

MetroHealth Medical Center

RESEARCH DAY 2023
Abstract Submission Form

Poster Title: Analyzing Gaps in Assistive Technology for People with SCI According to Maslow's Hierarchy of Needs: A Qualitative Study

Authors: Tyler Petrie, Ron Hart, Kevin Kilgore, Megan Moynahan, Blake Perkins, James Wilson, Anne Bryden, Eric Schearer, Michael J. Fu

Presenter's Name: Tyler Petrie

Location of Laboratory: SM2-009 Old Brooklyn Campus

Category: Physical Medicine and Rehabilitation

Introduction: This study framed the experiences of people with chronic high tetraplegia (HT) – their daily and weekly activities, their level of independence in these activities, and their desires to participate in activities – as they relate to assistive technology. Focusing on their experience with assistive technology, we contextualized the needs of people with HT according to how those needs were met or unmet. We present findings from both the HT population and their caregivers and the unique relationship between people with HT and their caregivers. To define independence over multiple areas of life, we used Maslow's Hierarchy of Needs as a conceptual framework for organizing activities and needs stated by people with HT.

Methods: We used data from in-depth semi-structured interviews of 10 people with HT, followed by interviews with six of their caregivers. Audio and video recordings were transcribed and coded line-by-line to analyze emerging themes and sub-themes facilitated by Dedoose qualitative data analysis software. Line-by-line coding was performed by one team member, after which the research team discussed each interview. Coded interviews were analyzed for common themes and topics across interview participants.

Results: Our analysis presents a hierarchical needs-based framework for understanding daily activities, goals, and assistive technology use. We identified critical themes based on the lived experience of people with HT, including the interdependence of caregivers, care recipients, and assistive technologies and barriers to independence and technology access.

Discussion: This study identified facilitators and barriers to independence and posits potential strategies for increased independence through assistive technology.