was older with more comorbidities than their non-long COVID counterparts. We also noted any differences regarding sex, race, ethnicity, severity of acute COVID-19 symptoms, vaccination status, as well as some analysis regarding medications taken. DISCUSSION/SIGNIFICANCE: This profile can be utilized to decisively define long COVID as a clinical diagnosis and will lead to consistence in future research. Elucidating an actionable model for long COVID will help clinicians identify those in their care that may be experiencing long COVID, allowing them to be admitted into more intensive monitoring and treatment programs.

59

Where are the viral loads? Searching for additional HIV laboratory results in South Africa's National Health Laboratory Services Database

Keri Geiger, Jason E. Farley
Johns Hopkins University

OBJECTIVES/GOALS: Guidelines suggest people with HIV (PWH) receive routine HIV viral load (VL) testing at least yearly and upon diagnosis with multidrug-resistant tuberculosis (MDR-TB). Many PWH and MDR-TB in South Africa seem to be missing VL results. This study's goal was to find results which may be available from the National Health Laboratory Service (NHLS). METHODS/STUDY POPULATION: We abstracted HIV laboratory results, specifically baseline VL and CD4 count and VL at MDR-TB cure, from PWH enrolled in a cluster-randomized clinical trial of nurse case management for PWH and MDR-TB in South Africa who were cured of MDR-TB. For any participant missing one or more of these results, we thoroughly searched the electronic NHLS database using multiple separate searches varying terms including patient name, surname, date of birth, medical record number where available, and South African identification number. Returned results were compared to results abstracted from the parent study and any additional results were entered into the parent study data. RESULTS/ANTICIPATED RESULTS: Of 929 PWH cured of MDR-TB, 879 (94.6%) were missing at least one expected VL or CD4 result in the parent study database. Though our search strategy was successful in identifying participants and returning CD4 and VL results, we rarely found additional results that were not already in the parent study database. Following the search and entry of the few additional results retrieved, 116 (12.4%) participants were missing a baseline CD4, 309 (33.3%) missing baseline VL, and 385 (41.4%) missing VL at MDR-TB cure, representing 572 individuals or 61.6% of participants with at least one unavailable result. This high level of unavailability of key laboratory results used to guide MDR-TB and HIV treatment suggests that these tests were either not ordered, not collected, or not completed due to electronic gatekeeping at NHLS. DISCUSSION/SIGNIFICANCE: Unknown CD4 count or VL leaves PWH open to including MDR-TB treatment failure and death. Our search strategy found additional results but was time-consuming and cumbersome. Limitations included lack of information on why laboratory results were missing, which limits our ability to make recommendations for better collection and reporting.

60

Derivation and Validation of a Novel Hospital Capability Score for Sepsis

Uchenna Ofoma, Elena Deych, Fei Wan, Marin Kollef, Karen Joynt Maddox
Washington University in Saint Louis

OBJECTIVES/GOALS: Regionalized sepsis care could improve sepsis outcomes. There are no measures of sepsis capability to guide the identification of hospitals that can best serve sepsis patients. We derived Capability-Based (CB) scores from specific hospital characteristics and evaluated their performance as system predictors of mortality among adults with sepsis. METHODS/STUDY POPULATION: We used the 2018 State Inpatient Databases to identify 90051 adult sepsis encounters at 157 non-federal NY hospitals (derivation cohort), and 130,249 sepsis encounters at 220 hospitals in FL and MA (validation cohort). We used Principal Component Analysis to analyze to reduce 14 hospital-level resource use characteristics to 3 interpretable, linear data combinations (principal components (PC). We calculated CB scores for each hospital as a sum of standardized values for each component multiplied by the respective PC loading. We evaluated the correlation of sepsis volume and each CB score with hospital mortality and with outward sepsis transfer proportions. We fitted linear, nested, predictive models to compare the system predictive abilities of CB scores and sepsis volume in relation to hospital mortality. RESULTS/ANTICIPATED RESULTS: In the derivation cohort, 83963 (93.2%) patients were non-transferred, of which 20230 (24.1%) died. The mean (range) score was 0 (-3 - +5) with higher scores denoting more capable hospitals. Higher scores were weakly and inversely correlated (spearman's [r]: - 0.28) with outward sepsis transfer proportions. Higher scores had weak but better positive correlation with hospital mortality (r: 0.33), than sepsis volume (r: 0.24). CB scores explained more variation in sepsis mortality (R2 = 0.24, P DISCUSSION/SIGNIFICANCE: Capability-based hospital scores account for three times more variation in sepsis mortality than sepsis volume and outperform sepsis volume as a system predictor of mortality. With further refinement and validation, these scores may find utility for improving system-based approaches to sepsis care.

61

Detecting Parkinson's Disease Using Computer Vision

Jacob Simmering, Robert Gerritsen, Nandakumar Narayanan
University of Iowa

OBJECTIVES/GOALS: Can we detect Parkinson's-disease-related motor impairments using computer vision and machine learning? METHODS/STUDY POPULATION: A sample of 29 people with Parkinson's disease (PD) and 29 non-Parkinson's disease (non-PD) controls were recruited from the University of Iowa Movement Disorders Clinic. Videos of 3 motor assessment tasks performed using the hands were recorded and hand location information was abstracted using the computer vision program MediaPipe. Measures from the raw data series and FFT were used as features to

https://doi.org/10.1017/cts.2023.148