

optimal test market for Intelhealth in the U.S. By developing a targeted intervention to improve hearing aid access and acceptability among older adults, we will create a generalizable model for delivering care through community health workers equipped with a decision support and telemedicine platform.

Dissemination and Implementation

55256

ReacStick: From Conception to Commercialization

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ABSTRACT IMPACT: ReacStick concussion testing and monitoring can serve as a 'vital sign for the brain', allowing for an immediate, objective assessment on the field or at the bedside. This project examines the entrepreneurship process from invention to commercialization. **OBJECTIVES/GOALS:** ReacStick is the first objective, portable, measure of concussion likelihood and severity and uses simple and complex reaction time testing. We detail the entrepreneurship process from product invention through its current mid-stage (patented, 20+ publications, etc.) to future commercialization for diverse applications. **METHODS/STUDY POPULATION:** ReacStick was invented in 2010 and underwent extensive testing and validation of the underlying innovations. The regulatory landscape of the product was examined, and 510(k) was found to be the best pathway. Competitive analysis was done examining alternative products and comparing against the current gold standards. A customer discovery process was undertaken, and stakeholders were interviewed for feedback and iteration. Testing and validation were completed with athletes, older adults, and people taking medications. An overview of the necessary commercialization concepts is: market opportunity/monetization, intellectual property considerations, regulatory processes, commercialization plan. **RESULTS/ANTICIPATED RESULTS:** ReacStick accurately predicts concussion and time to recovery and was patented through UM Tech Transfer in 2010, with 10 years currently remaining on the patent. Through customer discovery processes, athletics was determined to be the most viable first market to enter. Next steps include seeking additional patent protection, capital investors, delivery of minimum viable product followed by iteration and improvement for military, emergency medicine and acute care use. The current remaining timeline involves 12-18 months to commercialization and includes regulatory approval, additional patent protection, collaboration with regulatory consultants, capital fundraising and product production. **DISCUSSION/SIGNIFICANCE OF FINDINGS:** The research team has gone through a lengthy process toward commercialization of ReacStick. Proof of concept and extensive validation of the underlying technology have been completed and the regulatory process has been mapped. Our experience can serve as a model of many of the steps and challenges that lie on the path from lab to sale to end users.

Education/Mentoring/Professional and Career Development

31257

A Case Study of Needs Assessment Practices Using I-Corp Customer Discovery Protocols Alongside REDCap Surveys for CTSA Activities.

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ABSTRACT IMPACT: The results from this study will improve needs assessment practices. **OBJECTIVES/GOALS:** The discovery phase in project development is necessary to better understand the needs and requirements of the intended market. This paper compares the outcomes of two virtual data collection methodologies, NSF I-Corps Customer Discovery interviews and REDCap surveys, for a needs assessment. **METHODS/STUDY POPULATION:** Clinical and Translational Science Award (CTSA) Directors and Academic Administrators across the Consortium were asked about the types of skills needed to assess clinical research professional competencies and the need for a competency-based self-assessment tool (CBST). Parallel methods were used to extract qualitative and quantitative data. The first approach was to conduct interviews using I-Corps customer discovery guidelines, and data was collected using Innovation Within software. Targeted requests were sent via cold email outreach to 102 individuals within 63 CTSA hubs. The second approach involved the use of the NJ ACTS Training and Education Offering Inventory REDCap Survey which was distributed via LISTSERV to 63 CTSA hubs. Response rates and user insights from each method were compared. **RESULTS/ANTICIPATED RESULTS:** Twenty-one of 63 CTSA hubs responded to the survey (response rate: 33%) while 18 of 63 hubs participated in an interview (response rate: 28%). Twenty-two individuals out of 102 were interviewed (response rate: 21%). Fifty-nine percent of interviewees and 62% of survey respondents indicated a clear need for a CBST; types of responses varied. Forty user insights were obtained from ten interviews. Two insights were gained in the survey from the eight who were prompted to fill out the free-text response. Both survey participants and interviewees indicated that communication and team science soft skills were the most important competencies. Regarding hard skills, interviewees preferred written skills while survey participants favored 'scientific design and concept' skills. **DISCUSSION/SIGNIFICANCE OF FINDINGS:** Results suggest the use of a survey or an interview for a needs assessment is dependent on several factors: need for insights, burden of time, desire to obtain quantitative vs. qualitative data, and question format. The interview was more effective than the survey in addressing the key question and obtaining insights from the intended market.