RESEARCH SNAPSHOT THEATER: RESEARCH, ADULT AND PEDIATRIC

1126

LEVERAGING THE SCCM DISCOVERY VIRUS COVID-19 REGISTRY TO EVALUATE DRUG REPURPOSING RESEARCH DATASET

Smith Heavner[1], Kerry Howard[1], Mike Pauley[1], Pam Dasher[1], Laksika Sivaraj[2], Jagdeep Podichetty[1], Vishakha Kumar[3], Marco Schito[1] and Rahul Kashyap[4]

[1]Critical Path Institute, [2]Prisma Health, [3]Society of Critical Care Medicine, Mount Prospect, IL, [4]Mayo Foundation

INTRODUCTION: The CURE Drug Repurposing Collaboratory (CDRC) partnered with the SCCM Discovery VIRUS COVID-19 Registry (VIRUS) to develop and build a minimal dataset for drug repurposing research for COVID-19. This use case required a cross-sectional dataset to avoid the perceived risk of identifiability through serial laboratory results or vital sign patterns. The work took place as part of the early stages of a project funded by HHS Assistant Secretary for Planning and Evaluation to automate data extraction from the electronic health record.

METHODS: As part of an ongoing evaluation of the dataset's utility, CDRC performed factor selection analysis to explore relationships between baseline, median, and peak laboratory values and the patient outcomes. The primary outcomes of interest in this analysis were 28-day all-cause mortality and hospital length of stay (LOS). Serum creatinine, leukocyte count, lactate dehydrogenase (LDH), international normalized ratio (INR), and PaO2:FiO2 (P:F) ratio were examined as predictors of key outcomes. Data for 17,144 patients were obtained from VIRUS: COVID-19 Registry. Data were cleaned and an analysis dataset was constructed. Records with excessive missingness were excluded and liberal clinical plausibility rules were applied. Analysis used logistic regression with least absolute shrinkage and selection operator (LASSO) along with 10-fold cross validation. The cohort was randomly divided into training and testing sets at a 9:1 ratio. The study was IRB exempted.

RESULTS: Following a year-long Delphi process, the investigators identified 35 key data elements including primary outcomes. Modeling for 28-day mortality: median creatinine (n=4,304), baseline leukocytes (n=3,731), median LDH (n=1,854), maximum INR (n=1,972), and median PF ratio (n=1,000) were most predictive. Modeling for LOS: median creatinine, maximum leukocytes, baseline LDH, baseline INR, and median PF ratio were most predictive.

CONCLUSIONS: This analysis provides guidance for the evaluation of the CURE ID dataset. The data will ultimately be displayed in a publicly explorable interface through the CURE ID application and website hosted by the National Center for Advancing Translational Science at NIH in partnership with the FDA.

1127

QUALITATIVE RESEARCH ANALYSIS OF VIRTUAL CRITICAL CARE TRAINING FOR INTERNATIONAL HEALTHCARE WORKERS

Vanshika Balayan[1], Vikas Kumar[2], Michael Hollar[1] and Mary Arthur[3]

[1]Medical College of Georgia, [2]Augusta University Medical Center, Augusta, GA, [3]Augusta University

INTRODUCTION: Recently, the use of virtual platforms for training and learning has increased, and there is no doubt that it is here to stay. Virtual learning poses a significant challenge but also could provide a considerable benefit in bridging the gap in areas with limited critical care training. We analyzed data from international learners who completed virtual Fundamental Critical Care Support (FCCS) training.

METHODS: We conducted virtual FCCS training courses for healthcare workers in Ghana, Nigeria, the Philippines, and Pakistan. The virtual course was two days long, covering six skills stations. Participants completed a survey after the sessions. The survey questions determined the usefulness, content, delivery of various skill stations, and the most and least valuable features of the stations using a 5-point Likert scale.

RESULTS: 178 participant responses were analyzed. The participants were from various backgrounds (ex: resident physician, nurse practitioners, respiratory therapists, and attending physicians). Overall, respondents had a positive experience with the interactive virtual course. The survey showed a Likert score of approximately 4.5+ for the skills stations. One participant said, "The most valuable feature was recognizing an unstable patient and running through what to do from start to transfer." Participants reported that the workshop would bring changes in their daily practice of medicine, especially regarding understanding critically ill patient management. As a whole, participants reported that the workshop's least valuable features were network issues, time constraints for stations, and desire for in-person training. Most participants demonstrated a desire for a more hands-on experience in the mechanical ventilation station.

CONCLUSIONS: We demonstrated that implementing virtual FCCS workshops internationally is feasible and well received by trainees. Although cost-effective, participants did crave an in-person aspect to their training. Our data demonstrates potential in virtual critical care training. By incorporating virtual and augmented reality devices, critical care training can be conducted internationally in resource-limited countries with limited health care professionals with critical care training.