

507

### **a. Determining the marginal cost differences and potential areas of improvement for a telerehabilitation versus outpatient occupational therapy session for stroke survivors**

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**OBJECTIVES/GOALS:** The objective of this study was to estimate the cost differences of a telerehabilitation versus outpatient session. A secondary objective was to identify areas to improve telerehabilitation delivery efficiency. We aim to improve the translation/adoption of telerehabilitation for clinical use. **METHODS/STUDY POPULATION:** This study used a time-driven activity-based costing (TDABC) approach including 1) observation of rehabilitation sessions and creation of manual time stamps, 2) structured and recorded interviews with two occupational therapists familiar with outpatient therapy and two therapists familiar with telerehabilitation, 3) collection of standard wages for providers, and 4) the creation of an iterative flowchart of both an outpatient and telerehabilitation session care delivery process. This study followed the reporting guidelines to ensure a standardization for TDABC research. **RESULTS/ANTICIPATED RESULTS:** Overall, telerehabilitation (\$225.41) was more costly than outpatient therapy (\$168.29) per session for a cost difference of \$57.12. Primary time drivers of this finding were initial phone calls (0 mins for OP therapists versus 35 mins for TR) and post documentation (5 mins for OP versus 30 mins for TR) demands for telerehabilitation. **DISCUSSION/SIGNIFICANCE:** Telerehabilitation is an emerging platform with the potential to reduce costs, improve healthcare inequities, and facilitate better patient outcomes. Improvements in documentation practices, staffing, technology, and reimbursement structuring would allow for a more successful translation.

508

### **Comparing effectiveness and safety of levetiracetam loading doses among patients with status epilepticus.**

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**OBJECTIVES/GOALS:** Our long-term goal is to improve the clinical outcomes of patients with status epilepticus through increasing the level of evidence surrounding guidelines. The specific objective of our proposed work is to compare the outcomes and adverse drug events between the Neurocritical Care and American Epilepsy Society levetiracetam dose recommendations. **METHODS/STUDY POPULATION:** This is a retrospective, single site, cohort study comparing outcomes of hospitalized patients with status epilepticus treated with levetiracetam bolus at the University of Kansas Health System. Patients outcomes will be compared based on levetiracetam bolus dose received. The primary outcome will be seizure reoccurrence within 24 hours. Secondary outcomes include number of additional anti-epileptic drugs administered, cumulative dose of benzodiazepines administered within 24 hours of levetiracetam bolus administration and incidence of adverse drug reactions. All study data will be extracted retrospectively from the EPIC chart

review following patient list generation through the HERON i2b2 database query. **RESULTS/ANTICIPATED RESULTS:** Aim 1 will characterize levetiracetam dosing among patients admitted to the University of Kansas Medical Center for status epilepticus during routine clinical care. We hypothesize that given the inconsistency in dosing recommendations from various professional societies and drug references, we will observe inconsistent dosing of levetiracetam among those hospitalized due to status epilepticus.

Aim 2 will evaluate effectiveness and safety across the various levetiracetam doses. We estimate that adherence to the higher weight-based dosing recommendations of the 2016 American Epilepsy Society guideline may result in improved outcomes with a similar frequency and severity of adverse drug events compared to lower/fixed-dose levetiracetam dose recommendation of the 2012 Neurocritical Care guideline. **DISCUSSION/SIGNIFICANCE:** Notable inconsistencies across the dosing recommendations for levetiracetam exist between the guidelines for treatment of status epilepticus and commonly used tertiary drug information databases. This variation in guidance may lead to differences in dosing and warrants further exploration to better support the management of status epilepticus.

509

### **Pilot Projects as Catalysts for Research Initiatives**

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**OBJECTIVES/GOALS:** Pilot grants are small financial investments given out by CTSA hubs to facilitate new clinical and translational research projects. The New Jersey Alliance of Clinical and Translational Science (NJ ACTS) is one of 65 CTSA hubs. The goal of this project was to evaluate and improve the NJ ACTS program by learning from pilot programs across the consortium. **METHODS/STUDY POPULATION:** The initial research on pilot programs was conducted using the CTSA Search Solutions tool, a tool developed at NJ ACTS which provides links to individual pages by topic in all the hub websites. Using the tool, public information was accessed, including common award amounts, significant dates, and preferred categories of research. Then, a survey created in REDCap was distributed to colleagues at all CTSA hubs to gather additional information and thoughts on pilot programs. The data were compiled in an excel database to observe and analyze trends. These trends were graphically presented in figures developed from the data to see how NJ ACTS compares to other CTSA hubs in how they focus and operate their pilot programs. **RESULTS/ANTICIPATED RESULTS:** There are both similarities and differences between NJ ACTS and other hubs. NJ ACTS utilizes a REDCap form for its application, as do 14 other CTSA hubs. Surveys also show that NJ ACTS follows similar processes for: letter of intent and application due dates; having a standing review committee; and the categories of awards. Award categories for Clinical/Translational Innovation, Methodology/Infrastructure, and Partnership/Collaboration are shared with 47, 25, and 41 institutions, respectively. NJ ACTS requires collaboration between its multiple institutions, as do 28 other hubs. It does not, however, have a public notification of award date, and notifications tend to go out relatively late. NJ ACTS funded multiple proposals pertaining to COVID-19, something 11 other CTSA hubs did as well. **DISCUSSION/SIGNIFICANCE:** Although a new CTSA hub, NJ ACTSs Pilot Program operates comparably to more mature CTSA hubs. Using the survey data, NJ ACTS can implement modest changes, better serving its scientific community. CTSA Search