

completion of data collection, the survey results will be further analyzed to determine common barriers and patterns in barrier type across the different institutions, schools, positions/roles in research, and translational research stages. Given that the Comments and Feedback section of the survey entailed ranking the top three barriers across the entire survey as a whole, the results will also indicate the relative prevalence of specific barriers and categories. **DISCUSSION/SIGNIFICANCE:** The impact of the survey and its results is to develop feasible institutional solutions to overcome the prevalent barriers and improve efficiency in all parts of the research process. Possible solutions encompass accessible resources for researchers, longitudinal training programs, consultative services, and workshops for investigators.

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### **The development of a digital game to prevent suicide in youth who misuse substances**

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**OBJECTIVES/GOALS:** Suicide is the second leading cause of death in teens. Substance misuse, including opioids, is a risk factor for suicidal thoughts and behaviors among teens. School-based approaches are promising, yet they lack evidence on their effectiveness. To fill this gap, we created supportED, a digital game to prevent suicide in youth who misuse substances. **METHODS/STUDY POPULATION:** We conducted focus groups and interviews to inform the development of the digital game and discuss approaches to enhance user experiences, acceptability, and feasibility of the intervention. A semi-structured focus group/interview guide was developed, pilot tested, and used in focus groups/interviews. The guides aligned with constructs from a safety planning intervention, a well-recognized, evidence-based suicide prevention intervention, to identify potential warning signs of emotional distress, coping strategies, and resources for seeking help to prevent suicidal thoughts and behaviors. Focus groups/interviews were led by a facilitator, who is also a certified school counselor and licensed professional counselor, and a co-facilitator who took field notes and provided debrief summaries. **RESULTS/ANTICIPATED RESULTS:** A total of 35 participants, including 10 high-school-aged teens [aged 16-19], 10 college-aged youth [aged 18-22], 10 school-based providers, and five interviews with adults who had experience with opioids in their youth informed the development stage. Of the focus group participants, 25.7% identify as female (n=23), 71.4% identify as male (n=6), and 2.9% do not identify as male or female (n=1); 60% identify as White (n=18), 20% identify as multi-racial (n=6), 10% identify as Black (n=3), 3.3% identify as Asian (n=1), and 6.7% identify as race unknown (n=2); and, 37.1% (n=13) identify as Hispanic/Latinx. Salient themes that emerged focused on opioids, substance misuse, mental health, bullying, grief, family, identity, and stigma to create six distinct narratives in the digital game. **DISCUSSION/SIGNIFICANCE:** Findings informed the development of a digital game to prevent suicide among adolescents who misuse substances. The digital game is currently being evaluated in a pilot RCT to assess the preliminary efficacy of the intervention, user experience, usability, and feasibility of delivering the intervention and protocols among 60 youth.

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### **Exploring the Diversity of Expanded Access Patients at Michigan Medicine**

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**OBJECTIVES/GOALS:** Lack of diversity within clinical trials is well known, but there is little data on the use of investigational products through other pathways, such as expanded access. This project sought to determine the demographic diversity of patients benefiting from expanded access at Michigan Medicine. **METHODS/STUDY POPULATION:** Previous quality improvement reviews provided the list of 271 patients for whom a single-patient, expanded access request had been approved by the FDA and University of Michigan IRBMED between 2005 and 2021. Demographic information was collected through the EMERSE tool, including age, legal sex, race, ethnicity, and zip code. These data were cross-referenced with available regulatory documentation on product requested, treatment area, and date of request. Descriptive statistics were performed using Excel. **RESULTS/ANTICIPATED RESULTS:** Patients who were approved to use an investigational product through expanded access at Michigan Medicine showed a wide geographic distribution, including 48 Michigan counties, 20 states, and 1 province. All age groups were served, with those between 30-49 underrepresented and those under 10 and over 60 overrepresented. Race data generally followed the proportions of the Michigan state census, including 76% white and 14% black or African American (expected: 79% and 14%) and 48% female (expected: 50%). On further breakdown, populations differed by specialty and county. **DISCUSSION/SIGNIFICANCE:** The distribution of Michigan Medicine patients with approved expanded access requests was similar to the population of Michigan with respect to age, sex, and race. Further research is needed to determine if this reflects equitable use or if these results are generalizable to other institutions.

### **Research Management, Operations, and Administration**

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#### **Creating a Dashboard to Increase Efficiency in Tracking and Reporting on Research Data Requests**

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**OBJECTIVES/GOALS:** The purpose of the project was to create a Tableau dashboard to track metrics on requests for research data at Atrium Health Wake Forest Baptist. The objectives included: 1) define and identify request fulfillment metrics, 2) build a dashboard to capture metrics, and 3) integrate the dashboard into metrics tracking and reporting activities. **METHODS/STUDY POPULATION:** Project managers and team leaders in the Office of Informatics collaborated to determine which measures would be most relevant and impactful to report on. Metrics that were

collected included: total count of tickets fulfilled over time, number of tickets currently open, sum of outstanding quoted hours, quoted hours vs. actual hours needed to fulfill ticket, and hours billed. Tableau's direct connection feature was used to extract the Trac ticket data from its Postgres database and the dashboard was published to Tableau Server. After the initial draft was created, several rounds of revisions were made as new data insights were discovered through further investigation of the data. RESULTS/ANTICIPATED RESULTS: Each morning, Tableau Server runs an automatic refresh of the data. On the dashboard homepage, users can see a quick view of all available metrics; to minimize noise, only the current statuses, active tickets, and stats for the most recent monitoring periods are displayed. Many of the charts give the user the option to link out to a page with related supplemental information (historic data, ticket status history, etc.). With the help of the dashboard, project managers and team leaders can now monitor how long tickets are in each status, increase quote accuracy using the hours quoted and hours billed charts, and examine ticket complexity over time. DISCUSSION/SIGNIFICANCE: Prior to dashboard creation, metrics were sparse and difficult to assemble. By providing information on the quantity, size, and complexity of data requests, the dashboard enables the Office of Informatics to monitor how the process is functioning overall, make informed decisions about resource allocation, and provide quick interventions.

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### Developing a rubric to distinguish translational science from translational research in CTSA pilot projects

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OBJECTIVES/GOALS: The goal of the CTSA consortium is to move scientific discoveries to clinical application. Translational science (TS) focuses on the process by which this happens, and NCATS supports pilot projects that propose TS questions. We are developing a rubric to guide program managers' ability to discriminate between TS and translational research (TR). METHODS/STUDY POPULATION: The CTSA External Review Exchange Consortium (CEREC) and CEREC II are reciprocal review collaborations between CTSA hubs that identify reviewers for each other's pilot grant applications. CEREC and CEREC II partners developed a 31-item rubric, based on NIH's Translational Science Principles, for discriminating pilot TS grant applications from those proposing TR. The hubs contributed proposals pre-selected as either TS or TR projects. Then, experienced reviewers and/or program administrators from the hubs used the rubric to score each of the proposals. Reliability of the rubric will be assessed using inter-rater reliability (% agreement and kappa). To identify which of the items in the rubric best discriminate between TS and TR, Item Response Theory analysis will be employed. RESULTS/ANTICIPATED RESULTS: Ten CEREC participating hubs submitted 30 applications: 20 TS proposals and 10 TR proposals. Twenty-two reviewers from 12 CEREC hubs

evaluated the applications by using the scoring rubric; at least two reviewers evaluated each proposal. The results of the analyses will describe the reliability of the rubric and identify which of the seven TS Principles are most useful for distinguishing between TS and TR pilot grant proposals. Ultimately, this work will yield a scoring rubric that will be disseminated throughout the CTSA network to facilitate the screening of TS applications. DISCUSSION/SIGNIFICANCE: Optimizing research processes is critical to ensure that scientific discoveries are integrated into clinical practice and public health policy as rapidly, efficiently, and equitably as possible. By appropriately identifying and funding TS projects, CTSA hubs can accelerate the impact of clinical and translational research.

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### If You Build It, Will They Come? Navigating Research Resources at CTSA Hubs

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OBJECTIVES/GOALS: CTSA Program hubs provide a wide range of research support services (funding, training, consultations, etc.) to individuals and teams. The CTSA Program hub at Columbia University seeks to identify best practices across CTSA hubs in how they facilitate researchers to identify, navigate, and access services at complex academic medical centers. METHODS/STUDY POPULATION: o A landscape analysis across CTSA Program hub websites was conducted during December 2021-February 2022, with the goal of assessing the availability of research navigation services and the ease of accessing and requesting research support services at each hub. Websites of 66 CTSA hubs were accessed and browsed for the following: 1) if a research navigation or concierge service was available; 2) how to request and apply to use common services such as pilot funding, biostatistics, clinical research services; 3) if there was a contact form and/or email address for general inquiries. Binary coding (1=Yes, 2=No) was used to track and summarize if these features were available, and then further classification and observations were noted into the full data set. RESULTS/ANTICIPATED RESULTS: The landscape analysis determined that 68% of CTSA hubs offer a form of research navigation including consultative models (personalized guidance, studios) and web-based models (self-service web portals, graphics, toolkits). Consultative models could be classified into three levels of support ranging from general information sharing to providing scientific expertise to convening more intensive studio sessions. 92% of CTSA hubs have at least 1 system in place for researchers to request services with a majority of hubs using a mix of tools and systems. In addition, 36% of hubs have additional general contact forms and 75% have general email addresses to assist researchers in obtaining more information. DISCUSSION/SIGNIFICANCE: There is a relative lack of data and information on the effectiveness of different research navigation models across the CTSA network, and barriers for researchers to identify services remain (Elworth et al). Our team is planning additional evaluations including interviews with leaders at other CTSA hubs and researchers and trainees at Columbia.