

PATH TO IMPACT EXAMPLES

Example 1

Over 1 million older adults are hospitalized for pneumonia each year and up to 25 percent of these individuals will be readmitted within 30 days of discharge. Functional decline due to immobility during the acute hospitalization has been associated with hospital readmission and other detrimental effects. Pneumonia is one of the diagnoses in the Centers for Medicare and Medicaid Services (CMS) hospital readmission reduction program. Our study objective is to examine the effectiveness of physical therapy on length of stay and readmission in older adults admitted to the hospital with pneumonia. This research will ultimately impact the growing population of older adults in the U.S. who develop pneumonia, their families and caregivers, the health systems who care for them, and the insurers (e.g., Medicare) who finance their care.

For this study, we will engage patients and front-line staff to understand barriers and facilitators to promoting mobility in the acute care hospital. We will work with UPMC rehabilitation and administrative staff and begin with select UPMC acute care hospitals. We will disseminate our findings to UPMC leadership and clinicians and will work with our UPMC partners to determine the most effective methods of doing this.

Demonstrating the effectiveness of therapy visits on promoting mobility and decreasing hospital readmission will inform efforts at the health system level for appropriate staffing of rehabilitation therapists and for programs to promote patient mobility. Next steps in our research program will be the development of a mobility program to implement in acute care hospitals. As we move to this stage, we will expand our engagement to include hospital administration beyond rehabilitation (e.g., nursing, quality improvement).

Example 2

Hepatitis C virus (HCV) is a prevalent and undertreated disease; though there are curative medications, they are only prescribed to ~20% of Veterans with HCV, leading to cirrhosis, cancer, death, and reduced Quality of Life for patients and increased cost for healthcare systems. This project aims to implement evidence-based Hepatitis C virus (HCV) treatments nationally across the VA healthcare system. We hypothesize that using evidence-based implementation strategies will improve implementation in lower-performing facilities.

This implementation effort will impact HCV patients at VA medical centers and their caregivers by improving quality of life and preventing transplant, liver failure, and death. For providers and healthcare system administrators, it will improve care delivery and efficiency; for payers, it will decrease cost. We will engage these interested parties in designing the implementation intervention itself through Community Engagement Studios, in-depth interviews, and/or focus groups. The results will be disseminated to and tailored to non-VA viral elimination efforts via presentations and meetings.

Potential next steps for this project will be to increase reach by scaling to other VA facilities. We will work with local providers, patients, and administrators to tailor and adapt the intervention to local context and the evaluate implementation efforts.

Example 3

More than 7 million Americans need EEG recordings each year due to epilepsy, brain injuries, and stroke. However, many Black patients are unable to receive reliable EEG recordings because state-of-the-art EEG leads do not work well with coarse curly hair. Our solution is an EEG lead attachment that is specifically designed to work with coarse curly hair. When this gets into the market, patients with coarse curly hair will benefit from more accurate EEG measurements used to diagnose and treat neurological conditions.

The objectives of this project are to develop EEG prototype leads our lab; iteratively improve their design, and pilot test their use. As we begin pilot testing, we will look at the design through a lens of manufacturing and distribution. Next

steps would involve moving into small batch manufacturing to develop process steps and produce enough units to perform effectiveness trials.

Throughout this project, we will stay focused on the commercial channel that will be the ultimate pathway through which our solution gets to people. We will stay in communication with market incumbents as we seek a relationship that will lead to distribution to end users performing EEG tests. Keeping commercial drivers in mind, we will ensure, through design and manufacturing, that our solution can deliver an acceptable profit margin to manufacturer/distributors.