized abstraction process. Procedures needed to be established for this novel activity that addressed how to proceed with this project as a public health activity exempt from IRB review. **Conclusions:** The Sentinel System can yield timely data for active surveillance of medical product safety, and may be useful for other purposes, including research and quality improvement. Ongoing challenges include ensuring the minimum necessary amount of data is transmitted from Data Partners for centralized chart review and adhering to established procedures to maintain data security.

Keywords: Safety surveillance, Acute myocardial infarction, Validation project

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PS1-29:

Preparing for Genetics Research on Serious Skin Rash in the HMO Research Network

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Background/Aims: Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN) are life-threatening widespread serious skin rashes (SSR), often accompanied by extensive epidermal detachment and/or mucous membrane involvement. Recent genetic studies have shown a strong link in Han Chinese between HLA-B*1502 and risk for SJS with use of Carbamazepine; however, more research is needed to identify similar markers among other ethnic groups. With support from The International Serious Adverse Event Consortium, we evaluated the potential for using electronic clinical and administrative data from Kaiser Permanente Hawaii and Kaiser Permanente Georgia to identify provisional SSR cases. **Methods:** We searched inpatient encounters, problem lists and allergy tables for codes