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Healthcare Delivery Science in LA: Addressing patient and health system priorities with cross-sector research infrastructure

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ABSTRACT IMPACT: Effective healthcare interventions improve access, quality of care, and health outcomes for underserved, high-disparity populations of Los Angeles county and beyond. **OBJECTIVES/GOALS:** We will expand our successful, Los Angeles-based public-academic partnership to develop and evaluate health system interventions aimed at improving healthcare for underserved communities, as well as develop workforce skilled in healthcare delivery science. **METHODS/STUDY POPULATION:** Together with the LA County Department of Health Services, the two LA-based CTSA hubs at USC and UCLA have established critical infrastructure for effective cross-sector translational research: (1) New funding mechanisms to evaluate health system interventions in county hospitals and clinics in areas of mutual interest; (2) Specialized research service cores (Safety-net Health Innovation core, Clinical Research Informatics core, and Healthcare Delivery Science core), and (3) Training and mentorship programs tailored for healthcare delivery scientists. **RESULTS/ANTICIPATED RESULTS:** Outcomes from the first four years of the partnership include: (1) Significant impact on health outcomes from eight funded projects, e.g., lowered A1c levels by 0.9%; (2) Successful, coordinated service to dozens of research projects, e.g., a teleretinal screening program decreased ophthalmology visit wait times from 158 to 17 days; (3) New virtual coursework in seven domains (healthcare delivery science, dissemination and implementation science, systems engineering, behavioral economics, informatics, team science, and community engagement); (4) A published 'synergy paper' w/ CTSA hubs in three other urban cities examining common themes of academic-public partnerships; and (5) Rapid and streamlined COVID-19 research policy setting with county leadership. **DISCUSSION/SIGNIFICANCE OF FINDINGS:** Our sustainable infrastructure is effectively bridging research-policy-practice gaps in Los Angeles and addressing patients' and the health system's priorities.

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Comparing the Accuracy of Different Tools in Identifying Glaucoma Medication Non-adherence

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ABSTRACT IMPACT: Medication non-adherence is a widespread problem in glaucoma care, and this abstract shows that a free and easy to implement tool can be used to accurately screen and identify patients who are not adherent to their glaucoma medication. **OBJECTIVES/GOALS:** To compare the accuracy of pharmacy refill

data and five measures of self-reported adherence in identifying patients with poor electronically monitored glaucoma medication adherence. **METHODS/STUDY POPULATION:** Glaucoma patients (age ≥ 40 , poor self-reported adherence, and ≥ 1 medication) recruited at the University of Michigan completed five surveys of adherence and 3-months of electronically monitored medication adherence; pharmacy refill data were obtained. Electronically monitored adherence was summarized monthly as percent of doses taken on time. Median monthly adherence $\leq 80\%$ was considered non-adherent. Pharmacy refill data were reported as the proportion of days covered. The accuracy of the measures in predicting $\leq 80\%$ adherence was assessed with receiver operating characteristic curves such as estimation of area under the curve (AUC), sensitivity, specificity, and accuracy. **RESULTS/ANTICIPATED RESULTS:** 95 patients completed electronic monitoring with a median monthly adherence of 74% ($\pm 21\%$); 53 patients (56%) were non-adherent. Pharmacy refill adherence was not significantly correlated with electronically monitored medication adherence ($r=0.12$, $p=0.2$). A single-item adherence question ('Over the past month, what percentage of your drops do you think you took correctly?') had the largest correlation with electronically monitored adherence ($r=0.47$, $p<0.0001$), the largest AUC for predicting non-adherence (AUC=0.76, [95% Confidence Interval = 0.66, 0.87]), best accuracy (71%, [61, 82]), and good sensitivity (84%, [73, 96]). **DISCUSSION/SIGNIFICANCE OF FINDINGS:** A free, single-item screening question ('Over the past month, what percentage of your drops do you think you took correctly?') offers an easy-to-implement tool for identifying glaucoma patients with poor medication adherence in clinical practice.

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Assessing Transition Outcomes in Sickle Cell Disease (SCD) Prior To Implementation of A Formal Transition Program*

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ABSTRACT IMPACT: To identify potential facilitators and barriers to a successful transition in care. **OBJECTIVES/GOALS:** Improvements in care for children with sickle cell disease (SCD) have increased survival into adulthood. However, mortality rates are increasing in young adults. One of the challenges is providing appropriate care during transition from pediatric to adult care. The goal is to identify facilitators and barriers to a successful transition in care. **METHODS/STUDY POPULATION:** The UAB SCD Center serves a large area of Alabama. The pediatric program is in Birmingham and has outreach clinics in three other cities. The adult program only has one clinic located in Birmingham. With IRB approval, we performed a retrospective chart review of individuals with SCD (all genotypes) aged 18-24 (as of 1/31/2019) who were seen at least twice prior to age 18 (in pediatrics) and have confirmed SCD. Charts were reviewed for demographics, genotype, last known insurance, SCD therapy, clinic location, and transition status. Analyses were undertaken to determine predictors of successful transition (defined as coming to an appointment with an adult hematologist) and unsuccessful transition (defined as lost to follow-up (LTFU) without transfer of care). **RESULTS/ANTICIPATED RESULTS:** There were 544 individuals meeting inclusion criteria. Of this group, 234 were LTFU, 189