Title

PIN96 DEVELOPMENT OF PATIENT-REPORTED OUTCOME (PRO) AND OBSERVER-REPORTED OUTCOME (OBSRO) MEASURES FOR ASSESSMENT OF SYMPTOM INTENSITY IN DENGUE ILLNESS

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was two-to-four times faster than NASNetLarge and InceptionResNetV2, with similar accuracy. ***Conclusions:*** We developed a CXR-based pneumonia classification framework which achieved high classification accuracy. With substantial reduction in human time required, computer-aided reading of CXR-confirmed pneumonia may facilitate future disease burden and vaccine impact studies of pneumonia in children.

PIN93
PREDICTION MODEL OF TREATMENT FAILURE AMONG CHRONIC HEPATITIS C PATIENTS AT FOUR UNITED STATES INSTITUTIONS

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Objectives: Hepatitis C virus (HCV), the leading cause of advanced liver disease, has enormous economic burden. Effective treatments exist, yet identifying patients at risk of treatment failure could lead to interventions that improve cure rates. Our goal was to develop and evaluate a prediction model of HCV treatment failure. ***Methods:*** We analyzed HCV patients initiating direct-acting antiviral therapy at four United States institutions. Non-achievement of sustained virologic response (SVR) 12 weeks post-treatment completion defined treatment failure. The cohort was divided into a derivation (67%) and validation (33%) set. From 20 patient-level candidate variables collected before treatment initiation, we identified a subset associated with treatment failure in bivariate analyses. In the derivation set, separate predictive models were developed from 100 bootstrap samples using clustered logistic regression. From the 100 models, candidate variables were ranked by frequency of selection as predictors, using cutoffs of ≥80%, ≥50%, ≥40%, and all variables. In the validation set, predictive performance was compared across models using area under the receiver operating characteristic curve (AUC). ***Results:*** From 1,253 HCV patients, overall SVR rate was 86.1% (95% CI=84.1%, 88.0%). From the cutoffs, the number of variables included in final models were: ≥80%=three (AUC=0.576); ≥50%=five (AUC=0.605); ≥40%=nine (AUC=0.684); all=11 (AUC=0.681). The best performing model (≥40%) had significantly better predictive ability than the ≥50% (p=0.03) and ≥80% models (p=0.02) in the validation set, but poor discriminative ability. Most likely predictors of treatment failure in our dataset were older age, presence of hepatocellular carcinoma, and private versus public insurance, which appeared in 89%, 84%, and 80% of bootstrap models, respectively. ***Conclusions:*** This study did not result in a highly predictive model, but highlighted baseline factors associated with HCV treatment failure. Treatment failure prediction may facilitate development of data-driven clinical tools to identify patients who would benefit from interventions to improve SVR rates.

PIN94
MEASURING ADHERENCE TO TREATMENT IN HIV USING A REGIMEN BASED APPROACH

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Objectives: Medication adherence has been measured by numerous methods, including a proportion of days' covered metric recommended by Pharmacy Quality Alliance. This study examined a novel approach of calculating adherence to HIV treatment regimen, comparing established PQA PDC metric to a PDC multi-tablet regimen approach. ***Methods:*** A retrospective cohort analysis of patients with medication claim(s) for 3 ART ingredients during a 3 month index period. Medications dispensed as separate tablets must be filled within 14 days of one another for establishing index claims. Each day that a patient had completed an ART regimen (i.e., 3 ARTs, or in certain patient populations 2 ARTs) is counted as an adherent day. Adherent patients were defined as those whose regimen adherence was ≥90%. Patients were classified as new or continuous users based on a lookback period of 6 months prior to initial claims. ***Results:*** Final analytical sample included 5,530 patients on multi-tablet HIV regimens in 2017 meeting selection criteria. PDC was found to be significantly lower using the newer adherence approach than when using PQA PDC, 85.4% vs 88.5%, respectively (p<0.001). The percent of adherent patients was higher using the PQA PDC approach, 67.6% vs 60.0%, respectively. ***Conclusions:*** Clinical benefit of medication adherence has been well established, resulting in various strategies to address medication non-adherence. These strategies are often dependent on PDC calculations for triggering patient interventions. This study demonstrates the impact of an adherence metric accounting for multi-tablet regimens that previous methodology did not take into consideration, and provides a new approach for HIV medication adherence measurement. This approach can help providers more accurately identify patients who may previously have been considered adherent to therapy using PQA PDC.

Infectious Diseases - Patient-Centered Research

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PATIENT KNOWLEDGE ABOUT VACCINE-PREVENTABLE DISEASES: BASELINE RESULTS OF THE VACCINE EDUCATION THROUGH PHARMACISTS AND SENIOR CENTERS (VEPSC) TRIAL

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Objectives: Older adults experience low zoster and pneumonia vaccination rates, especially among minorities. Engaging patients in education about vaccines and vaccine-preventable diseases may be an important factor in increasing vaccine uptake. Vaccine Education through Pharmacists and Senior Centers (VEPSC) is a vaccine education trial of older adults being completed in senior community centers. Aim of VEPSC is to test effectiveness of didactic pharmacist-delivered education (PHARM) versus interactive peer-led small group education (PEER) in improving knowledge and beliefs about vaccination for zoster, influenza, and pneumonia. Purpose of this analysis is to present baseline knowledge results. ***Methods:*** VEPSC was conducted through Delaware Valley senior community centers from Fall 2017-Fall 2018. Participants completed knowledge and beliefs questionnaires at baseline, immediately post-program, and one month post-program. Knowledge scores were calculated as number of correct answers (max total score=22; max subitem scores for zoster, influenza, and pneumonia were 8, 7, and 7 respectively); baseline knowledge results were compared by race (Caucasian vs. other) via Wilcoxon Rank-Sum test and by group via ANOVA. ***Results:*** Baseline sample had 280 participants (127 PEER, 153 PHARM). Groups were similar for all demographics except race: PEER was predominantly African-American (81.9%); PHARM was 45.1% African-American, 39.9% Caucasian (p<0.0001). Caucasians had statistically higher mean baseline knowledge than other races: total knowledge score (13.51 vs. 10.79, p<0.0001), zoster (4.71 vs. 3.49, p<0.0001), influenza (5.20 vs. 4.39, p=0.0007), pneumonia (3.60 vs. 2.91, p=0.014). Baseline mean total knowledge score and pneumonia subscore differed by group with PEER scoring higher than PHARM for both (total 11.74 PEER vs. 10.99 PHARM, p=0.0196; pneumonia 3.25 PEER vs. 2.91 PHARM, p=0.0197). Baseline mean zoster and influenza subscores did not statistically differ by group (zoster 3.87 PEER vs. 3.63 PHARM; influenza 4.62 PEER vs. 4.45 PHARM). ***Conclusions:*** Significant opportunity exists to improve older adults' knowledge of vaccine-preventable diseases through a senior community center model.

PIN96
DEVELOPMENT OF PATIENT-REPORTED OUTCOME (PRO) AND OBSERVER-REPORTED OUTCOME (OBSRO) MEASURES FOR ASSESSMENT OF SYMPTOM INTENSITY IN DENGUE ILLNESS

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Objectives: Signs and symptoms of dengue disease are typically evaluated by clinicians in research studies at time of febrile illness onset and resolution. Outcomes based on the dengue patient experience, especially in the outpatient setting, have received less attention, limiting understanding of dengue illness burden. The aim of this study is to use patient input to develop the Dengue Illness Daily Diary (DIDD), a new Patient-Reported Outcome (PRO) and Observer-Reported Outcome (ObsRO) measure for use in children, adolescents and adults in outpatient settings. The DIDD was adapted from an existing PRO measure, the Dengue Illness Index Report Card (DII-RC), developed with clinician input only. ***Methods:*** Face validity assessment was conducted in accordance with FDA PRO Guidance, ISPOR PRO good research practices, and the dengue literature. Recommended modifications were discussed with dengue scientific and clinical experts to achieve consensus. A preliminary translatability assessment was conducted to confirm appropriateness for use in dengue endemic countries. Patient interviews will be conducted in Peru. ***Results:*** Concepts captured in the DIDD include fever, tiredness, rash, itchy skin, appetite loss, nausea, vomiting, diarrhea, headache, pain, eye redness, bruising, sleep, mood, daily functioning, and overall health. Response options capture gradation in sign and symptom intensity. Item and instruction wording, and general instrument format were aligned with outcomes from the face validity assessment and translatability assessment. The DIDD was migrated to electronic format. ***Conclusions:*** The DIDD aims to characterize the dengue illness burden from the patient's perspective. Concepts, response options, item and instruction wording, and general format, were modified from an existing instrument and are consistent with PRO published standards, the dengue literature, and expert opinion. Qualitative interviews with dengue patients and caregivers are planned in Peru to establish content validity and test for usability and feasibility of the instrument in paper and electronic format.

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STUDY ON PREFERENCE OF VACCINATION SCHEME SELECTION FOR CERVICAL CANCER

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Objectives: To survey, analyze and ascertain Preference of Vaccination Scheme Selection for Cervical Cancer, so that to provide the evidence for clinical decision-making and patient health management. ***Methods:*** Literature review was conducted