METHODS/STUDY POPULATION: Among 5 pilot clinical sites, 40 physicians and front-line providers consisting of medical assistants and receptionists were trained on the RxUniverse platform. They were instructed on the platform's purpose, were shown a demonstration of the functionality, and were observed in a trial process of prescribing an app. Specific implementation plans were designed with the help of the clinic staff in order to best fit in with their present workflows. The well-validated System Usability Score (SUS) was used to assess the usability of the platform. Prescriptions of 100 relevant app prescriptions within a 8-week pilot period was set as the adoption goal. RESULTS/ANTICIPATED RESULTS: Within the pilot period, greater than 2000 apps were prescribed across all users. Of the 40 providers trained on the RxUniverse platform, 26 prescribed >5 apps during the trial period. Of these 26 individuals, 18 prescribed >20 apps, 14 prescribed >50 apps, and 5 prescribed >80 apps; 58% of users reported frequent use (weekly or daily) of the platform. In total, 19 responses were received for the SUS survey. The RxUniverse platform received a usability score of 82%. DISCUSSION/SIGNIFICANCE OF IMPACT: As the pace of innovation continues to accelerate, health care providers will need to quickly integrate new digital-based tools into their workflows, and patients will need to be able to easily and readily access these tools. RxUniverse provides the necessary mechanisms, user-friendly interface, and EHR integration functionality to accomplish this. The total number of apps prescribed surpassed 2000, which far exceeded the initial target of 100 apps. The platform also scored an 82% on the SUS, which is considered an "A" by industry standards. By comparison, other health apps considered to have to be in the highest-rating groups have reported scores of 77.5% and an overall average of 68% among all systems. These outcomes demonstrate the high adoption and usability of the RxUniverse platform, an important platform that can be used to prescribe the latest technologies directly to patients.

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Mobile use patterns among low-income parents and teens enrolled in outpatient substance abuse treatment

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OBJECTIVES/SPECIFIC AIMS: This study sought to determine the accessibility, utilization, and preference for mobile phone use among a marginalized population of teens enrolled in an adolescent substance abuse treatment program and their parents. Specific study aims were to: (1) characterize mobile phone use, (2) assess the accessibility and reliability of mobile phone usage, (3) determine specific barriers to mobile phone use, and (4) examine parent and teen perceptions of the utility of integrating communication technology in substance use treatment. METHODS/STUDY POPULATION: In total, 103 (78.6% female; 75.7% Hispanic) parents of teens participating in an outpatient substance abuse treatment program with an average age of 42.60 (SD = 9.28) participated in our study. Upon enrollment in a substance abuse treatment program between October 2014 and July 2016, parents completed a technology use survey as part of program development and a chart review of clinic outbound calls to parent mobile phones was completed to evaluate reliability of parent mobile phone access throughout treatment. Survey collection among teens is ongoing. Study population information for teens will be presented at the conference. RESULTS/ANTICIPATED RESULTS: The vast majority of parents owned a cell phone and used it as their primary phone (97.1%); 83% of parents owned smart phones in particular, with the majority being Android phones (68.7%). Parents were more likely to have pay-as-you-go (41.4%) and yearly (32.3%) contracts, and only 15% of the sample endorsed changing their phone number more than once in the past year (64% = never; 21% = once). Parents reported using several of the phone features: text (97%), email (76%), pictures (93%), and accessing the internet (92%); 92% reported they did not have a texting limit; and the most popular use of the mobile phone was to send and receive text messages (58.6%), followed by accessing the internet (19.2%). During the course of a 10-week treatment program, the clinic made 2776 confirmation phone calls to parents who completed surveys. Report of accessibility matched the clinic's ability to reach parents. Of the 2776 calls, 97.2% were made to the original number provided, which was in service. Only 2.7% were determined to be disconnected, with the median number of days for disconnected service being 2 days with no voice and no texting capabilities (range = 14) and 2 days with no voice, but with texting capabilities (range = 28). In terms of parent perceptions of the utility of integrating communication technology in substance use treatment, 91% of parents reported they would be receptive to receiving text messages with parenting tips as aftercare support. Preferred content areas included: strategies for monitoring teen substance use

(56%), strategies for using consequences (62%), suggestions for encouraging positive activities (62%), and ways to improve parent-child communication (63%). Accessibility, utilization, and preference for mobile phone use in a treatment program among teen respondents will be presented at the conference. DISCUSSION/SIGNIFICANCE OF IMPACT: This study characterized both subjective and objective mobile phone accessibility and usability among teens participating in an adolescent substance abuse treatment program and their parents. This study also provides information on teen and parent perceptions of using mobile phones during the aftercare period and ratings of acceptable messages following treatment. This data will help researchers design mobile-based interventions both during and after treatment, which is the future direction of our research group.

EDUCATION/MENTORING/PROFESSIONAL DEVELOPMENT

2018

The translational integrator: Facilitating collaboration and bridging the "Valley of Death"

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OBJECTIVES/SPECIFIC AIMS: Translating conventional and regenerative medicine strategies from the research laboratory into the clinic is a complex process that can delay bringing novel therapies to the patient. Navigating the increasingly complex regulation surrounding cell-based and combination product technologies is a major challenge for the translational biomedical scientist. To this end, Mayo Clinic created a new position, the "Translational Integrator," as part of the cGMP Biomaterials Facility in the Center for Regenerative Medicine. METHODS/STUDY POPULATION: The Translational Integrator educates investigators about FDA standards and regulatory pathways; determines where the product is on the translational spectrum; works to understand the science behind the product; determines what additional studies may be needed; supports investigators in preparing for FDA communications and submissions; and educates researchers about institutional resources and funding mechanisms needed to move their product into manufacturing and trials. A primary objective is to meet investigators at an early stage in product development to avoid conducting potentially redundant work to meet regulatory requirements. RESULTS/ANTICIPATED RESULTS: Robust training in clinical and translational research methodology enables the integrator to facilitate the collaboration necessary between investigators, clinicians, institutional resources, regulators and funders to move products towards FDA IND/IDE approval and first-in-human trials. It is an iterative process using technology/translational readiness criteria, project management and review by subject matter experts that is highly interactive and customized to each project. Current projects include topics in orthopedic surgery and ENT. In creating and refining this position, several key lessons have been learned. DISCUSSION/SIGNIFICANCE OF IMPACT: First, the Translational Integrator must undergo constant reflection and assessment of investigator needs, which requires flexibility and understanding that their role may change in the context of each product. Second, the support that the Translational Integrator provides can shift the mindset of the investigator from being averse to engaging in the translational process to eager to move their product forward. Finally, for the investigator who does not personally want to move their work into first-in-human trials, establishing connections to intellectual property generation and licensing may support movement of their findings into patients.

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Improving evidence synthesis: Partnering with the Center for Clinical & Translational Science to build a Systematic Review Core

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OBJECTIVES/SPECIFIC AIMS: To improve the quality of evidence synthesis projects, including systematic reviews and other comparative effectiveness reviews, at the University of Utah. METHODS/STUDY POPULATION: Systematic reviews