

Neurology

TOPS is an online family problem-solving treatment for pediatric traumatic brain injury (TBI)

Brief Description of Technology

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TECHNOLOGY ID

2018-0202

TECHNOLOGY TYPE

Digital Health

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Technology Overview

TOPS is an interactive, web-based psychosocial tool that helps adolescents (age 13-19) recover from mild traumatic brain injuries (mTBI) or concussions. It includes an integrated suite of 20 self-paced, goal-directed exercises and content designed to improve brain function with problem-solving and coping strategies. Since the effects of TBI can impact the wider family dynamic, the solution is accessible by family members, and therapists who may provide telehealth therapy in real time.

Applications

- Minor traumatic brain injury, epilepsy, stroke, post-traumatic stress syndrome (PTSD)

Advantages

- Clinically validated for mTBI
 - Studies show that patients prefer online exercises over face to face experiences
 - Only virtual experience shown to be more effective than live therapy for traumatic brain injury
 - Web platform is easily disseminated across the country, reaching patients where they live
 - Home-based intervention may eliminate potential stigma felt by children and teen patients

Market Overview

Almost half a million emergency department visits for TBI are made annually by children aged 0 to 14 years. Children aged 0 to 4 years and older adolescents aged 15 to 19 years are among the populations most likely to sustain a TBI. More than 50% of children with TBI have problems with behavior and executive functioning. Most do not receive treatment. 30 to 50% of kids with epilepsy have executive functioning deficits despite good seizure control.

Investigator Overview

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