



Report: Rehabilitation After Brain Injury Could Dramatically Improve Outcomes, Save Taxpayers Millions

Policy proposals focus on expanding access to post-acute rehabilitation as well as prevention, case management, support for return to work programs and data collection

Boston, MA (November 20, 2019) The Massachusetts Health Policy Forum (MHPF) released a new report today that outlines how post-acute rehabilitation could significantly improve health outcomes for individuals with brain injuries while reducing total healthcare costs by an average of \$1.67 million over a survivor's lifetime.

According to report authors Dr. Laura Lorenz, visiting scholar at The Heller School for Social Policy and Management at Brandeis University, and Dr. Michael Doonan, associate professor at The Heller School for Social Policy and Management at Brandeis University, the emphasis traditionally has been in acute medical care for the ABI patient, with less attention on post-acute rehabilitation and community-based care. However, existing data, information, expert opinion and patient experience support the effectiveness of early rehabilitation services at improving brain function after a severe brain injury. Greater access to these services will improve lives and result in significant cost savings.

“Intensive multi-disciplinary rehabilitation has been shown to result in statistically and clinically significant gains following brain injury, in a large cohort of adults,” said Dr. Laura Lorenz, visiting scholar at The Heller School for Social Policy and Management at Brandeis University. “Access to rehabilitation after a brain injury reduces the need for family caregiving and economic burdens, reduces the cost to the state of publicly-funded long-term care. Early and continuous access is best.”

The report analyzed 20 years' worth of studies exploring outcomes and cost effectiveness from access to rehabilitation after acquired brain injury (ABI). Six studies examined cost savings from access to post-acute, intensive, multi-disciplinary rehabilitation services after a

severe brain injury. For patients admitted within 1 year of injury lifetime savings ranged from \$1.28M to \$2.27M per patient, and averaged \$1.67M per person over their lifetime. As long-term services are often funded by Medicaid or other public sources, the Commonwealth (and taxpayers) would stand to save millions.

“Imagine you were in a car accident and broke your arm. We as a society would never say that you need to live the rest of your life with a broken arm, but that is exactly what often happens when you injure your brain,” said Nicole Godaire, CEO of the Brain Injury Association of Massachusetts. “This report confirms with academic rigor what we at BIA-MA have seen first-hand for many years: post-acute rehabilitation leads to tremendous health outcomes for survivors of brain injury and can save the Commonwealth millions in public healthcare costs.”

Estimates of the number of people living with disabilities from brain injury in Massachusetts are between 68,000 and 112,000, according to population-based estimates of disability after brain injury used by the Centers for Disease Control. Massachusetts residents with more serious brain injuries from stroke and severe traumatic brain injury (TBI) resulting in disability are likely to rely on public funding for their health and long-term care within two years of their injury. This is due to becoming impoverished as a result of losing their jobs and the high cost of acute and ongoing care.

Additionally, within six months of a severe brain injury, more than 30% of survivors nationally lose their private or employer-based health insurance (Lin, Canner, & Schneider, 2016). Those with more severe injuries are more likely to file for bankruptcy “with substantial levels of medical debt soon after the injury,” including those insured by Medicaid at the time of their injury (Relyea-Chew et al., 2009).

The report’s authors recommend the following five policy initiatives if Massachusetts intends to improve ABI patient outcomes and reduce the cost of care:

- **Increase access to post-acute rehabilitation**, especially for people who have sustained a severe brain injury where the greatest cost-savings are observed. Ideally, ensure access within 12 months of injury, when capacity for improvement is greatest, and provide access in a continuous chain, without interruptions.
- **Maintain and enhance ongoing brain injury prevention activities.** Examples are seat belt and helmet usage; distracted, drunken, and drugged driving; pedestrian and home safety practices; sports concussion and fall prevention for seniors.

- **Increase access to case management from injury to end-of-life.** Through state-sanctioned entities, provide independent case management (not tied to payers or providers) for as long as needed, for all patients at all income levels. Case management, or a case manager assigned to support an injured individual to navigate the “ocean” of systems, providers, and payers and access appropriate services, can align patient and provider interests and increase timely access to services that support recovery.
- **Continue to support vocational rehabilitation activities** and consider expansion based on experiences with the return-to-work program in Indiana. Research supported by a collaboration of providers, state agencies, advocacy groups, and federal and local funders found that such interventions improve long-term function, increase earnings, and save money.
- **Systematically collect outcome and cost data over the short- and long-term for people who sustain a serious brain injury.** Such data are needed to support decision-making by policymakers. Collecting outcomes data at admission and discharge, as well as over the long-term, will allow the state to compare outcomes and savings and will increase understanding of any rehabilitation savings that result from access.

The MHPF report was made possible by funding from the Brain Injury Association of Massachusetts (BIA-MA) and the Brain Injury Association of America (BIAA). For more information about the Massachusetts Health Policy Forum and today’s report: *A Policy Analysis of Access to Post-Acute Rehabilitation Services for People with Acquired Brain Injury in Massachusetts and Beyond*, please visit: www.masshealthpolicyforum.brandeis.edu

The Brain Injury Association of MA:

The Brain Injury Association of Massachusetts (BIA-MA) is a nonprofit organization founded almost forty years ago. BIA-MA provides Support & Resources to brain injury survivors and their families; Prevention Programs to educate the public on the impact of brain injuries; Education & Training for brain injury survivors, caregivers and professionals; and Legislative Advocacy for improved community services and safety laws. BIA-MA is an affiliate of the Brain Injury Association of America.

###