



2022-2027 Indiana Brain Injury State Action Plan



Indiana
Department
of
Health



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Overview

This action plan has been developed to more effectively meet the needs of families living with the effects of brain injury throughout Indiana by increasing treatment capacity, improving community education initiatives and expanding access to care. Through the goals and strategies detailed in this plan, our aim is to build the foundation necessary to create an effective, efficient and sustainable system of care in Indiana that will connect those in need of services, including families and caregivers, while also helping agencies within Indiana to better serve the brain injury community.



Brain Injury in Indiana

Brain injury (BI) can result in chronic disability that is associated with both the primary effects of the injury, including cognitive or neurobehavioral impairments, but also secondary co-morbid conditions such as depression, substance abuse or seizures. Additionally, BI can lead to significantly greater health risks, including higher rates of diabetes, pain, insomnia and fatigue, dementia, sleep disturbances, among many others. Recent efforts have begun to identify BI as a chronic condition that should be managed as such.

Traumatic brain injury (TBI) is a serious public health problem in the United States, contributing to more than 68,000 deaths nationally in 2023.¹ A TBI is caused by a bump, blow, jolt or penetration to the head that disrupts the normal function of the brain. Each year, traumatic brain injuries contribute to a substantial number of deaths and permanent disability.

Impact and Magnitude of TBI

In 2023, more than 23,000 TBIs occurred in Indiana, including 1,463 deaths (21.3 per 100,000), 4,442 hospitalizations (64.7 per 100,000), and 17,846 ED visits (260.1 per 100,000).² Data are not available to calculate how many people with TBI were treated in other settings or went untreated.

Causes of TBI

Causes of injury varied among ED visits, hospitalizations, and deaths involving TBI. Unintentional falls were the leading cause of injury in TBI-related ED visits and hospitalizations. In contrast, firearm injury was the leading cause of injury in TBI-related deaths (53%). Among firearm-related TBI deaths, 84% were due to suicide, 12% due to homicide, and the remaining 4% were unintentional or other intent.

TBI by Age Group

The age distribution of patients who were treated in the ED for TBI was relatively uniform across age groups. However, a higher proportion of TBI hospitalizations and deaths were among older age groups. The majority of TBI hospitalizations (55%) and a plurality of TBI deaths (38%) were among people aged 65 and older.

TBI by Sex

In 2023, males were more likely to sustain a TBI resulting in hospitalization or death than females. Males accounted for three in four TBI deaths, and the rate of TBI death among males (32.3 per 100,000) was over three times the rate among females (10.6 per 100,000). Additionally, males accounted for the majority (57%) of TBI hospitalizations. TBI ED visits were more evenly split among males (51%) and females (49%).

¹ Centers for Disease Control and Prevention. TBI Data. Accessed Jan. 9, 2025, from <https://www.cdc.gov/traumatic-braininjury/data-research/index.html>.

² TBI-related deaths are from Indiana vital records. Hospitalization and ED visit data are from Indiana hospital discharge data. TBI deaths, hospitalizations, and ED visits were calculated based on definitions from the Centers for Disease Control and Prevention available at: <https://stacks.cdc.gov/view/cdc/128417>.



Administration for Community Living (ACL)-funded Indiana TBI State Partnership Program (SPP)

The ACL-funded Indiana TBI SPP serves to improve the lives of those affected by brain injury in Indiana by the following means:

- Capacity building to best serve people affected by brain injury throughout the state of Indiana
- Provision of NeuroResource Facilitation for those impacted by brain injury
- Participation in ACL SPP Workgroups
- Development, facilitation, and oversight of the TBI Action Plan with input from key stakeholders
- Solicit input from key stakeholders through facilitation of the Indiana Brain Injury Stakeholder Council

Indiana Brain Injury Stakeholder Council

The Indiana Brain Injury Stakeholder Council, with sustained active engagement since 2009, is made up of providers, policymakers and consumers. The council aims to determine and serve the needs of those living with and affected by brain injury, including survivors, their families and caregivers. The purpose of the council is to address strategic planning and guide services related to preventing brain injury and improving health, disability and quality of life following a brain injury.



2022-2027 Indiana Brain Injury State Action Plan

Indiana Department of Health Mission

To promote, protect, and improve the health and safety of all Hoosiers.

Indiana Department of Health Vision

Every Hoosier reaches optimal health regardless of where they live, learn, work, or play.

The Indiana Brain Injury State Action Plan will be reviewed and implemented by the Indiana Brain Injury Stakeholder Council and the Indiana Brain Injury State Partnership Program. Updates or revisions to the Action Plan, with justification, will be made throughout the course of the plan.

Values

- **Person-centered:** Those impacted have a voice and are served for their individualized needs and goals. Anyone impacted by BI seeking assistance receives help.
- **Innovative:** Continually striving to learn, research, and advance evidence-informed practices, and be open to new methods, ideas, and products.
- **Collaborative:** Diverse private and public agencies and those impacted by BI working together towards a common cause to achieve positive outcomes.
- **Knowledgeable:** Easily accessible information and data supporting BI education and resources.



2022-2027 Priority Areas

Areas of priority were developed by considering the Indiana Traumatic Brain Injury 2019 Needs and Resources Assessment results and recommendations from discussions with the Indiana Brain Injury Stakeholder Council. Priorities, goals, and ongoing strategies in the 2022 – 2027 Indiana Brain Injury Action Plan aim to ensure the continued development of a state infrastructure to support the development of systems of care for people with lived experience of brain injury and the continued development of evidence-based resource facilitation and its implementation with all of those living with brain injury, with a particular focus on disproportionately affected populations.

The web-based Indiana Needs and Resources Survey for TBI was distributed using Indiana Department of Health (IDOH) list serves, Brain Injury Association of Indiana (BIAI) list serves, TBI support group networks and Ghost Map Analytics (GMA) presentations at local health department and hospital meetings. Overall, results were collected from 1,191 individuals across Indiana consisting of 282 (23.7%) respondents with TBI, 236 (19.8%) caregivers of people with TBI, 286 (24%) medical professionals providing direct clinical care to those living with brain injury, and 387 (32.5%) service providers working within community-based organizations that support people with brain injuries.

The Indiana Traumatic Brain Injury 2019 Needs and Resources Assessment revealed people with TBI and their families experience barriers to accessing services. People affected by brain injury in Indiana are commonly hindered by a lack of awareness of available resources, limited services, difficulty navigating required processes and paperwork, and a lack of advocacy and support. Consumers and their families reported that many brain injury-specific resources and services are not available in their communities. A significant gap in housing availability for those living with a brain injury was identified, with the unhoused having a high rate of having experienced brain injury during their lifetime. History of brain injury has also been found among at least 60% of those served by the criminal justice system, which affects successful completion of programs and recidivism rates.

Subsequent analytics of the data collected resulted in five recommendations that guide the goals set forth in this action plan. According to those surveyed, cognitive rehabilitation, mental health services, medical and medication issues, relationships and return to work were offered as the domains of greatest need. Additionally, awareness of resources, reimbursement, difficulty understanding processes or paperwork, local service availability, transportation and lack of advocacy or support were offered as the greatest barriers to recovery and quality of life. Survey results were reviewed with the stakeholder council, who then identified strategic priorities resulting in the following recommendations:

Recommendation 1: Expand capacity and access in Indiana to provide brain injury-specific care. Examples of some identified needs include cognitive rehabilitation, mental health and behavioral interventions (including therapy for families and relationships, and substance abuse), medical and medication issues, and pain management.



Recommendation 2: Expand access to information and assistance for people with brain injury in Indiana that address common needs and barriers. Examples of identified barriers include lack of local services, advocacy, legal support, reimbursement/paperwork support, transportation, and employment.

Recommendation 3: Review recommendations for return to education to serve people with brain injury.

Recommendation 4: Increase knowledge and awareness of brain injury needs among people serving housing resources/agencies.

To address these concerns, it is important to educate those who are living with a brain injury, the organizations that service them and the community at large. The Indiana Brain Injury Action Plan has been designed to promote brain injury-informed competencies across systems, agencies, organizations, and providers in Indiana to develop and implement strategies to screen for brain injury and build capacity to better serve those with brain injury. To address the needs assessment findings and optimize brain injury outcomes in Indiana, the 2022 – 2027 Indiana Brain Injury State Action Plan is comprised of three priority areas:

- **Priority area 1:** Brain injury resource infrastructure, capacity, and access
- **Priority area 2:** Brain injury neuro resource facilitation
- **Priority area 3:** Brain injury stakeholder engagement

Priority Area 1: Brain Injury Resource Infrastructure, Capacity, and Access

Goal: Build infrastructure, capacity, and access among providers, agencies, and organizations across Indiana to provide brain injury-specific care and resources to support people living with the effects of brain injury.

Strategy 1:

Increase awareness about brain injury and build community capacity to better serve people with brain injury, which includes basic knowledge about brain injury identification (screening), assessment, treatment, accommodations and connection to resources within high-risk populations and professionals.

High-risk populations include:

- People hospitalized for trauma
- Veterans
- People affected by domestic violence
- People served by the criminal justice system
- People experiencing homelessness

Target agencies and providers for capacity building include:

- Healthcare providers



- Mental health providers
- Substance abuse treatment providers
- Veteran's service providers
- Vocational service providers
- Educators
- Domestic violence providers
- Law enforcement, criminal justice and first responders
- Legal service providers
- Housing agency employees

Core activities:

- Provide education and training on basic knowledge about brain injury identification (screening), assessment, treatment, accommodations, and connection to resources within high-risk populations and professionals
- Explore existing initiatives that have been developed to build capacity among educators regarding brain injury needs and return to learning and disseminate selected information to educators in Indiana
- Collaborate with agencies and providers across Indiana to determine cross-referral strategies and recommendations to optimize community integration and independent living for people with brain injury

Measures:

- Provide 10 training sessions yearly with professionals in the community related to brain injury identification (screening), assessment, treatment, accommodations, and/or return to work/school
- Identify three initiatives (across 2022 – 2027) aimed at enhancing educators' ability to serve people with brain injury
- Expand the number of agencies and providers with established cross-referral strategies by two annually

Strategy 2:

Raise awareness of brain injury and brain injury services. Examples of resources relevant to the public and people affected by brain injury include:

- Brain Injury Association of Indiana (BIAI)
- Traumatic Brain Injury Model Systems
- Indiana Department of Health
- Family and Social Services Administration
- Division of Disability and Rehabilitative Services
- FindHelp.org
- Area Agency on Aging
- 211 First call for Help



- Sources of affordable legal service
- Selected materials from the ACL SPP workgroups and ACL SPP Technical Assistance and Resource Center

Core activities:

- Review and update the BIAI website semi-annually with new opportunities for continuing education, resources and research participation
- Remain engaged with the relevant brain injury resources listed above

Measures:

- Update the BIAI website semi-annually

Strategy 3:

Explore and advocate for sources of revenue to support state brain injury initiatives.

Core activities:

- Identify potential collaborators across the state who specialize in funding and/or utilize funding for initiatives targeting the high-risk populations listed above
- Incorporate discussions of new funding initiatives into the advisory council agenda
- Continually review available resources which might serve to support sustainability of neuro resource facilitation services

Measures:

- Complete an annual scan of funding opportunities

Priority Area 2: Brain Injury and NeuroResource Facilitation (Nrf)

NeuroResource facilitation is a service delivery concept that emerged in the 1990's. NeuroResource facilitation, as defined by Connors et al. in 2001, is "a partnership that helps people and communities choose, get, and keep information, services, and supports to make informed choices and meet their goals". Many versions of Nrf descriptions have been developed over the years.

NeuroResource facilitation aims to bridge social support services following acute care and rehabilitation and provide education, support and advocacy for people with brain injury. Evidence from NeuroResource facilitation programs across the United States has shown participation in NeuroResource facilitation is associated with improved ability to make informed choices when accessing community and state resources, and some models of have shown improved return to work and school, reduced disability, and decreased recidivism. Through the Indiana NeuroResource facilitation program, we aim to significantly maximize participation and community living, reduce disability, and decrease caregiver burden following brain injury specifically in high-risk, significantly underserved populations.



Goal: Facilitate access to information and assistance for people living with brain injury in Indiana that addresses common needs and barriers.

Strategy 1:

Provide individualized brain-injury informed navigation and connection to resources and needed services for persons living with the effects of brain injury and their care partners through NeuroResource facilitation.

This includes information, connection and services for needs such as:

- Brain injury screening identification
- Cognitive rehabilitation
- Mental health and behavioral interventions
- Medical and medication issues
- Pain management
- Education
- Employment
- Housing
- Legal services

Core activities:

- Establish NRF within IUSOM and begin providing NRF services to people with brain injury
- Meet with community providers and professionals working with persons with brain injuries and high-risk groups identified above to discuss the IUSOM NRF program's purpose, goals, and referral process

Measures:

- Provide NRF services to 400 people impacted by brain injury in Indiana annually
- Meet with 10 community providers/professionals annually to introduce the IUSOM NRF program and referral process

Priority Area 3: Brain Injury Stakeholder Engagement

The Indiana Department of Health, Indiana University School of Medicine, Brain Injury Association of Indiana, organizations that work with individuals impacted by brain injury, and other stakeholders will work together to achieve the state's vision for Hoosiers affected by brain injury. The Indiana Brain Injury Stakeholder Council will work to build the foundation necessary to create a system of care in Indiana that will ultimately achieve all five Administration for Community Living pillars and goals:

- Connecting those in need to services
- Protecting patient rights and preventing abuse
- Supporting families and caregivers
- Enhancing employment and education opportunities for the individual with lived experience



- Expand the capacity of agencies within the state to better serve the brain injury community.

Goal: Engage stakeholders to facilitate improving brain injury infrastructure, capacity, access, and resources in Indiana to better the lives of those living with the effects of brain injury in Indiana

Strategy 1:

Engage representative stakeholders relevant to the goals and strategies of the State Brain Injury plan to serve on the Indiana Brain Injury Stakeholder Council.

This may include representation from:

- People with experience living with the effects of brain injury
- Healthcare payors
- Healthcare providers
- Mental and behavioral health providers
- Substance abuse treatment providers
- Veterans
- Veteran's service providers
- Vocational service providers
- Educators
- Domestic violence care organizations/professionals
- Legal service organizations/professionals
- Housing agencies/organizations/professionals
- Policy makers

Core activities:

- Establish relationships with professionals representing the disciplines listed above and facilitate potential stakeholder council involvement as needed to fit the needs of the State Plan objectives and core activities
- Regularly review Stakeholder Council membership recruitment, engagement and maintenance needs
- Generate an advisory board Orientation Manual.

Measures:

- Stakeholder Council membership will include
 - At least 50% representation by people with lived experience of brain injury impacts,
 - Include at least one representative specializing in education and
 - At least one representative specializing in affordable, accessible housing services
- A Stakeholder Council Orientation Manual will be created and reviewed annually for necessary updates



Strategy 2:

Involve the Indiana Brain Injury Stakeholder Council members in accomplishing the goals of the State Brain Injury plan, determining the tasks, establishing the timelines, facilitating and monitoring progress, and providing ownership.

Core activities:

- Subcommittees of the Council will be established as needed to cover the key domains identified above (For example, brain injury-specific care, return to learn, and housing).
- Stakeholders will be invited to share their experience and knowledge with the Indiana Brain Injury Stakeholder Council and engage the council in discussion with the goal of moving forward the purposes of the council and the State Brain Injury Action Plan
- Continue discussions and review among the council members as to changes, updates and needs in their own agencies as well as topics needing potential representation of the council

Measures:

- Indiana Brain Injury Stakeholder Council will meet quarterly
- At least one stakeholder presentation will take place annually at a Stakeholder Council meeting

