community partners new partnerships were formed to create stronger alliances amongst those being serve. Members of the Penn State CTSI were invited to serve on state and local advisory bords and became trusted messengers in our communities.

165

Rates of SGLT2 Inhibitor Use in Patients With Diabetes and Heart Failure in the Southeastern United States

Apoorva Gangavelli[1], Zihao Liu[2], Jeffrey Wang[1], Alexis Okoh[1], Shivani Patel[2] and Alanna A. Morris[1]
[1]Emory University Division of Cardiology, Atlanta, GA and [2]Rollins School of Public Health, Department of Epidemiology, Atlanta, GA2

OBJECTIVES/GOALS: Clinical trials of SGLT2 inhibitors in patients with heart failure (HF) have confirmed a reduction in hospitalization and death. Adoption of novel therapeutics has been slower in Black and female patients. We investigated utilization of SGLT2 inhibitor in patients with HF and type 2 diabetes and if there were utilization differences by race or gender. METHODS/STUDY POPULATION: We created a retrospective cohort of outpatients with HF at Emory Healthcare from 2015 to 2020. Additional inclusion criteria included presence of heart failure and a diagnosis of T2D. SGLT2 inhibitor use was identified by a presence of SGLT2 inhibitor prescription at the time of the clinic visit. We estimated differences in prescription of SGLT2 inhibitors by race and gender using Chi-square analysis. RESULTS/ANTICIPATED RESULTS: The cohort included 5829 patients, age 69.47 years Â± 13.44, 47.67 % female, 54.62% Black. Overall prescription of SGLT2 inhibitors was low but increased over time (1.4% in 2015 to 5.6% in 2020; p<0.0001). On average, SGLT2 inhibitor use increased annually by 44.77%. From 2015 to 2020, fewer female than male patients were on an SGLT2 inhibitor (1.94% vs. 2.73%, p=0.0033). A similar percentage of Black and non-Black patients were on an SGLT2 inhibitor (2.13% vs. 2.64%, p=0.0591). DISCUSSION/SIGNIFICANCE: Prescription rates of SGLT2 inhibitors remain low in patients with T2D and HF, especially for female patients, despite evidence of their benefit on hospitalizations and mortality. Implementing use of SGLT2 inhibitors in this population represent an opportunity to improve cardiovascular outcomes.

Precision Medicine/Health

166

Predicting 30 Day Return Hospital Admissions in Patients with COVID-19 Discharged from the Emergency Department: A national retrospective cohort study

David Beiser[1], Zach Jarou[1], Michael Puskarich[2], Marie Vrablik[3], Elizabeth Rosenman[3], Samuel McDonald[4] and Jeffrey Kline[5]
[1]University of Chicago, [2]Hennepin, [3]University of Washington, [4]UT Southwestern and [5]Indiana University

OBJECTIVES/GOALS: Identification of COVID-19 patients at risk for deterioration following discharge from the emergency department (ED) remains a clinical challenge. Our objective was to develop a prediction model that identifies COVID-19 patients at risk for return and hospital admission within 30 days of ED discharge. METHODS/STUDY POPULATION: We performed a retrospective cohort study of discharged adult ED patients (n = 7,529) with SARS-CoV-2 infection from 116 unique hospitals contributing to the national REgistry of suspected COVID-19 in EmeRgency care (RECOVER). The primary outcome was return hospital admission within 30 days. Models were developed using Classification and Regression Tree (CART), Gradient Boosted Machine (GBM), Random Forest (RF), and least absolute shrinkage and selection (LASSO) approaches. RESULTS/ANTICIPATED RESULTS: Among COVID-19 patients discharged from the ED on their index encounter, 571 (7.6%) returned for hospital admission within 30 days. The machine learning (ML) models (GBM, RF,: and LASSO) performed similarly. The RF model yielded a test AUC of 0.74 (95% confidence interval [CI] 0.71–0.78) with a sensitivity of 0.46 (0.39-0.54) and specificity of 0.84 (0.82-0.85). Predictive variables including: lowest oxygen saturation, temperature; or history of hypertension,: diabetes, hyperlipidemia, or obesity, were common to all ML models. DISCUSSION/SIGNIFICANCE: A predictive model identifying adult ED patients with COVID-19 at risk for return hospital admission within 30 days is feasible. Ensemble/boot-strapped classification methods outperform the single tree CART method. Future efforts may focus on the application of ML models in the hospital setting to optimize allocation of follow up resources.

Regulatory Science

167

Implementing a Community Researcher IRB Certification Through a Community-Engaged Approach

Mary Ott[1], Dustin Lynch[1] and Gina Claxton[1]
[1]Indiana University

OBJECTIVES/GOALS: A collaboration among Indiana CTSI community health partnerships (CHeP), bioethics, and regulatory programs identified and reviewed human research protection training programs targeting community engaged research, and pilot tested CIRTification with community partners working across a range of contexts. METHODS/STUDY POPULATION: We searched community human research protection training programs from across the county, identified three, examined each based upon criteria identified by community partners (time, relevance, online delivery) and our Human Research Protection Program (HRPP), and selected CIRTification (CIRT) to pilot. Ten community research partners volunteered to complete CIRT and a debriefing interview. Four completed CITI training previously. Participants included local and state-wide organizations, a resident, a state agency, and a hospital, and came from rural and urban communities. Interviews covered practical issues (ease of use, language, time), relevance, and comparison to CITI. Results were shared with HRPP for approval. RESULTS/ANTICIPATED RESULTS: Most felt CIRT was easy to navigate and engaging, and those who had done CITI felt CIRT was more relevant and engaging. The sections on historical background and recruitment were cited as most valuable. Suggestions were made to increase the diversity of examples beyond health care research. Community members mentioned several applications for CIRT including: (1) helping their own community work; (2) empowering them to be an advocate; (3) referring others to CIRT; (4) influencing approaches to recruitment and community engagement; and (5) applying ethics principles to their other community work. The Human Research Protection Program approved CIRT in place of CITI for community researchers. DISCUSSION/SIGNIFICANCE: Our process represents collaboration across the Indiana CTSI, HRPP and community partners, and use of best practices. Exemplifying “nothing about us without us”, actions were based on direct input from community

https://doi.org/10.1017/cts.2022.74 Published online by Cambridge University Press