

MHTA ACE Leadership Program

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MHTA Can Support the Intersection of Technology and Mental Health

According to the National Alliance on Mental Illness (NAMI), one in five American adults experience a mental health issue of some kind (e.g. depression, anxiety, bi-polar disorder, schizophrenia, dementia, etc.). Yet nearly sixty percent of adults with a mental illness did not receive mental health services in the previous year. To make matters worse, 10.2 million adults also have co-occurring addiction disorders along with their mental health issues according to the National Center for Biotechnology Information. The impact to the technology sector is substantial and an estimated 10 percent of tech employees have a substance abuse disorder that costs employers over \$13,000 per employee. In a way, mental health issues have a significant impact on the bottom line for the technology industry.

Given that mental health issues affect so many technology workers, this paper explores how the Minnesota (Minn.) technology community can be an influencer in overcoming stigmas and barriers to disrupt mental health treatment. It will provide an overview of what a few technology startups are doing to treat mental health issues and gives specific recommendations for how MHTA can support mental health startups and raise awareness around mental health issues in our community.

Minnesota has a rich history of leading medical innovation and a wealth of medical knowledge. Minnesota is also home to internationally-renowned companies such as Mayo Clinic, Medtronic, United Health Group, Starkey Hearing Technologies, Boston Scientific and many others. We also know that technology has transformed the way we live in so many other ways from smart phones, fitness devices to artificial intelligence enabled IOT's.

Minnesota High Tech Association (MHTA) is uniquely positioned to make a positive difference in mental health issues and the impact it has on technology employees. MHTA stands at the intersection of technology, startups and many medical and healthcare companies that together, could help raise awareness around the impacts and emerging treatments of mental health, focused on technology employees in Minn.

Clinical

Perspective

The technology produced by startups in the mental health space, shows incredible promise for use in the clinical practice. Phia Magill, Program Director of Mayo Clinic's residential treatment facility focused on functional recovery and integration for people with mood disorders, notes that even ubiquitous technologies such as activity/fitness trackers and sleep trackers provide valuable insight and actionable feedback for patients and clinicians.

The challenge of introducing and integrating new technologies into the clinical realm, especially in mental/behavioral health, is shared across the full spectrum of stakeholders: from startups and the public sector, to patients and medical institutions, to insurance

companies. On the consumer data and privacy side of the conversation, consumers are generally willing to allow their personal information to be shared with the vendor in exchange for the benefits of using a device that improves their life. This becomes significantly more challenging when moving to the clinical space due to HIPAA regulations and becomes even more challenging when dealing with behavioral health specific state regulations and requirements. Additional barriers present when interfacing with insurance companies to provide the necessary data and information to justify device or for treatment reimbursement.

Mental Health Start-ups in Minnesota

Our project team spoke with three Minnesota based mental health start-up companies as part of our research. Below are brief summaries of their stories and how each of them is helping treat mental health issues.

NightWare: Digital Health as a Disruptor

Grady Hannah, the CEO of NightWare, shared his start-up's origin story. Tyler Skluzacek, who was a senior at Macalester College, participated in a hackathon in Sept 2015 organized to help patients suffering from a form of nightmare PTSD called diagnosable nightmare disorder or (DND). Studies show that vets suffering from DND were five times more likely to commit suicide. The hackathon was organized by members of the Veterans Administration and a mental health practitioner from Walter Reed National Military Medical Center. Tyler was motivated to help people like his dad who has DND.

Tyler tested the technology that he created during the hackathon on his father and it worked. Tyler set up a Kickstarter that caught the attention of Grady, who had read about Tyler in the Star Tribune. Tyler and Grady met in November 2015 and hit it off. If the Hackathon hadn't happened, NightWare would not have been created. The founders worked without salary for two years and started raising money in 2018 from investors like Medical Alley, Gener8tor and MNSBIR via Pat Dillon.

NightWare is a product in the Digital Therapeutics industry which can complement working with physician. Nightware is not currently for sale and is waiting for FDA approval in 2020. FDA granted NightWare breakthrough status as it helps with DND. Revenue for the company would eventually come from reimbursements from payers (e.g. DOD, VA, CMS, private insurers). There are many companies doing cognitive behavior therapy such as Learn to Live. Nightware is trying to stand apart from its competitors by going through the Clinical route, having research materials supporting their product and creating a reimbursable technology for outcome-based care.

Recovree: Investing in human-centered technology

Tenacity and empathy are needed to build a mental health start-up. At the company Recovree, Melissa Kjolsing's brother, Luke Kjolsing, also the co-founder, is the start-up's inspiration. Luke used drugs/alcohol for over 15 years of his life, an addiction he struggled with. He accepted the challenge of getting sober and began treatment in 2016. As a family member experiencing the road to recovery, Melissa Kjolsing was shocked by how that system worked. There were only two options: Alcoholics Anonymous or a treatment facility — only two options for millions of people.

Melissa and Luke realized that they wanted to approach recovery differently through technology and focus on scale for the potential to impact a lot of people. Their mission become Recovree's differentiator: use technology to connect people seeking support.

Per Melissa, "The opposite of addiction is community." Recovree uses technology to connect people to a recovery community — where they will always have humans at end of line. This concept of working with a peer recovery specialist, became their product. They set out to deliver a proven and effective solution using technology to accelerate the connection. Melissa says her brother, having lived the experience of addiction and having the grit and fight to get through it, epitomizes the strong characteristics of a successful entrepreneur.

Recovree is at the intersection of addiction. The solution is not just thinking about the very sick, but it addresses a progression and fosters positive behaviors around awareness, wellness, exercise, water, sleeping well, etc. This holistic approach is positively received in the Twin Cities where there is much more dialogue on wellness, self, balance, mindfulness and health than in other states.

Funding and Competition: Recovree benefits from an advisory board and experts who are generous with their time — people who've been in this place before and have worked with entrepreneurs in a few stages before. Engaging with the start-up community continues to be so important as is receiving the emotional and mental support.

Everybody is affected in some way by trauma or generational trauma. Most investors know someone with substance misuse and how it impacts people's lives. It's a shared human experience; we want to do good for other people, contributing versus taking or depleting. The interest has been incredible and people gravitate to the mission. It's a huge advantage to have people connect to Recovree's mission emotionally.

For investors, the market is huge; when you think about behavioral health, there is substance abuse, eating, gambling, PTSD and many unique needs and tools out there. There would need to be many more iterations of digital therapies before the market gets saturated, and it's a good problem to have.

HabitAware: Problem Solving in Digital Health

For HabitAware, creating social impact and positively impacting people directly, is a huge part of their company's value proposition. Their metrics are not sales or profit-driven. They look at how they are helping people to measure and improve customer outcomes.

Co-founder Sameer Kumar shared with us his personal story in helping his wife Aneela stop a habit of a Body-Focused Repetitive Behavior or BFRB. Body-Focused Repetitive Behaviors include hair pulling (trichotillomania), skin picking (dermatillomania), nail biting and other behaviors.

The product, the HabitAware Keen smart bracelet, senses a user's specific behavior and sends a gentle vibration. Once aware, the user can choose healthier activities and retrain their brain. HabitAware posed a really innovative way to move the ball forward in mental health and for them to make their mark. Sameer also believes that the team could branch out and use the methodology to help other habits.

MHTA: A New Influencer in Mental Health Awareness

We believe MHTA can play a prominent role in making MN a leader in supporting mental health start-ups and increasing awareness around mental health issues and the impacts they are having on the technology workforce. We have identified three actionable recommendations for MHTA to consider:

- 1. Provide a forum for the intersection of mental health and technology**
MHTA has the high-quality membership and employee base to raise awareness around the impact mental health issues are having on the MN technology workforce. Leveraging its member mindshare, and creating the right forums would minimally increase mental health/addiction awareness, and could also develop into concrete solutions to problems that start-ups, providers and employers are facing. MHTA could create a separate TEKNE award category for Mental Health and/or feature a mental health/addiction technology panel at the Spring Conference.
- 2. Partner with Medical Alley and Start-Up Accelerators**
MHTA could also partner with Medical Alley to create a dialogue and bring the right group together for this issue. Medical experts, start-up accelerators, policy makers and technologists could brainstorm innovative mental health/addiction solutions and strengthen the MN tech community as a whole.
- 3. Activate member companies for pilots and early adoption**
Start-ups need customers and users early-on to help collect and validate data. Finding institutional partners is important. MHTA could be a connector in finding tech-savvy early adopters in their member companies and proactively finding leaders who are willing to make a commitment and investment to new technologies. There needs to be process to ensure that both parties are able to get what they want out of the relationship. For start-ups, they would be able to test their product or solution and get feedback from end users, employees, etc. and for

the established technology company; it helps propel their learning and innovation and could provide a tangible benefit to their workforce. Can MN become the land of 10,000 pilots?

Leverage MHTA Members

Start-ups need customers and users early on to help collect and validate data. MHTA could be a connector in finding tech-savvy early adopters and proactively finding people and who willing to make a commitment to and investment in it. The backing of a membership organization like MHTA is significant.

Associations like MHTA are very effective in scaling up. Recovree is now exploring the employer market. They are looking for a captive market with a need and an incentive to provide tools for workers to battle addiction as in the hospitality industry. Access to bigger customers to show credibility will increase investment.

Recovree would like to increase their work with companies and find solutions to the challenges employers are facing. Examples include finding new ways to combat prescription costs, mental health illness and substance abuse. Recovree aspires to be a preferred vendor and establish a shared revenue model to benefit both parties. In the tech industry, where drug or alcohol abuse is often masked by high performance, Recovree could help technology talent stay in a high-performing space.

MHTA: Supporting a Worthy Social Cause, Mental Health & Addictions

In closing, we believe MHTA is uniquely positioned to help support mental health in MN by leveraging existing member capital and considering new events and partnerships with other enabling organizations. MHTA could approach mental health issues from a workforce perspective as it has a big impact on technology workforce productivity and costs. Finally, by providing new forums and tools to raise awareness in this area, MHTA will play a systemic role in reducing the stigma around mental health and contribute to helping solve this local and national challenge.

References:

- National Alliance on Mental Illness (NAMI) <https://nami.org/Learn-More/Mental-Health-By-the-Numbers>
- Linked in post by recoveree co-founder Melissa Kjolsing, <https://www.linkedin.com/pulse/tech-industrys-relationship-alcohol-drugs-melissa-kjolsing/>