Traumatic Brain Injury in Missouri

State Plan
2018-2023

Including 2019-2020
Annual Action Plan Activities

Revised 6/19/19

Missouri Brain Injury Advisory Council
Missouri Department of Health and Senior Services
TBI Missouri
Traumatic Brain Injury in Missouri

State Plan
2018-2023

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Collaborative Effort

The Missouri Traumatic Brain Injury State Plan for 2018-2023 was developed by the Missouri Brain Injury Advisory Council in conjunction with its lead agency, the Missouri Department of Health and Senior Services in partnership with University of Missouri-Kansas City Institute for Human Development. The plan represents a collaborative effort among members of the Missouri Brain Injury Advisory Council, board members of the Brain Injury Association of Missouri and other stakeholders from across the state.
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Priority Area One: Prevention
Goal One: Reduce the number of Traumatic Brain Injuries.
Goal Two: Improve and maintain prevention policies (create new and/or strengthen existing policy).

Priority Area Two: Services and Funding
Goal One: Maintain and enhance a comprehensive array of services available to all.
Goal Two: Secure funding for a comprehensive array of services.

Priority Area Three: Education
Goal One: Increase professional development for those who serve individuals with TBI and their families.
Goal Two: Increase concussion awareness and improve a multi-disciplinary, community-based system of support.
Goal Three: Provide best practice education to survivors and families.
Overview

The vision of the Missouri Brain Injury Advisory Council (MBIAC) is excellence in traumatic brain injury (TBI) prevention, public awareness, and the provision of services and supports across the lifespan of people with brain injuries and their families.

To achieve this vision, the MBIAC mission is to lead in the development of a collaborative statewide system of prevention, public awareness, and provision of services and supports driven by the needs of individuals with brain injury and their families.

The Missouri Traumatic Brain Injury State Plan was developed to serve as a guide to the MBIAC, keeping the Council focused on the key priority goals and objectives. The MBIAC will determine specific activities as partnerships and resources are identified and opportunities arise. Just as collaboration with many key stakeholders was very important in the development of the State Plan, collaboration will be vital to the implementation of the plan.

The MBIAC will look to identify partnerships that can leverage outcomes consistent with those identified in the plan. The MBIAC does not have the resources to accomplish this alone, but rather identifies itself through its mission as the organization that must lead in the establishment of these collaborative partnerships.

The implementation of this state plan brings the hopes of preventing TBI, increasing public awareness of TBI, increasing knowledge/education of best practices, and increasing services and supports for TBI survivors and their families. While many TBI initiatives and programs have been established in Missouri during the past few decades, they form only a foundation. Missouri must continue to build upon that foundation to provide appropriate and accessible services to all persons who have been affected by TBI.
TBI Basics

Traumatic Brain Injury (TBI) is defined as a blow, jolt or penetration to the head that disrupts the function of the brain. Most TBIs are caused by falls, jumps, motor vehicle traffic crashes, being struck by a person or a blunt object, and assault. Blast injuries sustained in combat are a growing cause of TBI.

According to the Missouri Information for Community Assessment (MICA) 2015 data 16,743 Missourians were treated at an emergency department or were hospitalized due to a TBI. Many more people sustain a TBI but go undiagnosed and untreated. The MICA data does not reflect those undiagnosed, untreated, treated in a physician office, or treated by the military. The 2015 MICA data reveals that the leading causes of TBI in Missouri are falls, motor vehicle traffic crashes, and being struck by/against an object or person. Falls are the leading cause of TBI in children and for those over the age of 65. Motor vehicle crashes and struck by/against an object or person are the leading causes of TBI for those between the ages of 15 and 24.

While TBI can affect men and women of all ages, males are about one and a half times more likely than females to sustain a TBI. The three age groups at highest risk for a TBI are 0-4 years, 15-24 years and 85 years and older.
TBI can range from mild to severe, and the effects can be temporary or permanent. Many people who experience a TBI have long-term or lifelong disabilities as a result of impairments in a number of areas including:

- Thinking and reasoning
- Memory
- Speech
- Behavior
- Seeing
- Understanding words
- Attention
- Problem Solving
- Physical Activities
- Hearing

These impairments can affect a person’s physical, cognitive, behavioral and emotional well-being, which subsequently impacts self-concept, family and social relations, education, and learning performance. These secondary disabilities can cause significant long-term problems with independent living, community integration, employment and financial stability.

The short- and long-term consequences of a TBI create a significant public health burden across the country and in Missouri. Because TBIs affect different areas of the brain in different ways, no two brain injuries are alike. As a result, a range of services that can meet individual needs and change over time is necessary.

Improvements in health care and technology are helping people with TBI live longer, healthier lives, so the need for services to assist those with TBI and their family members is growing. Educating the public about TBI is vital to improving the lives of TBI survivors.

Because prevention is the only real cure for TBI, efforts to promote the use of seatbelts, child safety seats, and helmets and to reduce the occurrence of child abuse, domestic violence, and other non-accidental injury are vital to reducing the number of lives impacted by a TBI. Many states, including Missouri, have recently passed legislation aimed at preventing long-term harm to student athletes who sustain concussions. Prevention measures are essential to reducing the social and economic burden caused by TBI.
Needs Assessment

Historically, the State of Missouri has conducted needs assessments every five years to inform the development of a Missouri Five Year Plan, which guides the provision of services and supports for individuals with TBI and their families. As a part of this project, an intensive needs assessment was completed ten years ago that involved interviews and focus groups with survivors, their families, and the professionals that serve them. A needs assessment conducted approximately five years ago was designed to build upon the earlier effort through surveys focused on survivors, their families, and the professionals who serve them. The current needs assessment, conducted in 2017 with survivors of TBI, their family members, and professionals, builds upon these previous efforts and provides updated information on current needs of, and service availability to, the Missouri TBI community.

2017 Key Findings

276 survivors and families and 1,067 professionals responded to the survey.

Professional Needs Assessment Survey

- Most professionals reported having either minimal (44.3%) to moderate (41.3%) knowledge of available supports and services for individuals with TBI and their families, whereas fewer than 10% reported having a great deal of knowledge on the subject.
- Over half of respondents (58.3%) served 20 or fewer individuals with TBI in the last five years.
- There was a significant increase in the mean rating of service adequacy from five years ago to today for the following services:
  - Urgent care
  - Doctor’s office service
  - Hospital discharge planning
  - Acute rehab services (inpatient/outpatient rehab, and home health)
  - Service coordination
  - Mental health counseling
  - Information and referral

- Mean service adequacy ratings of respite service are significantly lower in 2017 than 2012.
- Adequacy in discharge planning and continuing education have had a statistically significant increase since 2007.
- Adequacy in inpatient rehab is significantly lower in 2017 than it was 10 years ago.

24.1% of professionals reported that their organization provides TBI education to the community.

53.9% of professionals reported TBI training was part of their professional training.
TBI Survivor and Family Member Needs Assessment Survey

• The majority of individuals with TBI (63.0%) were diagnosed within the first week of injury—51.8% were diagnosed in the same day as the injury.

• There were marked increases in the following health conditions TBI survivors experienced from before to after the TBI occurred: cognitive (9.1% vs. 82.6%), physical (9.8% vs. 63.0%), behavior change (11.2% vs. 60.1%), language (7.2% vs. 54.7%), depression (24.3% vs. 65.9%), and chronic pain (12.3% vs. 54.0%).

• Most respondents reported that the following areas of their lives got worse after their TBI: psychological status (87.2%), income (85.9%), general health (85.3%), employment (83.7%), interpersonal / social (80.8%), marriage (76.2%), education (66.7%), and living situation (59.3%).

• Over half of respondents (54.7%) reported that they want to live in a different place from where they are currently living. Of those, 51% wanted to live “independently without assistance” or “in own apartment/home with outside assistance” and about 48% wanted to live with family.

• Over a quarter of respondents (27.5%) identified insufficient financial resources as a barrier to their desired living situation, followed by lack of employment (15.6%) and a need for help coordinating and planning services (11.2%).

• When asked, “Did anyone provide you with information or advise you about services available for people with traumatic brain injury?” less than half of the survivors (44.6%) reported that information had been provided.

• Almost 85% of TBI survivors received emergency room care at the time of injury and reported that they were generally satisfied with these services.

• Among the 186 people who received hospital admission at the time of injury, about half (58.1%) reported that they received discharge planning services before they left. The average level of satisfaction with the discharge planning service is 3.2, which is between satisfied and very satisfied.

• There is a statistically significant increase in satisfaction levels with home health, financial management, housing assistance, and legal services from year 2011 to year 2017.

• Over half of the respondents (n=181, 65.6%) reported that they have met professionals providing services related to TBI who need to learn more about TBI.
  ✓ The most frequently identified professionals who need to learn more about TBI include teachers (76.8%), law enforcement personnel (72.4%), and principals (70.2%).
  ✓ Most of these respondents (82.3%) indicated that professionals need more general knowledge about TBI. Respondents also indicated that professionals need additional training or information on managing cognitive changes (76.2%), specific knowledge about needs (76.2%), and additional information on available services for TBI (76.2%).

**Priority Area One: Prevention**

**Goal One:**
Reduce the number of Traumatic Brain Injuries.

- Increase public awareness, education, and outreach regarding the causes of TBI (e.g. domestic violence, sports concussions, auto accidents, elderly and falls).
  - Expand utilization of Speaker Bureau representatives to focus on brain injury prevention.
  - Collaborate with the Brain Injury Association of Missouri, Missouri State High School Activities Association (MSHSSA), Missouri Athletic Trainers Association, Missouri School Nurses Association, Missouri Association of Rural Education, and other potential partners to provide concussion seminars and education.
    - Provide three in person seminars for coaches and school personnel.
  - Explore concussion education for student athletes and parents.
    - Explore collaboration with recreational youth sports leagues.
      - Discuss collaboration with Missouri Parks and Recreational Association, YMCA, and youth summer camps.
Goal Two:
Improve and maintain prevention policies (create new and/or strengthen existing policy).
  • Promote traffic safety, recreational safety, and youth concussion legislation.
    o Identify filed legislation related to traffic safety, recreational safety, and youth concussion and determine position of support or opposition.
      ▪ Develop talking points and activities related to determined position.
  • Promote strong violence prevention laws in areas such as domestic violence, anti-bullying, child abuse, and illegal firearms violations.
    o Collaborate with Missouri Injury and Violence Prevention Advisory Council (MIVPAC) and other stakeholders.

Goal One:
Maintain and enhance a comprehensive array of services available to all.
  • Increase utilization of family and peer support group services especially for underserved populations.
  • Increase awareness and access to local, state, and federal resources.
    o Participate in Brain Injury Awareness activities in March.
      ▪ Distribute Brain Injury social media messages.
    o Participate in a Department of Mental Health Podcast regarding TBI.
  • Collaborate with organizations to meet the needs of individuals with TBI.
    o Expand the Provider Committee meetings to help develop more efficient procedures and policies for the ABI Program.
    o Invite complementary organizations to present at MBIAC meetings for exploration of partnerships (e.g., Special Olympics, School Nurses Association, MIVPAC, Agribility, NASHIA).
  • Develop and enhance relationships with medical providers to increase awareness of the need for information about services at onset and throughout the lifespan, including medical home model.
  • Increase utilization of services and supports that help individuals improve their quality of life and levels of independence (e.g. employment, housing, personal care, community involvement, transportation and recreation).
Goal Two:
Secure funding for a comprehensive array of services.

- Increase revenues to the Brain Injury Fund and maintain or increase general revenue as needed.
  - DHSS and advocates will continue to submit requests to have the Brain Injury Fund increased each fiscal year.
- Improve services available through the Adult Brain Injury Program and eliminate the waiting list for these services.
  - Implement a new service called ‘Consultation Visit’ for the Adult Brain Injury Program. During this visit, the provider and participant will establish a Treatment Plan outlining their goals and strategies. This service would allow providers and participants to meet before the allocations of lifetime units begin, ultimately better utilization of services.
- Implement a Brain Injury Waiver that enhances the array of available services without compromising existing services.
  - Implement the Brain Injury Waiver effective October 1, 2019, after CMS approval.
- Reinstate or add services to the Medicaid state plan, including physical therapy, occupational therapy, speech therapy, cognitive therapy, comprehensive day rehabilitation, neuropsychology services and other services related to brain injury.
- Identify insurance barriers and explore solutions, excluding managed care.
Goal One:
Increase professional development for those who serve individuals with TBI and their families.

- Improve education/awareness of First Responders regarding TBI. Education should focus on areas such as:
  - Recognition and immediacy of treatment.
  - Recognition of individuals who may be brain injury survivors.
- Improve knowledge of medical, support group facilitators, rehabilitation and community support professionals about the needs of TBI survivors and their families.
  - Recognition and immediacy of treatment.
  - Communication with patient and family.
  - Knowledge of resources available and how to access them.
  - An overview of the ABI Program will be presented by an ABI Program Service Coordinator to BIA-MO Support Group Facilitators during one of their quarterly Support Group Facilitator Calls.
    - Provide initial and follow up information to individuals and families in easy to use and understandable formats.
    - Increase knowledge of emergency personnel of the need for follow up for concussions.
- Increase prevention strategies and public education among professional and community groups.
  - Expand utilization of Speaker Bureau representatives to focus on brain injury prevention.

Goal Two:
Increase concussion awareness and improve a multi-disciplinary, community-based system of support.

- Continue to build concussion awareness among school personnel, coaches, referees, parents, youth and the general public. Awareness activities should address:
  - team protocols;
  - return to activities;
  - academic adjustments; and
  - risks from repeat injury.
  - Provide three in person seminars for coaches and school personnel.
Goal Three:
Provide best practice education to survivors and families.

- Promote opportunities for self-advocacy training.
  - Explore a session on self-advocacy at the BIA-MO Survivor & Family Seminar or Annual Statewide Conference.

- Promote educational opportunities for individuals and their families living with brain injury.
  - Sponsor the BIA-MO Survivor & Family Regional Seminars and share registration information with ABI Program Participants, survivors and family members across the State.

- Reduce the risk of repeat injury.
More information about traumatic brain injury can be found at:
http://health.mo.gov/living/healthcondiseases/tbi/index.php

For additional copies of this report visit:

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