Traumatic Brain Injury (TBI): Causes, Symptoms and Resources

According to the Centers for Disease Control and Prevention (CDC), Traumatic Brain Injury (TBI) is a major cause of death and disability in the United States (U.S.) with approximately:

- 69,350 TBI-related deaths in 2021
- 223,135 TBI-related hospitalizations in 2019

The data estimates above do not include untreated TBIs or those treated only in urgent care facilities, primary care offices, or emergency departments. Also, more than 450,000 U.S. military service members were diagnosed with a TBI from 2000 to 2021.

This Fact Sheet provides: 1) an overview of CDC information concerning the causes and symptoms of TBI; and 2) a list of potential resources that may be helpful for individuals with TBI seeking access to supports and services.
Causes and Symptoms of TBI

Causes of TBI include a penetration or jolt to the head, for example from motor vehicle accidents, physical abuse, including domestic violence, gunshot wounds, falls, contact sports, and other situations when there is a sudden, quick jerk to the head. TBI disrupts brain function. As a result, individuals may experience the effects of mild, moderate, or severe TBI.

The range of effects from TBI can vary significantly and be short-term and long-term. Brain injury may impact cognitive, physical, social-emotional, and behavioral health; the onset of symptoms may not be immediate and could occur days after the injury. TBI can also cause epilepsy and seizures. Further, TBI-related symptoms may worsen, or occur along with symptoms from pre-existing conditions such as post-traumatic stress disorder or mental illness or a previous brain injury.

Symptoms of mild, moderate and severe TBI may be different for each person and could include the following:

- **Physical**: headaches, nausea, vomiting, tiredness, sensitivity to light or noise, problems with hearing, vision, and/or motor skills (such as balance and coordination), slurred speech
- **Cognitive**: trouble thinking clearly, problems with concentration, fogginess, short- or long-term memory, understanding, communicating, learning, problem-solving
- **Emotional/mood**: depression or sadness, anxiety, irritability, feeling more angry, aggressive, and/or emotional than usual
- **Behavior**: impulsiveness, personality changes, trouble controlling behavior
Long-term effects of TBI can be significant and result in a variety of chronic health conditions. In addition to increased risk of seizures, drug poisoning, infections, and pneumonia, early death may also occur for some individuals.

Diagnosing TBI may require an initial assessment with questions about whether the person has ever experienced a penetration, hit, or jerk to the head or bumped their head. Also, specialized testing including neuropsychological or neurocognitive tests may be necessary.

Types of follow-up care that may be needed after a TBI depend on the severity of brain injury and resulting effects. Length of care necessary may be short-term, long-term, or life-long. Examples of services that individuals may need after a TBI include but are not limited to: physical and cognitive rehabilitation, communication, home and community-based supports, residential habilitation, neurocognition, psychological, behavioral management, assistive technology, and vocational rehabilitation.
TBI Resources

I. PA Department of Health (DOH)

A. Head Injury Program

The goal of the Department of Health’s Head Injury Program (HIP) is to help eligible individuals with a TBI live independently in their homes and communities.

Services provided by the program, through a contracted provider, include:

- Pre-enrollment assistance
- Pre-admission assessment
- Service plan development
- Rehabilitation
- Case management
- Services are provided in residential facilities; day facilities (outpatient); and other home and community-based settings

Enrolled individuals may receive no more than 12 consecutive months or $100,000 for rehabilitation services as specified in the rehabilitation service plan, followed by a maximum of six consecutive months or $1,000 for case management to assist in transitioning out of the HIP. Certain situations may cause an individual’s enrollment period to end prior to the time designated in the rehabilitation plan.

To learn more about eligibility and enrollment for HIP, visit DOH’s website at https://www.health.pa.gov/topics/programs/Pages/Head-Injury.aspx. You may contact the Head Injury Program by calling 717-772-2763 during regular business hours, 8 a.m. until 5 p.m. EST or sending an email to RA-DHBFHHIP@pa.gov. You may also call the toll-free Brain Injury Help Line at 1-866-412-4755 to be connected to an enrollment specialist.
B. NeuroResource Facilitation Program for Brain Injury Services

The NeuroResource Facilitation Program (NRFP) is a service that helps individuals 18 and older with TBIs and their family members identify and navigate brain injury resources, services, and support. This service is provided at no cost to the individual or their family.

To learn more, visit DOH’s website at [https://www.health.pa.gov/topics/programs/Pages/NeuroResource-Facilitation-Program.aspx](https://www.health.pa.gov/topics/programs/Pages/NeuroResource-Facilitation-Program.aspx). You may contact the NRFP at 717-772-2763 during regular business hours, 8 a.m. until 5 p.m. EST, or send an email to RA-BFHNRF@pa.gov. You may also call the toll-free Brain Injury Help Line at 1-866-412-4755 to be connected to a Brain Injury Specialist.

C. Brain Injury Ambassador Program

The Ambassador Program was developed through a partnership between the Pennsylvania Department of Health and the Brain Injury Association of Pennsylvania. (Please see additional information below under Brain Injury Association of Pennsylvania.)

II. PA Department of Human Services - Office of Long-Term Living (OLTL)
Home and Community-Based Services for Adults

Pennsylvania has several programs that provide home and community-based services to allow adults to live in the community rather than in a nursing facility:

- Community HealthChoices (CHC) Home and Community-Based Services Waiver
- Act 150 Attendant Care (Act 150) Program
- OPTIONS Program
- Living Independence for the Elderly (LIFE) Program

Generally, if you are determined to need the level of care provided by a nursing facility and meet specified Medicaid financial eligibility requirements, you can receive home and community-based services through the CHC Home and Community-Based Services Waiver or through the LIFE Program. If, however, you are determined to need a nursing facility level of care but do not meet the Medicaid financial eligibility requirements, you may qualify for services through the Act 150 Program if you are under age 60 or the OPTIONS Program if you are age 60 or older.

Additional information about these programs, including eligibility standards, is further explained in Disability Rights Pennsylvania’s **Eligibility for Community HealthChoices (“CHC”) and Other Programs that Provide Home and Community-Based Services for Adults as Alternatives to Nursing Facilities** publication at: [https://www.disabilityrightspa.org/wp-content/uploads/2022/03/Eligibility-for-CHC-and-Other-HCBS-Programs-for-Adults-print-version-March-2022.pdf](https://www.disabilityrightspa.org/wp-content/uploads/2022/03/Eligibility-for-CHC-and-Other-HCBS-Programs-for-Adults-print-version-March-2022.pdf).

You may also call the OLTL Participant Hotline at 1-800-757-5042 or Department of Human Services (DHS) Customer Services at 1-877-395-8930.
III. Pennsylvania Office of Vocational Rehabilitation (OVR)

The Office of Vocational Rehabilitation (OVR) provides vocational rehabilitation services to help persons with disabilities prepare for, obtain, or maintain employment. Services are provided to individuals with disabilities who are eligible both directly and through a network of approved vendors.

OVR services are wide-ranging and provided on an individualized basis aligned to need. Not everyone will need every service. Types of OVR services may include the following: diagnostic services, vocational evaluation, counseling, training, restoration services, job placement assistance, assistive technology, and support services.

For additional information about OVR services and eligibility go to: https://www.dli.pa.gov/Individuals/Disability-Services/ovr/Pages/default.aspx or call OVR’s central office at 800-442-6351 (Voice) or 866-830-7327 (TTY). Individuals may also contact their closest OVR District Office by obtaining contact information from the OVR office directory posted at http://www.pa.gov/.

IV. Brain Injury Association of Pennsylvania (BIAPA)

The Brain Injury Association of Pennsylvania (BIAPA) is a 501(c)(3) membership organization. It is a statewide organization supporting education, advocacy, and research in the field of brain injury. Additional information is available on its website at https://biapa.org/. BIAPA supports several brain injury programs including the following:

A. Brain Injury Resource Line (BIRL)

A call to 1-800-444-6443 will connect to a recording that invites you to leave your telephone number. Thereafter, calls are assigned to a volunteer who returns the call and provides resource information.
B. BrainSTEPS

BrainSTEPS is a brain injury school re-entry counseling program. The program model follows a student (K-12) brain injury and includes development and implementation of educational plans, along with connecting families, medical, rehabilitation, and education sectors.

For information about the BrainSTEPS Program model visit: https://brainsteps.net/home or contact: Brenda Eagan-Johnson, EdD, CBIS, BrainSTEPS Program Coordinator, by email at eagan-johnson@biapa.org or telephone at: 724-944-6542.

C. Brain Injury Ambassador Program

Brain Injury Ambassador Program is a partnership between Pennsylvania’s Department of Health (DOH) and BIAPA. Program goals include increasing awareness about brain injury and available resources. Brain Injury Ambassador Program volunteers make a one-time contact, as permitted, and educate individuals about brain injury services and supports that may be needed in the future. Ambassadors may also raise awareness about brain injury at community events and educational settings.

D. ReDiscover U

ReDiscover U assists individuals in learning new skills or rediscovering past interests through inclusive and diverse educational opportunities that enhance the health, well-being, and knowledge of those who participate. The classes are virtual. Additional information is available here: https://biapa.org/programs/rediscoveu/
V. BrainLine

BrainLine offers information and support to individuals whose life has been affected by brain injury or PTSD, including people with brain injuries, their family and friends, and the professionals who work with them. For additional information visit brainline.org, call 1-703-998-2020, or send an email to: info@BrainLine.org.

VI. Resources Specifically for Active-Duty Military Service Members, Veterans & their Families

A. Traumatic Brain Injury Center of Excellence (TBICoE)

The Traumatic Brain Injury Center of Excellence (formerly, the Defense and Veterans Brain Injury Center) promotes TBI care from point-of-injury to reintegration for active-duty service members, veterans, and their families to prevent and mitigate consequences of mild to severe TBI. For additional information visit: https://health.mil/Military-Health-Topics/Centers-of-Excellence/Traumatic-Brain-Injury-Center-of-Excellence or call 1-800-870-9244.

B. BrainLine

BrainLine’s programs include providing military-specific information and resources about TBI to veterans, service members, and their families. For additional information visit: https://www.brainline.org/military-veterans, call 703-998-2020, or send an email to: info@BrainLine.org.
C. Resources for Pennsylvania Military Veterans With Developmental Disabilities

This Veterans Resource Guide was developed by the Pennsylvania Developmental Disabilities Council (PADDCC) in partnership with Disability Rights Pennsylvania (DRP). You may review and print the publication from DRP’s website: https://www.disabilityrightspa.org/wp-content/uploads/2020/06/Veterans-Resource-Guide-Final.pdf.

VII. Pennsylvania Department of Aging (PDA)

The Pennsylvania Department of Aging’s **PA Link to Aging and Disability Resource Center** helps persons with disabilities and seniors find information that will connect them to supports and services in their community. For information visit the PDA website at: https://www.aging.pa.gov/local-resources/pa-link/Pages/default.aspx, or call the PA Link to Aging and Disability Resource Center Toll-Free Helpline at 1-800-753-8827.
Stay Connected

If you need more information or need help, please contact Disability Rights Pennsylvania (DRP) at 800-692-7443 (voice) or 877-375-7139 (TDD). Our email address is: intake@disabilityrightspa.org. DRP's live intake line is open Monday - Friday from 9:00 a.m. to 3:00 p.m.

The mission of Disability Rights Pennsylvania is to advance, protect, and advocate for the human, civil, and legal rights of Pennsylvanians with disabilities. Due to our limited resources, Disability Rights Pennsylvania cannot provide individual services to every person with advocacy and legal issues. Disability Rights Pennsylvania prioritizes cases that have the potential to result in widespread, systemic changes to everyone, we do seek to provide every individual with information and referral options.

IMPORTANT: This publication is for general informational purposes only. This publication is not intended, nor should be construed, to create an attorney-client relationship between Disability Rights Pennsylvania and any person. Nothing in this publication should be considered legal advice.

PLEASE NOTE: For information in alternative formats or a language other than English, contact Disability Rights Pennsylvania at 800-692-7443 (voice) or 877-375-7139 (TDD). Our email is: intake@disabilityrightspa.org.

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