PMR300
COMPARISON OF THE 4-ITEM AND 8-ITEM MORISKY MEDICATION ADHERENCE SCALE IN PATIENTS WITH TYPE 2 DIABETES Pedersen E1, Vietri J2
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OBJECTIVES: To compare the Morisky Medication Adherence Scale [MMAS-4] and more recent 8-item version (MMAS-8) which have both been validated and demonstrate concurrent validity among patients with hypertension, but the extent to which the scales can be compared in a different population. This study assessed the comparability of adherence scores obtained with these scales in patients with type 2 diabetes (T2D) as well as the feasibility of integrating results across the scales using 4 items of the MMAS-8. METHODS: Data were taken from the 2011 and 2012 US National Health and Wellness Survey (NHWS). The NHWS is a large cross-sectional survey representative of the total adult population in several major markets; N=75,000/year in the US. A total of 13,007 respondents self-reported physician diagnosis of T2D and were included. Respondents were included in 2011 or MMAS-8 and 2012 or MMAS-4. Data were evaluated by comparing the frequency distributions of the MMAS scores for the two scales, Cronbach’s alpha and inter-item correlations, and the creation of a new 4-item scale including the questions in MMAS-8 that best matched the questions in MMAS-4. RESULTS: The 4-item versions in Pregnancy Scoring Study cohort were created. Women were recruited from nine North American Teratogen Information Services and at the CHU Ste-Justine outpatient obstetrical clinic (Montreal). To be included, women had to be ≥ 18 years old, ≤15 weeks pregnant, and not using known teratogenic medications. Women were self and telephone-administered to mothers at 12-months postpartum. The ASQ includes five domains (communication, gross motor, fine motor, problem-solving and personal-social). The R-PDQ tests gross and fine motor, communication, language, socio-demographic and psychosocial aspects. Parents were collected through telephone interviews. Concordance between the telephone- and self-administration of both questionnaires were assessed with Intraclass Correlation Coefficient (ICC) with 95% Confidence Intervals (CI). RESULTS: Overall, 61 and 56 women filled the ASQ and R-PDQ, respectively. Concordance between the self- and telephone-administered ASQ was substantial for the communication scale (ICC=0.76, 95% CI [0.63;0.84]), almost perfect for the gross motor scale (ICC = 0.83; 95% CI [0.77; 0.89]), and moderate for the fine motor, problem-solving and personal-social scales (ICC = 0.44; 95% CI [0.21; 0.62]; ICC = 0.43; 95% CI [0.19; 0.61]; ICC = 0.52; 95% CI [0.31; 0.68], respectively). Regarding the R-PDQ, the following concordance estimates were found: gross motor scale (ICC = 0.90; 95% CI [0.83; 0.94]), language (ICC = 0.58; 95% CI [0.38; 0.72]), personal-social scales (ICC = 0.27; 95% CI [0.07; 0.49]. The agreement was perfect for the fine motor scale. CONCLUSIONS: The telephone administration of the ASQ is a valid method of child development screening. However, only the 4- item gross and fine motor and language scales should be administered through telephone when pre-screening infant development.

PMR13
VALIDATION OF CLAIMS DATA TO IDENTIFY SURGICAL SITE INFECTIONS WITH ANTIBIOTIC UTILIZATION DATA Warren DK1, Nickell KB1, Wallace AE1, Mines DP1, Fraser VFJ1, Olsen MA1
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OBJECTIVES: International Classification of Diseases (ICD-9-CM) diagnosis codes are increasingly being used to identify hospital survivors, classify clinical outcomes, and provide evidence demonstrating validity of the codes used. Absent medical record verification, we sought to confirm a claims algorithm to identify surgical site infections (SSI) using administrative claims data and antibiotic utilization. METHODS: We performed a retrospective cohort study using private insurer claims data from persons < 65 years with ICD-9-CM procedure or CPT codes for anterior cruciate ligament (ACL) reconstruction from 1/2004–12/2010. SSIs occurring within 90 days after surgery identified by the ICD-9-CM diagnosis codes. Antibiotic utilization, surgical treatment, and microbiology culture claims within 14 days of SSIs codes were used for validation. RESULTS: Of 40,702 ACL reconstruction procedures, 409 (1.0%) were complicated by SSIs, 172 (8.8%) of which were specifically identified as septic arthritis. Most SSIs were associated with an inpatient admission (n=232, 57%), and/or surgical procedure(s) for treatment (n=258, 63%). Among SSIs included in the validation, temporally associated antibiotics, surgical treatment procedures, and cultures were present for 84% (338/401), 61% (246/401), and 59% (238/401) respectively. Only 5.7% (23/401) of procedures coded for SSI post-procedure had no antibiotics, surgical treatment, or culture within 14 days of the SSI claim. CONCLUSIONS: Over 94% percent of patients identified by our claims data as having an SSI received clinically expected treatment for infection, including surgery, cultures, and antibiotics, suggesting this algorithm has very good positive predictive value. This data may facilitate retrospective SSI surveillance and comparison of SSI rates across facilities and providers.

PMR14
DEVELOPING A COHORT OF LINKED MOTHER-BABY PAIRS TO STUDY PRETERM LABOR: HARMONIZING REAL-WORLD DATA FROM FOUR LARGE UNITED STATES INTEGRATED DELIVERY NETWORKS Greenawalt S1, Dayan A2, Mack C1, Dreyer NR1, Copper RL1, Quinniles J1
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OBJECTIVES: Integrated delivery networks (IDNs) capture patient data across the continuum of care and are valuable tools for real-world research, with potential to study large, diverse cohorts with rich information on patient characteristics, treatments, physician decisions and outcomes. However, using multiple IDNs requires combination of dissimilar data to create a uniform post hoc analysis dataset. We used this approach to create a novel cohort to examine maternal and neonatal characteristics with the goal of better understanding preterm labor, a critical step in developing effective tocolytic treatments. METHODS: Retrospective data on births from 2001-2012 were obtained from four large national and regional New Mexico and central states [Missouri/Arkansas/Kansas/Oklahoma] participating in Quintiles’ COMparative Effectiveness Patient Safety and Surveillance (COMPASS) Research Network. The IDNs were selected to perform retrospective SSI surveillance by using two different types of electronic medical records, catchment areas and institution types. Detailed data specifications were defined, mothers and babies were linked using medical record numbers, and multiple years are used to produce an overall cohort of 109,583 mother-baby pairs among women with uncomplicated, singleton pregnancies. Results: During the validation, temporally-associated antibiotics, surgical treatment procedures, or culture within 14 days of the SSI claim. OVER 94% percent of patients identified by our claims data as having an SSI received clinically expected treatment for infection, including surgery, cultures, and antibiotics, suggesting this algorithm has very good positive predictive value. This data may facilitate retrospective SSI surveillance and comparison of SSI rates across facilities and providers.

PMR15
SOME STATISTICAL CONSIDERATIONS IN ESTIMATING A DISEASE PROGRESSION MODEL FOR CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) Evans A1, Colby C2, Briggs A3, Riseborough N4, Baker TMY3, Ismaila AC2, Diekmann AM5, Larson ML6, Langer RD3, Ramirez JD7, Bérard A8
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OBJECTIVES: We aimed to validate the telephone administration of the Revised Pre-screening Denver Questionnaire (R-PDQ) and the Ages and Stages Questionnaire (ASQ), 2 tools used to pre-screen and screen children development, respectively in the PRM14 infants <1 year of age. The PRM14 infants are from 4 U.S. IDNs (from Illinois, Ohio, New Mexico and central states [Missouri/Arkansas/Kansas/Oklahoma] participating in Quintiles’ COMparative Effectiveness Patient Safety and Surveillance (COMPASS) Research Network. The IDNs were selected to perform retrospective SSI surveillance by using two different types of electronic medical records, catchment areas and institution types. Detailed data specifications were defined, mothers and babies were linked using medical record numbers, and multiple years are used to produce an overall cohort of 109,583 mother-baby pairs among women with uncomplicated, singleton pregnancies. Results: During the validation, temporally-associated antibiotics, surgical treatment procedures, or culture within 14 days of the SSI claim. OVER 94% percent of patients identified by our claims data as having an SSI received clinically expected treatment for infection, including surgery, cultures, and antibiotics, suggesting this algorithm has very good positive predictive value. This data may facilitate retrospective SSI surveillance and comparison of SSI rates across facilities and providers.

PMR16
CAUSAL INFERENCE: COGNITIVE FUNCTIONING AND DEPRESSIVE SYMPTOMS BY LONGITUDINAL MARGINAL STRUCTURE MODEL Hayes P
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OBJECTIVES: The association between depressive symptoms (Center for Epidemiologic Studies Depression Scale [CES-D]) and subsequent cognitive functioning...