



Final Report

**The Bowen Center for Health Workforce
Research and Policy**

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Table of Contents

Executive Summary	4
Introduction	5
Objective 1. Identify the licensed workforce providing healthcare services to individuals living with BI. .	6
Survey of Health Professionals	6
Objective 2. Describe the policy and regulatory environment and strategies of Indiana and other states active in the BI space selected by IDOH.	11
Conclusions	28
Objective 3: Identify successes and challenges of both providing and receiving services for BI in Indiana	29
Barriers to Care	29
Successes and Challenges	30
Potential Solutions to BI Service Challenges	30
Access to Care	31
Perceptions of Care	32
Needs/Gaps	34
Conclusions	36
Objective 4. Provide workforce related recommendations for opportunities to continue to support and expand BI services in Indiana, as BI continues to be considered as a chronic condition.	37
Cross-Cutting Themes	37
Recommendations	37
Appendices	45
Appendix A. Glossary of Terms	45
Appendix B. Health Professionals Survey	47
Appendix C. Key Informant Interviews With Health Professionals	54
Appendix D. Survey for Individuals Living with a Brain Injury	60
Appendix E. Focus Group for Individuals Living with BI/Caregivers	70
Appendix F. Policy Review	72

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Executive Summary

Traumatic brain injury (TBI) represents a major and growing public health concern in Indiana. In 2023 alone, the state recorded more than 23,000 TBI cases, including 1,463 deaths, 4,442 hospitalizations, and 17,846 emergency department visits, not including individuals who remain undiagnosed or untreated. As TBI and other forms of brain injury (BI) are increasingly understood as chronic conditions with long-term physical, cognitive, and emotional impacts, the need continues for Indiana to deliver coordinated, specialized, and accessible care.

This workforce assessment, conducted by the Bowen Center for Health Workforce Research and Policy and sponsored by the Indiana Department of Health (IDOH), describes the licensed professionals providing BI services across Indiana, evaluates the current policies and regulations driving BI care and services, examines the capacity of Indiana's licensed health workforce providing these services.

Key Findings

- In Indiana, a total of 4,449 licensed health professionals responded to the survey, of which 44% reported providing BI services.
- Although 44% of the surveyed licensed health professionals said they provided BI services; 60% of individuals living with BI reported difficulty finding providers who specialize in BI care.
- The licensed health workforce providing BI services in Indiana currently includes: athletic trainer, certified nurse aide (CNA), clinical social worker (CSW), home health aide (HHA), licensed practical nurse (LPN), occupational therapist (OT), physical therapist (PT), physician, psychologist, registered nurse (RN), respiratory therapist (RT), speech-language pathologist (SLP), social worker (SW), and qualified medication aide (QMA).
- RNs were the professionals who reported providing BI services most often.
- The highest number of health professionals reported the biggest barrier to BI services as inadequate insurance coverage.
- Indiana, like other states, does not require specific education or training to provide care or services for individuals living with BI.
- Patients have limited direct access to certain healthcare professionals, requiring a physician referral after so many days and/or visits.
- Indiana's TBI waiver covers many social supports but is limited in terms of healthcare services. Home health, residential care, and behavioral health are the most commonly waiver-covered healthcare services, across Indiana and all states.
- Indiana has an identified BI-specific plan and advisory board, all of which informs its [Brain Injury State Action Plan](#).
- Indiana is a federal awardee but also has multiple other facets of BI funding.
- In terms of data surveillance, Indiana collects multiple data points. These surveillance methods lead to occasional public reporting to help understand the landscape and impact of BI and understand the demands for the workforce.

Conclusion

Indiana has foundational strengths, including an established BI plan, committed stakeholders, and partially developed infrastructure, but some gaps remain related to the workforce. These gaps include training and education, service accessibility and coordination, funding, and data systems. These gaps provide opportunities for Indiana to build workforce capacity, further develop the workforce, increase

coordination of care, and fully understand the impact of BI on Hoosiers. Indiana could consider requiring formal education and continued education training to develop the workforce to provide specialized care to meet the needs of Hoosiers. Additionally, workforce capacity could be increased through direct access reform, more coordinated care, social support, and increased data surveillance efforts. The goal of the current report is to provide recommendations for Indiana to prepare the workforce to meet the lifelong needs of individuals living with brain injury, strengthen the statewide workforce and care capacity, and improve outcomes for thousands of Hoosiers affected each year.

Introduction

Traumatic brain injury (TBI) is a significant public health concern in the United States. In 2021, it was estimated that more than 69,000 Americans died from TBI-related causes.¹ Specific to Indiana, in 2023, there were more than 23,000 cases of BI identified, including 1,463 deaths, 4,442 hospitalizations, and 17,846 emergency department visits, not including undiagnosed or untreated individuals.

BI can occur from both traumatic and non-traumatic events. The Administration for Community Living (ACL) defines a TBI as an alteration in brain function or other evidence of brain pathology caused by an external force, such as a blow or jolt to the head. While a non-traumatic event is characterized as damage to the brain due to internal factors, such as a lack of oxygen, exposure to toxins, and/or pressure from a tumor. Acquired brain injury (ABI) is another categorization of BI that includes TBI, as well as other types of damage, such as stroke, hypoxia, and/or infection.^{2,3}

The health workforce plays a critical role in delivering timely, effective, and specialized care to individuals living with BI. As BI is increasingly recognized and treated as a chronic condition, evidence suggests that it is not a singular event with a fixed trajectory for recovery. Thus, states must adapt their healthcare systems and workforce to meet the evolving needs of individuals with brain injury, considering physical, cognitive, and emotional health. The need for a workforce educated and prepared to support individuals through acute care, rehabilitation, treatment, and long-term recovery is becoming increasingly important.⁴

This review examined Indiana's healthcare workforce and systems currently serving individuals with BI and identified opportunities to strengthen the state's capacity and demand to deliver informed BI care through several activities. First, to evaluate the workforce providing BI healthcare services, the licensed professionals providing these services had to be identified and described. The policy environment that regulates these services and professionals also had to be examined and described focusing on waiver-covered healthcare services, education, and regulation of the workforce, TBI plans and programs, TBI funding, and surveillance. Each of these components is related to the workforce in terms of capacity, demand, training, etc. For example, collecting surveillance data is one way that BI services are regulated in Indiana and help the state keep a finger on the pulse of "demand" for BI services. The data collected, in turn, helps identify what the workforce needs might be. Additionally, multiple perspectives were utilized to conduct this assessment, with surveys of both licensed health professionals and individuals living with BI or their caregivers, as well as key informant interviews with licensed health professionals and focus groups with individuals living with BI or their caregivers.

The Bowen Center for Health Workforce Research and Policy completed this review as experts in health workforce policy. This project was sponsored by the Indiana Department of Health (IDOH), and expert

review was provided by the Indiana University School of Medicine Department of Physical Medicine & Rehabilitation (PM&R).

This workforce assessment was designed to meet the following objectives:

1. [Objective 1](#): Identify the licensed workforce providing healthcare services to individuals living with BI through a survey and key informant interviews with health professionals.
2. [Objective 2](#): Describe the policy and regulatory environment and strategies of Indiana and other states active in the BI space selected by IDOH (Colorado, Illinois, Iowa, Kentucky, Michigan, and Ohio).
3. [Objective 3](#): Identify successes and challenges of both providing and receiving services for BI in Indiana.
4. [Objective 4](#): Provide workforce related recommendations for opportunities to continue to support and expand BI services in Indiana as BI continues to be considered as a chronic condition.

Objective 1. Identify the licensed workforce providing healthcare services to individuals living with BI.

Survey of Health Professionals

To best describe the workforce providing services to individuals living with BI, a comprehensive survey was utilized to both identify the workforce and describe their delivery of BI services. As this is a workforce assessment, the licensed workforce was prioritized. This examination will quantify the capacity of the workforce in Indiana and geographic accessibility of BI services. This section summarizes the data collected from health professionals actively licensed in Indiana through a survey. For more information about survey development, methodology, recruitment, data collection, analysis, and additional findings, please see [Appendix B](#).

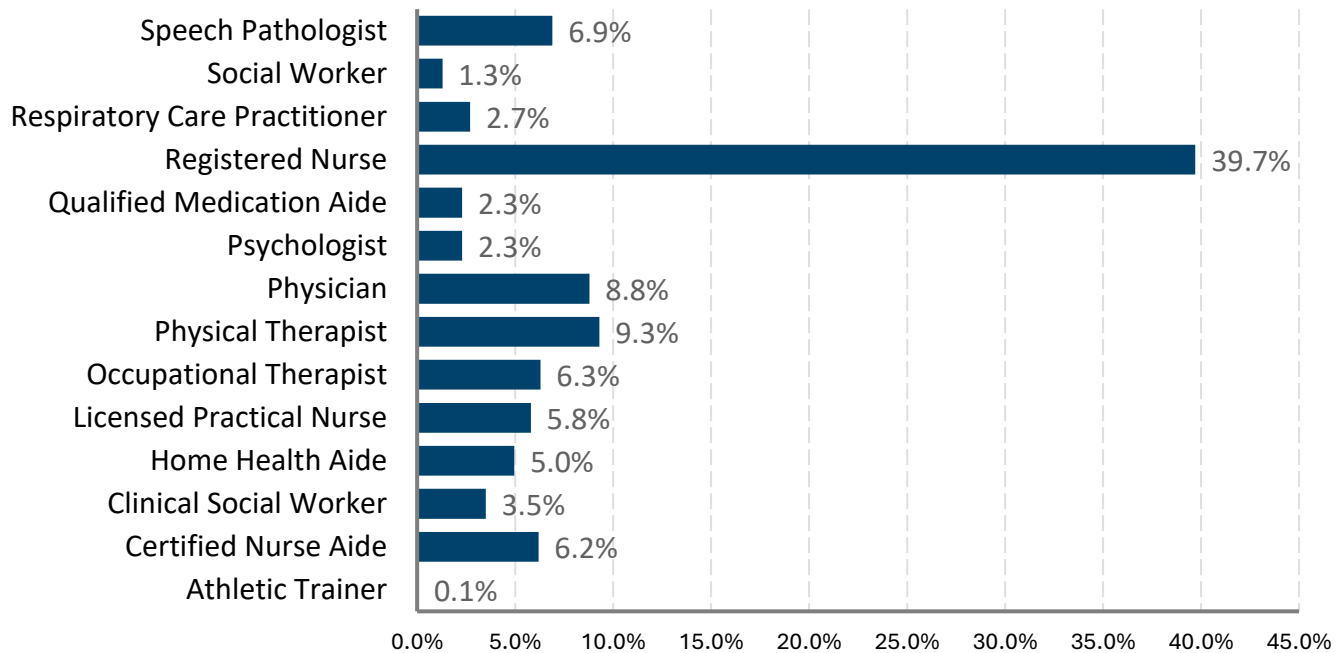
TBI Service Provision

A total of 4,449 health professionals responded to the survey. As shown in Table 1.1, approximately 44.0% of respondents reported providing BI care. Figure 1.1 demonstrates the breakdown of professionals who reported providing BI treatment.

Table 1.1 BI provision status

Providing BI Care	N	%
Yes	1,957	44.0
No	2,492	56.0
Total	4,449	100.0

Figure 1.1 Breakdown of health professionals providing BI treatment



Services Provided

Figure 1.2 provides a breakdown of the BI services health professionals reported providing. The responding health professionals were most likely to provide services related to their scope of practice.

Figure 1.2 Breakdown of BI services provided by Indiana health professionals

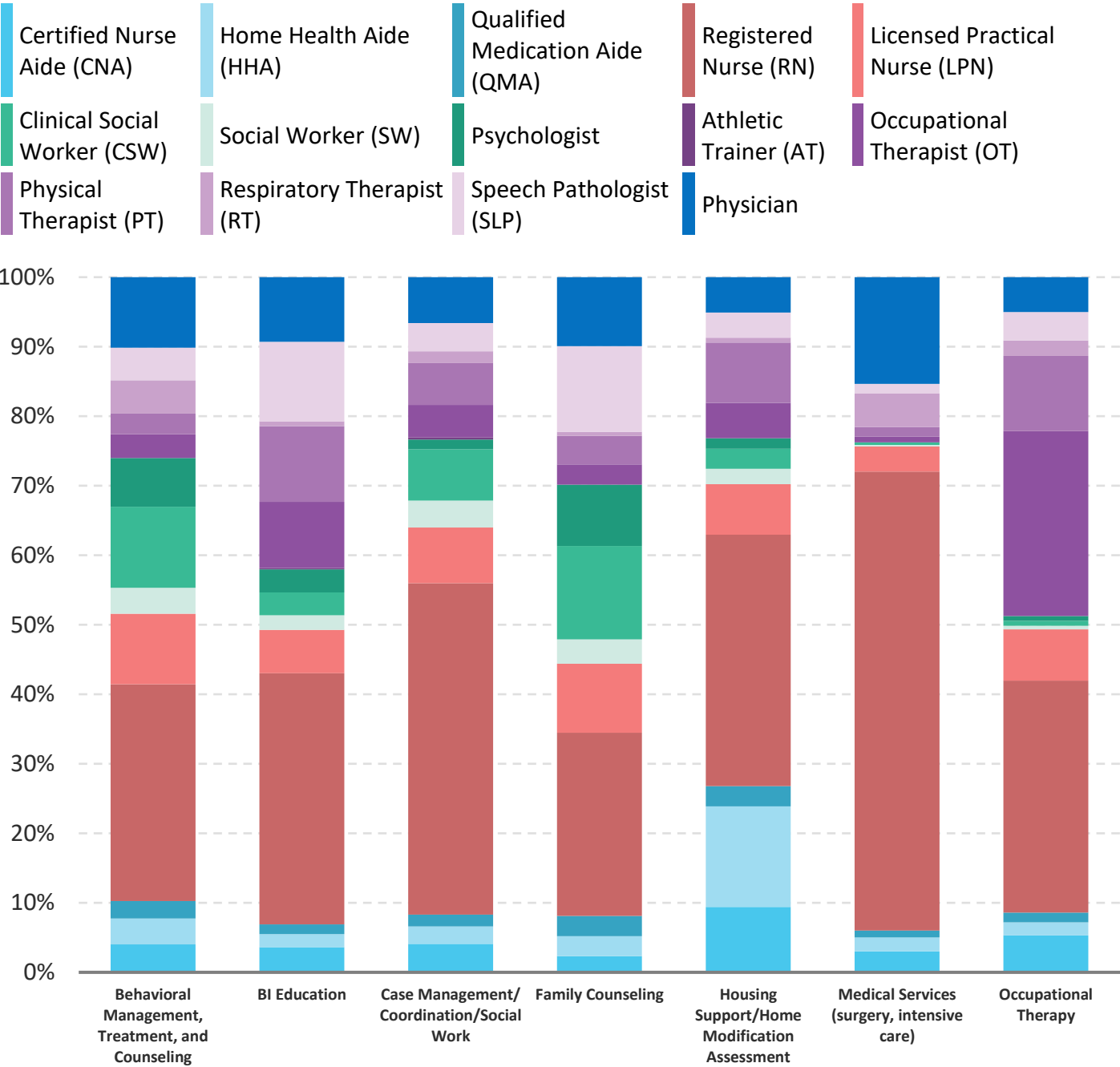
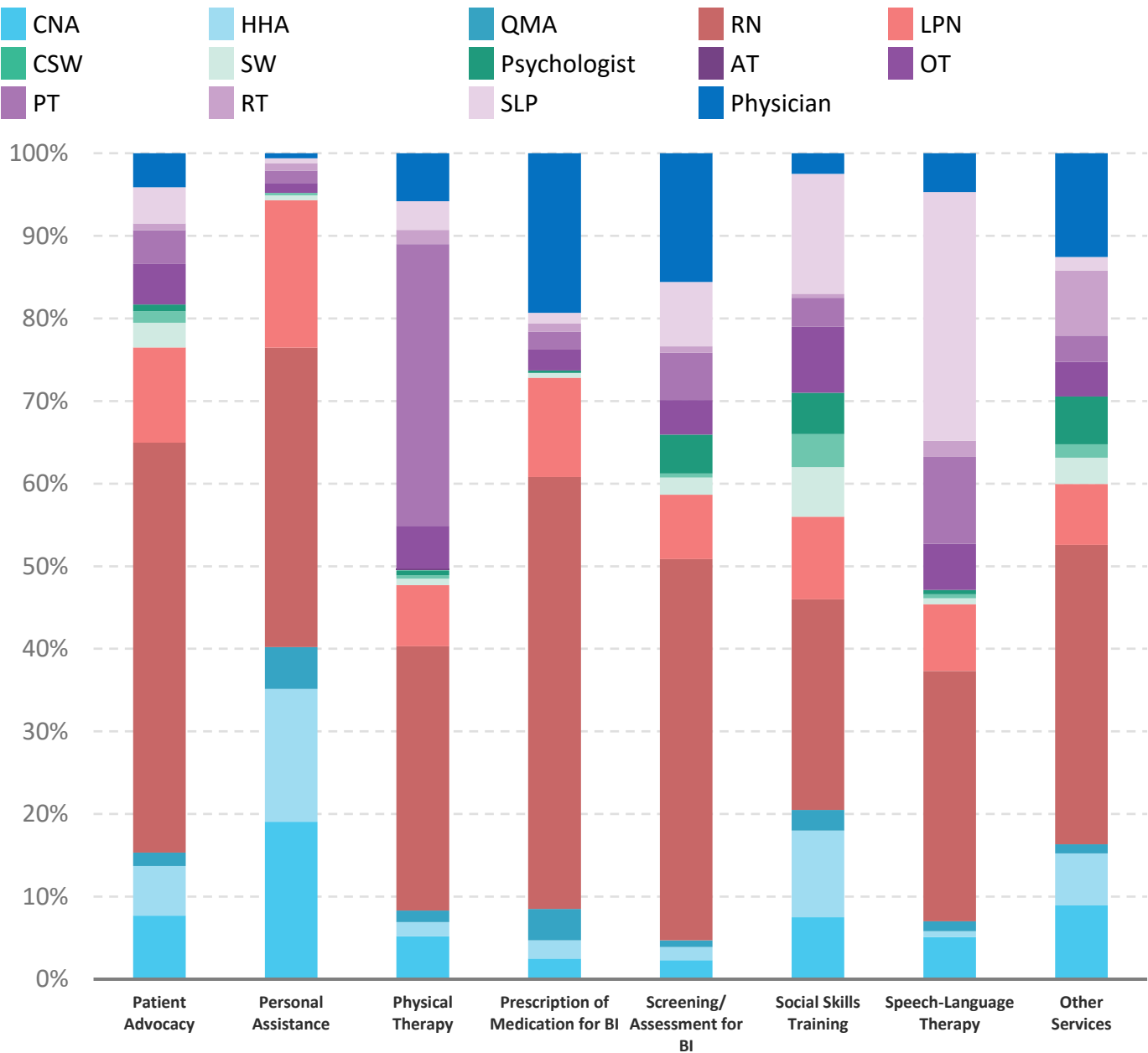


Figure 1.2 (cont.) Breakdown of BI services provided by Indiana health professionals



BI-Specific Certifications and Knowledge

Participants were also asked if they held any certifications specific to BI including brain injury specialist, brain injury specialist training, and a provisional certified brain injury specialist. The therapeutic professions most often reported being a Certified Brain Injury Specialist (OT, PT, SLP). Otherwise, very few professionals reported being a trainer or having a provisional certification.

Figure 1.3 Breakdown of BI Certifications held by professionals, by license type

License Type	Certified Brain Injury Specialist		Certified Brain Injury Specialist Trainer		Provisional Certified Brain Injury Specialist	
	N	%	N	%	N	%
AT	0	0.0	0	0.0	0	0.0
CNA	4	5.1	0	0.0	2	28.6
CSW	1	1.3	1	14.3	0	0.0
HHA	2	2.6	1	14.3	0	0.0
LPN	2	2.6	0	0.0	0	0.0
OT	10	12.8	2	28.6	0	0.0
PT	21	26.9	0	0.0	2	28.6
Physician	8	10.3	0	0.0	0	0.0
Psychologist	1	1.3	0	0.0	0	0.0
QMA	0	0.0	0	0.0	1	14.3
RN	9	11.5	2	28.6	2	28.6
Respiratory Care Practitioner	0	0.0	0	0.0	0	0.0
SW	1	1.3	0	0.0	0	0.0
SLP	19	24.4	1	14.3	0	0.0
All	78	100.0	7	100.0	7	100.0

Additionally, the licensed health professionals were asked to provide a response to items about brain injury care areas, based on their knowledge level (high/expert knowledge, limited knowledge, or no knowledge/need training). Most professionals reported having limited knowledge across all care areas, but most often reported expert knowledge with cognitive deficits, rehabilitation strategies, and screening and assessment (as depicted in Figure 1.4).

Figure 1.4 Breakdown of reported knowledge level for BI care categories

	Case Management		Cognitive Deficits		Mental and Behavioral Health		Rehab. Strategies	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
<i>High/Expert Knowledge</i>	234	17.0	720	51.4	460	32.8	568	40.3
<i>Limited Knowledge</i>	771	55.9	620	44.2	793	56.5	653	46.3
<i>No Knowledge</i>	375	27.2	62	4.4	150	10.7	189	13.4
<i>All</i>	1,380	100.0	1,402	100.0	1,402	100.0	1,410	100.0

Figure 1.4 (cont.) Breakdown of reported knowledge level for BI care categories

	Resources/ Referrals		Screening and Assessment		Substance Use/ Abuse		Transitional Care	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
<i>High/Expert Knowledge</i>	297	21.5	512	36.7	277	20.0	384	27.4
<i>Limited Knowledge</i>	796	57.6	628	45.1	697	50.4	705	50.2
<i>No Knowledge</i>	290	21.0	254	18.2	408	29.5	314	22.4
<i>All</i>	1,383	100.0	1,394	100.0	1,382	100.0	1,403	100.0

Conclusions

A total of 4,449 licensed health professionals responded to the survey, of which 44% reported providing BI services. The professions reported were AT, CNA, CSW, HHA, LPN, OT, PT, physician, psychologist, QMA, RN, respiratory care practitioner, SLP, and SW. RNs were the profession that reported most frequently providing BI healthcare services. Additionally, health professionals providing BI services most often reported having no certification and limited knowledge of BI care categories such as mental and behavioral health, case management, and resources/referrals.

Objective 2. Describe the policy and regulatory environment and strategies of Indiana and other states (identified by IDOH) active in the BI space.

Once the workforce was identified, it was imperative to determine the policy environment, including any regulations related to education requirements for professional practice and any related state-level initiatives such as waivers, state plans, trust funds, programs, and data surveillance. Ensuring the healthcare workforce understands and can adapt to treating patients living with BI is of critical importance. For additional summary findings of the policy review, see [Appendix F](#).

Regulation

Ensuring the healthcare workforce understands and can adapt to treating patients living with BI is of critical importance. Regulation creates the context in which healthcare professionals can provide services to patients, including the education and examination requirements, and the practice environment (scope of practice). Understanding the state-level policies that shape the healthcare workforce within a state is important to determine opportunities for strengthening the workforce for people living with BI. It is of equal importance that individuals living with BI can be treated by providers who have specialized knowledge and expertise.

Methodology

Research was conducted to identify licensure, education, and scope of practice requirements for healthcare providers. This research included reviewing state licensing board websites, national professional association resources, and any publicly available policy documents. Each profession was evaluated on different regulations that inform their practice in each state such as scope and standards of practice, ability to practice independently, level of access, and prescribing authority.

Findings

Table 2.1 State regulations summary

State	Regulations
Colorado	Colorado offers a flexible regulatory framework for healthcare professionals. It is worth noting that psychologists in Colorado have prescriptive authority, which expands their role in integrated behavioral health treatment. APRNs are granted independent practice licenses, allowing them to operate without physician oversight. Additionally, OTs and PTs benefit from unrestricted direct access, enabling patients to receive rehabilitative care without delays caused by referral requirements. With two levels of social work licensure, Colorado also supports a multi-level pathway for entry into the profession, potentially increasing access to mental and behavioral health services. Although BI-specific education is not currently mandated, Colorado's regulatory structure and its BI Plan provide a solid foundation for future integration of BI training across disciplines.
Illinois	Illinois presents a balanced regulatory environment for healthcare professionals, offering moderate autonomy and access that can support improved care for individuals with BI. Like Colorado, psychologists in Illinois have prescriptive authority, aligning with the expanded scope of behavioral health providers. Both OTs and PTs benefit from direct access provisions, allowing them to evaluate and treat patients without a physician referral, a key step in reducing delays and barriers to care for those living with BI. Additionally, Illinois maintains three levels of social work licensure, including a bachelor's level, which can help entry into the field and expand access to social services across different care settings.

Indiana	Indiana has a mixed regulation landscape based on the professions analyzed. Patients have limited direct access to certain healthcare professionals such as PTs and OTs meaning a physician referral is required after a certain number of days/visits. Although the use of APRNs and PAs can lead to less wait times when seeking healthcare services, they are still required to maintain collaborative agreements with Physicians.
Iowa	Iowa's healthcare regulatory framework reflects a high degree of professional autonomy and access. Several healthcare professionals, including APRNs and PAs, have licenses that enable independent practice, thus reducing reliance on physician oversight and enabling more responsive care. OTs and PTs have full direct access, allowing patients to receive rehabilitative services without referral delays. Additionally, Iowa allows pharmacists to practice independent prescriptive authority, which allows pharmacists to write and fill prescriptions for their patients without the oversight of a physician or advanced practice health professional. This regulatory flexibility positions Iowa to lead in workforce innovation by integrating BI education across licensed and unlicensed roles.
Kentucky	Kentucky's healthcare regulations reflect a blend of conventional oversight and selective autonomy. OTs, PTs, and SLPs are permitted to initiate care without a physician referral. Pharmacists operate under more constrained access models, while APRNs and PAs are subject to collaborative or supervisory agreements respectively, which may limit flexibility in care delivery. The state's three-tiered social work licensure system allows for differentiated roles within the profession but currently lacks integration of BI competencies.
Michigan	Michigan's healthcare license regulatory framework offers a structured approach to professional practice, with a mix of regulations regarding level of access in licensure requirements. OTs and SLPs can practice with direct access to patients. PTs have more restrictions considering they may treat patients without a referral for up to 10 visits or 21 days, which allows immediate assessment of patients but can create issues with continuity of care. Pharmacists practice under more restrictive models, with dependent prescriptive authority, meaning they can prescribe only specific forms of pharmaceuticals without a prescription from a provider. APRNs and PAs continue to operate under collaborative or supervisory agreements, limiting independent decision-making.
Ohio	Ohio's regulatory framework reflects a balance of professional oversight and evolving autonomy. While direct access is permitted for OTs, PTs have limited direct access, requiring a referral after six visits or 30 days. Pharmacists in Ohio have independent prescriptive authority, allowing for more responsive medication management. SLPs can initiate treatment without physician involvement. However, PAs and APRNs remain under more restrictive models, requiring supervision or collaborative agreements with physicians to practice.

A key finding of the current review was that no state, including Indiana, currently require BI specific education for professional licensure. As all professions investigated require licensure or certification, thus each state has statutes that require certain education standards. But no license or certification requires any specific BI training either through formal education (degree programs) or continuing education requirements. But several states have included education and training for healthcare professionals as priorities in their [TBI Plans](#).

Overall, three states (Colorado, Iowa, and Kentucky) allow unrestricted patient access for PT. All states reviewed required a referral from a medical practitioner, such as a physician, to receive care from RTs. On the other hand, all six states allowed direct access to OT services and SLP services (Colorado, Illinois, Iowa, Kentucky, Michigan, and Ohio), while Indiana does not. Direct access to these types of providers may improve a patient's ability to access rehabilitative care services without delay of care.

Colorado, Illinois, and Iowa are three of seven states nationwide that grant prescriptive authority to psychologists. This expanded scope of practice may enhance access to psychiatric medications for individuals with BI, especially in areas with limited access to psychiatric services.

Pharmacists also have some form of prescriptive authority in nearly all states, although the scope varies. In the current review, Iowa and Ohio offer expanded authority for Pharmacists, including the ability to prescribe medications such as naloxone (used to reverse opioid overdoses) and tobacco cessation therapies.⁶

Waiver Services

States have a variety of opportunities to support the health and wellness of individuals living with brain injury (BI). Many states have implemented initiatives such as Medicaid waivers and/or state TBI/trauma plans. TBI waivers allow states to offer services and support that may not be covered under their state's standard Medicaid program. Waivers seek to support individuals living with BI in receiving necessary healthcare and long-term care services. The waiver review was focused on health care services that require licensed healthcare professionals, which are defined as those typically provided to advance human health or management of disease. Services were not included if they focused on environmental adjustments, lifestyle services, or community services and support.

Methodology

Research was conducted to better understand and describe the landscape of BI waivers and variations across states. First, a general search to identify whether each state had a BI specific waiver was conducted utilizing State Health and Medicaid agency websites, as well as general searches utilizing Google.

For states with an identified BI waiver, the official waiver was collected from the Centers for Medicaid and Medicare services website.⁷ For states without a BI specific waiver, additional research was conducted to identify whether the state had a Home and Community-Based Services (HCBS) waiver. While these HCBS waivers are not BI specific, they often include provisions which allow individuals with BI to access the waiver services. The waivers were then categorized as BI specific or General HCBS. After identification and categorization of existing waivers, a cross-state comparison was conducted using a research matrix to identify key terms and consistent health care services included in waivers across states. Specific language utilized in each waiver varied state to state. The language used by the state is preserved in the current research thus variations in language (BI/TBI/etc.) are reflected in the summary of each state and comparison text.

Table 2.2 State waiver review summary

State	Healthcare Services Covered
<u>Colorado</u>	Personal Care, Behavior Management and Education, Consumer Directed Attendant Support Services, Day Treatment, Mental Health Counseling, Substance Abuse Counseling
<u>Illinois</u>	Individual Provider, Home Health Aide, Intermittent Nursing, Occupational Therapy, Physical Therapy, Speech Therapy, Cognitive Behavioral Therapies, In-Home Shift Nursing
<u>Indiana</u>	Attendant Care, Assisted Living, Care Management, Residential Based Habilitation, Behavior Management/Behavior Program and Counseling, Integrated Health Care Coordination
<u>Iowa</u>	Behavioral Programming, Case Management, Consumer Directed Attendant Care (Skilled and Unskilled), Family Counseling and Training Services, Interim Medical Monitoring and Treatment (IMMT), Self Directed Personal Care, Supported Community Living
<u>Kentucky</u>	Adult Day Training, Case Management, Personal Care, Behavioral Services, Counseling, Group Counseling, Occupational Therapy, Speech Therapy, Supervised Residential Care
<u>Michigan</u>	Community Health Worker, Counseling, Nursing Services, Private Duty Nursing/Respiratory Care, Residential Services
<u>Ohio</u>	Adult Day Health Center Services, Personal Care Aide Services, Home Care Attendant Services, Waiver Nursing Services

Findings

TBI Medicaid waiver programs vary significantly across states. In Indiana, the TBI Waiver is a Medicaid Waiver dedicated to individuals with BI, administered by the Indiana Family and Social Services Administration (FSSA). The goal of the TBI waiver is to increase availability and access to cost-effective home and community-based services for individuals living with BI. While the waiver offers a range of community supports, such as vehicle or home modifications, it provides limited healthcare services.

Four of the states (Colorado, Iowa, Illinois, and Kentucky) operate dedicated BI waivers. In contrast, Michigan and Ohio offer waiver services to individuals living with BI through general HCBS waivers.

Each state offers unique healthcare services through their waiver programs. Behavior health services were included as waiver services in every state, except Ohio. These services are an important support to individuals living with BI, as research has shown significant mental health consequences post initial injury that range from mild to severe. Several of the waivers (Colorado, Illinois, and Kentucky) included access to allied health care rehabilitative services. Illinois offers some of the most expansive healthcare workforce services under its waiver, including access to an individual provider who may be a personal care assistant, RN, LPN, CAN, OT, PT, or SLP. Another innovation of note is in Iowa, as this is the only waiver that covers counseling services for a holder's relatives. Finally, Colorado is the only state that covers neuropsychology services through their waiver.

State TBI Plans

Another way states may provide healthcare services and support for individuals living with BI is through the creation and implementation of a State TBI Plan. State TBI/trauma plans allow states to use intentional, data-driven, stakeholder-approved approaches to improve the care and outcomes for individuals after a trauma, or brain injury. These plans are used to develop a system of services and support that maximize independence, health, and wellbeing for people living with BI. TBI plans are typically created by advisory boards or councils, which are a key component of a well-built BI program according to the ACL.¹⁰ TBI advisory boards are developed to represent diverse perspectives, including

stakeholders from education, healthcare, and insurance industries, as well as individuals with lived experience and representatives from state government. Plans typically include measurable and achievable goals or themes, as well as strategies to achieve those goals.

Methodology

First, each state was investigated to determine if a TBI plan existed through general Google searches and investigation of state agency websites. All states with plans were documented and collected. For states where a specific plan was not identified, additional searches were conducted to obtain any existing trauma system or aging and disabled individuals plan, also through general Google searches and state agency websites.

Once the plans were identified, the goals of each plan were summarized in Table 2.3.

Findings

Table 2.3 State TBI plans summary

State	Goals of Plan
<u>Colorado</u>	Strengthen early identification and referral systems for individuals and families impacted by BI. MINDSOURCE is Colorado’s innovative approach to statewide coordination of BI activities. MINDSOURCE acts as an umbrella state entity for three BI functions: management of the Colorado Brain Injury Trust Fund and Board; collaboration with stakeholders statewide to enhance BI screening and support services; and overseeing use of research grants to advance BI policy and service delivery. The plan focuses on expanding BI screening by conducting an environmental scan, supporting trauma-informed protocols, and integrating screening into routine wellness exams, enhancing the accessibility of brain injury resources by improving the Mind Your Brain campaign website and linking it to statewide directories, maintaining and expanding the Mind Your Brain awareness campaign through partnerships and outreach, including sports organizations, and establishing a hospital transition plan to connect individuals to community resources at discharge.²¹ Strengthen infrastructure and capacity of MINDSOURCE and its partners by building a system of ongoing support. Colorado aims to strengthen MINDSOURCE’s infrastructure to ensure individuals with BI have access to comprehensive care and continuous support. To achieve this, it plans to increase BI-informed care through provider training and integration into onboarding systems and continuing to educate professionals who support and provide Medicaid waiver services, such as case workers or caregivers. Part of this goal includes establishing a transition plan from hospital care to continuous care through resource facilitation, by infusing resources available to those with BI into the hospital discharge infrastructure. MINDSOURCE hopes to continue to connect Coloradans to services through expanded use of the Colorado Symptom Index (CSI), which guides trauma-informed assessments to individuals with suspected BI. Finally, the development of a tips sheet resource that provides a user-friendly roadmap to help navigate BI services in the state.²² Promote individuals with BI to participate in their community while expanding inclusive environments. To achieve this, Colorado will develop and implement training for community health workers, resource navigators, and peer support professionals to support meaningful engagement for people with BI for their daily lives. Through tailored

	training programs, these professionals will learn how to eliminate barriers and foster inclusive practices in education, workplace, home, and community settings. Building on this engagement, the state will prioritize individuals with lived experience in the design and delivery of training. Programs such as AHEAD (Achieving Healing through Education, Accountability, and Determination)²³ and SAIL (Self Advocacy for Independent Life)²⁴ will serve as models for this work.
Indiana	1. Build BI resource infrastructure, capacity, and access among providers, agencies, and organizations across Indiana. The plan aims to increase awareness and capacity among professionals and agencies serving high-risk populations, including individuals affected by domestic violence, involved in the justice system, or veterans, among others. This strategy targets a wide range of service providers such as healthcare professionals, educators, mental health and substance use providers, legal and housing agencies, and first responders. Providing education and training on BI screening, assessment, treatment, and resources to these professionals may ensure they are equipped to identify and support individuals living with brain injuries. The Plan also calls for collaboration across agencies to develop cross-agency referral strategies and seeks to identify initiatives that may enhance educators' ability to support students with BI. 2. Facilitate access to information through NeuroResource Facilitation (NRF). Designed to improve how individuals with brain injury access critical services and supports, NRF provides individualized BI-informed navigation and assistance. NRF bridges the gap between acute care and long-term community support by helping individuals identify their needs and access corresponding services. Indiana University School of Medicine serves as the central hub for NRF services in Indiana and works to develop community partnerships, referral pathways, and raise awareness of brain injury and the program. Indiana plans to provide NRF services to 400 individuals living with BI and engage with 10 community providers annually to improve the quality of life for people with BI and enhance their independence. 3. Engage BI stakeholders. Led by the Indiana Department of Health and key partners, this priority area aims to establish a comprehensive system of care aligned with ACL goals of connecting individuals to services, protecting individual rights, supporting caregivers, and expanding capacity and opportunities. To achieve this, Indiana will bring together diverse perspectives by including individuals with lived experience, domestic violence services, housing, veterans, and others on the Indiana Brain Injury Stakeholder Council. The Council meets quarterly, develops subcommittees, and maintains an Orientation Manual to support new members. Members actively shape and implement the State Plan and seek to ensure the development of a system that meets the needs of all Hoosiers impacted by BI.
Iowa	1. Individual and family access to information, services, and care coordination. Iowa prioritizes increased awareness of screening and available services among the general population, allied health professionals, primary care providers, provider organizations, and other relevant organizations. Specifically, Iowa has a Brain Injury 101 training that it intends to widely disseminate to the general population and a provider training module that focuses on the importance of screening individuals for BI. 2. Enhancements in the delivery of health services. An evaluation of the BI service system is planned to identify barriers to care and gaps in services. The goal is to implement

	actionable recommendations from this evaluation. Also under this focus area is a goal of updating training modules for direct service professionals providing BI services. This training module is currently required for any professional providing HCBS/BI waiver services in Iowa.²⁵ 3. Preventing and reducing the risk of BI. The development and implementation of data-driven strategies to prevent brain injuries is the goal of this focus area. Through partnership with the Iowa Injury & Violence Prevention Advisory Committee and the Department of Education, initiatives related to the prevention of brain injury and the relationship with youth sports concussions will be implemented across various settings. 4. Raise awareness about BI. Individuals with BI cite a lack of awareness among professionals as a barrier to accessing services, making it another priority area for the state. The plan focuses on increasing awareness among state agencies, raising awareness about the relationship between TBI and sports and TBI and motor vehicle injuries, and finally raising awareness about non-traumatic BI prevention. Specifically, the plan hopes to produce a training plan to implement for state agency staff in key public-facing roles. For the other priorities in this goal, they intend to develop briefs with data and information about prevention.
<u>Ohio</u>	1. Have good data for statewide planning and evaluation. Ohio is focused on improving the identification and understanding of individuals with BI across service systems. This includes implementing screening and identification efforts within behavioral health programs, domestic violence programs, nursing homes, HCBS waiver programs, and Medicaid Managed Care Organizations. Advocacy is ongoing for screenings in behavioral health and managed care settings. A voluntary registry is in development for individuals with BI and their families. Additionally, Ohio is leveraging the Behavioral Risk Factor Surveillance System (BRFSS) to measure TBI prevalence and is working to analyze the relationship between TBI and domestic violence.²⁶ 2. Have a workforce who understands BI and can adapt its treatments accordingly. This goal is to integrate BI education into professional training and practice across provider services. Ohio has started to incorporate BI instruction in social work and nurse training programs. Five social work programs have adopted BI training into their curriculum across the state, with hopes that nursing programs will follow. Efforts are also underway to incorporate education on the chronic effects of BI into graduate training for allied professionals. Finally, Ohio is partnering with national BI organizations and credentialing bodies to include content in professional licensing exams. These efforts aim to ensure that providers across Ohio are equipped to recognize and respond to the needs of individuals affected by BI. 3. Advocate for the use of best practices in service delivery and support systems. The focus of this goal is to advocate for and implement best practices in service settings that commonly support individuals with BI. Ohio has made progress by initiating efforts to identify best practices in vocational rehabilitation programs, with research beginning in 2022. Additionally, the state's contractual relationship with the Brain Injury Association of Ohio supports ongoing access to information and referral services, which are essential for implementing and sustaining BI support groups. 4. Increase awareness of the issues faced by people with BI and their families. This goal focuses on expanding public understanding and support for individuals living with BI and their families by developing a plan for additional public sector financing. Ohio is working

	to identify key stakeholders and create targeted outreach strategies to ensure that the needs of this population are recognized and addressed in policy and funding decisions. As of 2022, the planning process was initiated, and efforts to reach the intended audience are ongoing. 5. Create the infrastructure for strategic plan implementation. This goal focuses on making changes to improve the infrastructure of the Ohio Brain Injury Program (BIP) and the Ohio Brain Injury Advisory Committee (BIAC). A key objective outlined is to align BIP/BIAC with guidance provided by ACL.⁸ As part of this alignment, the Ohio BIAC is pursuing legislation to change the composition of the board to be mostly people with lived experience. The state is also exploring opportunities for additional funding, including applying for federal grants and assessing the feasibility of securing state funds to support BI services in nursing facilities. This goal focuses on making changes to improve the infrastructure of the BIP and the BIAC.
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States show varying levels of development in their TBI plans. Three states (Colorado, Iowa, Ohio) have BI-specific plans, while two states (Kentucky and Michigan) have unique state plans that include some reference to BI. Only Illinois does not have a formal state plan.

Both Kentucky and Michigan's state plans include only one general reference to individuals with BI. Kentucky's state plan is focused on the aging population and was produced by the Department of Aging and Independent Living while Michigan's plan is a state trauma system plan focused generally on people with any traumatic injuries. The importance of public awareness and education of BI and prevention strategies were consistent themes across multiple state plans through a variety of facets.

State TBI Programming

States have been able to create comprehensive and coordinated TBI programs focused on improving services coordination, systems data collection, and improvement of health outcomes through this grant program. Some states have formalized and centralized programs that manage and coordinate all BI strategies, while others have lead agencies that provide guidance to the diverse group of stakeholders in the BI system of care. The ACL operates the federal grant program and has developed [tools](#) for evaluating BI programs. A successful TBI program requires:

1. A self-advocate-led advisory board or council
2. Commitment and investment from a lead state agency
3. State plan based on assessment of needs and resources
4. Data to connect people to and evaluate services⁸

Methodology

State TBI programs were identified through a review of the federal [TBI State Partnership Grant website](#). For Illinois and Michigan, which were not identified on the federal website, a search was done to identify if there were any state-sovereign TBI programs through general Google searches and state agency websites. After the programs were identified, the ACL's criteria for a successful TBI program were utilized to organize information about Indiana's and other state's programs, excluding data. Each state was reviewed to describe its advisory board mechanism, agencies leading the work, and management of state plans.

Findings

Table 2.4 State TBI Programs Summary

State	Program Description
Colorado	• Advisory Board: CACBI was created by and has guided the work of MINDSOURCE since its formation in 2018. Council members include people with lived experience, state staff, community members, and providers. Council members receive training on person-centered principles to ensure alignment with program goals. Subcommittees within the council focus on advancing targeted strategies in areas like hospital transitions, behavioral health, and community engagement. These elements reflect the core components of a well-functioning advisory board. • Lead Agency: MINDSOURCE serves as the state’s lead agency for the BI program and is housed under the Colorado Department of Human Services. MINDSOURCE has cultivated strong partnerships with state agencies, healthcare providers, advocacy organizations, and individuals with lived experience to shape and implement Colorado’s State Plan on Brain Injury. The agency also manages the Colorado Brain Injury Trust Fund and actively pursues federal funding through ACL, demonstrating a proactive approach to sustaining and expanding resources, an indicator of a lead agency operating at an advanced level. • State Plan: MINDSOURCE and CACBI collaborated closely on the development of the State Plan on Brain Injury 2024–2027. This plan was based on stakeholder engagement including individuals with lived experience and providers. Both entities identified service gaps and barriers to care that informed the plan’s goals and strategies. Colorado has committed to ongoing evaluation and monitoring through structured subcommittee work, public feedback mechanisms, and alignment with the Colorado Brain Injury Trust Fund Board. These factors are an indication of Colorado’s advanced status State Plan on Brain Injury.²⁷
Indiana	• Advisory Board: Indiana’s Brain Injury Stakeholder Council has been actively advocating for individuals living with and affected by BI since 2009. The board features individuals with diverse perspectives such as individuals with lived experience, representatives from state government, industry leaders, providers, insurers, and many others. There are also workgroups focused on advancing specific subtopics such as education, housing, and domestic violence. These are all aspects of operating a functional board. • Lead Agency: The Indiana Department of Health (IDOH) serves as the statutorily authorized lead state agency for TBI programming and planning and has demonstrated strong and ongoing commitment to this role.¹¹ IDOH has built collaborative relationships with educators, industry leaders, insurers, and people with lived experience to advance the state’s TBI plan. Additionally, IDOH has been proactive about maintaining current, and seeking out new funding and resources, an indicator of a lead agency operating at an advanced level. • State Plan: Indiana has created a fully informed state plan based on a TBI needs assessment. This needs assessment gathered information about barriers to care and the need for resources that directly informed the state plan. IDOH has also committed to ongoing needs assessments as the process has now been completed in 2019, and most recently in 2022 for a timeline of 2022-2027, another indication of Indiana’s advanced approach to assessing state needs.⁴
Iowa	• Advisory Board: Until recently, Iowa has maintained a separate Advisory Council on Brain Injuries. As of 2024, the advisory council was integrated into an existing Department of

	Health and Human Services Board. The board is charged with the same mission of reducing the impact of brain injuries by advancing efforts in prevention, evaluation, care, and treatment. It is also responsible for advising the governor through recommendations that inform the development and implementation of the BI State Plan. These efforts reflect the foundational elements of a well-functioning advisory board. • Lead Agency: The Iowa Department of Health and Human Services (IDHHS) administers the Brain Injury Services program and serves as the lead agency. IDHHS collaborates closely with the Iowa Advisory Council on Brain Injuries and other relevant stakeholders to develop and implement the State Plan for Brain Injury. Additionally, IDHHS provides the Your Life Iowa Program,²⁷ which creates opportunities for screening and identification of a BI, an indicator of a lead agency operating at an advanced level. • State Plan: The Advisory Council on Brain Injuries developed The State Plan on Brain Injury 2021-2026 to guide the work of the council, program, and stakeholders. The state plan was developed by the State Plan Task Force based on the review of the Brain Injury Alliance Needs Assessment and the Brain Injury Provider Needs Assessment. The state plan outlines four focus areas that Iowa can develop for the care of individuals with BI with the intention to collaborate with other state agencies and stakeholders, meaning the plan consists of intermediate elements of a state plan.⁸
Kentucky	• Advisory Board: The Traumatic Brain Injury Trust Fund Board was established by the Kentucky General Assembly to oversee the state's brain injury program by managing the trust fund, delivering direct services, and maintaining a partnership with the Brain Injury Alliance of Kentucky to connect individuals with resources and education. The nine-member board is made up of mostly medical professionals, with two members being individuals living with a BI or a family member of an individual living with a BI. It meets regularly, oversees a statewide trust fund, and supports community-based services. These elements reflect the foundational components of a functioning board. • Lead Agency: The Kentucky Cabinet for Health and Family Services serves as the lead agency for the state TBI program. Established as the lead agency through legislation, it administers the TBI Trust Fund and supports the TBI Trust Fund Board. This lead agency demonstrates state level cross-agency collaboration, resource development and statutory foundation, making it an intermediate level lead agency. • State Plan: While Kentucky's BI program has not produced a specific BI plan, the Department of Aging and Independent Living (DAIL) has produced a state plan that may impact individuals with BI and their caregivers.²⁸ The absence of a dedicated BI plan leaves room for opportunity when compared to ACL recommendations for state TBI plan.
Ohio	• Advisory Board: The Brain Injury Advisory Committee (BIAC) was created by the general assembly at the same time as the creation of the program. Now housed at the OSUCOM, the 10-12 board members are dean-appointed and include leaders from state agencies, people with lived experience, medical professionals and other stakeholders. The committee maintains a public-facing website with resources and meeting-related materials and publishes a biennial report on the impact of BI on the people of Ohio. Together with program leadership, the committee developed and continues to lead implementation of the Brain Injury Program State Plan. These efforts reflect the requirements of operating a high-performing advisory board.

	• Lead Agency: OSUCOM serves as the lead agency for Ohio’s Brain Injury Program (BIP). BIP collaborates extensively with the BIAC and other Ohio state-level agencies to advance Ohio’s BI strategic plan through coordinated efforts in data collection, training, and service delivery. Additionally, the program has continued to pursue and has received federal funding through the federal TBI State Partnership Grant, as well as state-budget allocations from the General Fund, demonstrating a proactive approach to securing funding for the program. The above criteria indicate that the lead agency is operating at an advanced level. • State Plan: BIP released a state plan guiding the program priorities from 2020 through 2025. The state plan created a multi-pronged approach with five distinct goals to be addressed during the five-year timeframe. The Ohio BIP has also demonstrated a commitment to ongoing evaluation and refinement, with annual reports and continued data collection efforts, indicating advanced elements of its BI Plan.
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Among the seven states reviewed, five (Colorado, Indiana, Iowa, Kentucky, and Ohio) have TBI programs that seek to improve access to integrated, coordinated services and support for people living with a BI, which also includes advisory boards. These five states also have an identified lead agency for their programs. Although Illinois and Michigan lack state plans and advisory boards, both states do have appointed lead agencies for BI.

Kentucky presents a unique advisory board structure, where the board is not only statutorily authorized but plays a formal role in oversight and coordination. Iowa established its advisory board into rulemaking to enable the BI plan to remain a priority for the state. Indiana’s plan focuses on screening within state-funded services, a narrower focus than Iowa’s and Ohio’s, both which promote broader screening across healthcare systems. Additionally, Indiana’s lead agency has not yet embedded BI services into broader systems like behavioral health or education, as seen in Kentucky’s model.

Funding Approaches for State TBI Programs

TBI programs are typically funded through a mix of federal grants, state general appropriations, fees or surcharges collected from state agencies, and private donation sources to support the programs and the services provided. Since 1997, the federal government has had a TBI State Partnership Grant Program to help states improve BI care.³ This grant program, administered through the ACL, assists states in expanding their capacity for administering services and resources for individuals with BI.

Methodology

To investigate TBI funding, the [National Association of State Head Injury Administrators Guide to State Government Brain Injury Policies, Funding, and Services](#) was utilized.¹² This guide identifies whether states receive funding through federal awards, trust funds, or general appropriations. Federal awards refer to funds provided through the ACL TBI State Partnership Program Grant. Trust funds typically consist of revenue generated through fees and fines. General appropriations are funds allocated by the state legislature, either directly to state agencies/BI programs or through other mechanisms. It is important to note that in some cases, trust fund dollars and state appropriations are not mutually exclusive; states may utilize both funding mechanisms concurrently to support TBI programs and services. These funding sources were validated through a review of state statutes, administrative code, budgets, and other official documents. In addition to confirming funding mechanisms, this review also identified allowable expenditures for each funding source. Additional reports that were reviewed included any annual reports from Trust Funds, any TBI program special reports, and TBI state plans.

Findings

Table 2.5 State TBI funding approaches summary

State	Funding Approach
Colorado	Colorado funds its MINDSOURCE program through three sources of funding, including federal grants, trust funds, and state appropriations. MINDSOURCE serves as the lead agency for BI in the state and consists of the trust fund board and the CACBI. • Federal: Colorado is a recipient of the TBI State Partnership Grant Program for FY2021-FY2026. The award consists of \$1 million over five years to be used to create and strengthen person-centered systems of services and support for individuals with TBI throughout their lifetime. Colorado received \$1 million over three years for FY2018-FY2021 and used this funding to maximize health outcomes and reduce disability following TBI. • Trust Fund: The Colorado Brain Injury Trust Fund was statutorily created in 2002 with the intended purpose to provide services to people with brain injuries and support research and education to increase awareness of TBI. The trust is statutorily obligated to use at least 50% of its funds to provide service coordination and skills training for individuals with BI and their families. The trust receives revenue from surcharges assessed for convictions of driving under the influence, driving while ability is impaired, speeding, and riding a motorcycle or motorized bicycle without a helmet. The trust received \$113,803.49 of donations in FY2023-2024, with a total revenue of \$2,501,650.67. • State: The Colorado state legislature funds the program with money appropriated from the General Fund. In FY2023-2024,³⁰ MINDSOURCE's appropriation was \$450,000.
Indiana	Indiana funds its TBI program through a mix of federal grant funding and state appropriations to the trust fund. • Federal: Indiana is a recipient of the TBI State Partnership Grant Program for FY2021-FY2026. The award consists of \$1 million over five years and is used to strengthen person-centered systems of services and support for individuals living with BI throughout their lifetime. This is the second time Indiana has received the TBI grant from the federal government. Indiana received \$1 million over three years for FY2018-FY2021 to expand its BI infrastructure. • Trust Fund: Indiana maintains the Indiana Spinal Cord and Brain Injury Research Fund (ISCBIRF), established in 2007 and administered by IDOH.¹⁰ As outlined in statute, the fund is intended to support research on treatment and recovery, development of a statewide trauma system, and creation of a surveillance registry for spinal cord and brain injuries. It is designated that 10%-15% of money in the fund is for post-acute extended treatment and services for those with BI and affordable rates for those with BI in long-term care facilities.¹³ The fund consists of state appropriations, gifts, fees, and grants from the federal government. The funding for grants administered through the ISCBIRF comes from non-commercial motor vehicle registration fees to support continued state-level research of TBI. The fund is expected to generate approximately \$1.7 million in revenue each year and must be mostly allocated to fund TBI-related research, with 11 proposals funded at a total

	amount of \$789,500 for FY2024 . The Indiana state legislature appropriates these funds directly to the ISCBIRF. ¹⁴
Iowa	Iowa funds its BI program through a mix of federal grant funding and state-appropriated general revenue. • Federal: Iowa is a recipient of the TBI State Partnership Grant Program for FY2021-FY2026. The award consists of \$1 million over five years to be used to create and strengthen person-centered systems of services and support for individuals with BI throughout their lifetime. Iowa received \$1 million over three years for FY2018-FY2021, to expand its TBI infrastructure. • Trust Fund: Iowa does not have a trust fund for spinal cord or brain injuries. • State: Iowa's Brain Injury Program was established through state statute in 2006 and is administered by Iowa Health and Human Services. Iowa funds the Brain Injury Program through General Revenue funding. Iowa does not maintain a dedicated line item for the Brain Injury Program, but it has a general appropriation of over \$2.2 billion dedicated to the Iowa Department of Public Health for FY2025.
Kentucky	Kentucky funds its TBI program through a mix of federal grant funding and a trust fund. • Federal: Kentucky is a recipient of the TBI State Partnership Grant Program for FY2021-FY2026. The award consists of \$1 million over five years to be used to create and strengthen person-centered systems of services and support for individuals with TBI throughout their lifetime. Kentucky received \$1 million over three years for FY2018-FY2021 and used this funding to maximize health outcomes and reduce disability following TBI. • Trust Fund: The Kentucky Brain Injury Trust Fund was established in 1998 by the Kentucky General Assembly.²⁸ The trust fund is funded through surcharges for moving motor vehicle violations, driving under the influence, and overweight trucks. Additionally, the fund receives 5.5% of all court costs in criminal cases that have penalties that do not exceed \$2.75 million. The trust fund serves as a last resort for residents; to qualify for assistance a person must have exhausted all other funding sources to cover services. The trust has a lifetime cap of \$60,000 that may not exceed \$15,000 per year with a four-year limit. • State: The state does not provide general appropriations to the Kentucky Brain Injury Trust Fund, which runs its TBI program. Kentucky's 2024-2026 budget highlighted an additional investment into its acquired brain injury waiver to expand it by 50 slots.
Ohio	Ohio funds its BI program through a mix of federal grant funding and state-appropriated general revenue. • Federal: Ohio is a recipient of the TBI State Partnership Grant Program for FY2021-FY2026. The award consists of \$1 million over five years to be used to create and strengthen person-centered systems of services and support for individuals with TBI throughout their lifetime. • Trust Fund: Ohio does not have a trust fund for spinal cord or brain injuries. • State: Ohio provides appropriations through the Ohio Department of Developmental Disabilities and the Ohio Department of Mental Health and Addiction Services. The Ohio General Fund funds the Brain Injury Program through general appropriations. The program was funded at \$550,000 in the FY2024-2025 state budget.

States vary widely in the mechanisms through which they fund TBI programs. Among the seven states reviewed, five States are grantees of the federal TBI State Partnership Grant Program (Colorado, Indiana, Iowa, Kentucky, and Ohio) while Colorado, Iowa, and Ohio also fund their TBI programs with General Revenue Funding. In addition, Colorado, Indiana, and Kentucky also utilize Trust Funds, a state-established dedicated fund that provides financial support for individuals with BI. Two states (Illinois and Michigan) do not operate a state level program and therefore do not report any official funding mechanism.

Colorado and Kentucky stand out for their greater trust fund revenue generation to support usage of these funds for direct services, education, and rehabilitation. Iowa and Ohio rely on general revenue to fund comprehensive programs that include training, service coordination, and community engagement.

Ohio, Iowa, Colorado, and Kentucky allow state funds to be used to provide direct services to individuals with TBI in their states. This means that in these states, individuals with BI may receive healthcare services not covered by Medicaid or other waiver programs, with costs covered by state-designated TBI funds. For example, Kentucky’s TBI Fund allows services such as case management, psychological services, occupational therapy, and speech/language services.¹⁵

TBI Surveillance Strategies

Specific to TBI, surveillance is a data strategy that monitors how many people have experienced BI, identify common risk factors for these injuries, evaluate the impact of prevention programs, track changes in prevalence over time, and understand the intersection of health and state systems.¹⁸ Information gathered through surveillance of TBI can help inform planning to reduce and prevent BI and determine where public health prevention strategies may be needed.

Methodology

The review of state TBI plans provided information on surveillance strategies for monitoring the incidence and prevalence of TBI. Information on surveillance strategies was collected from state plans, state statute, and administrative code. Supplemental information was identified through a review of state websites and reports from executive branch agencies, TBI programs, and advisory councils.

Findings

Table 2.6 State surveillance strategies summary

State	Surveillance Strategy
<u>Colorado</u>	Colorado maintains a general trauma registry, rather than a registry specific to brain injury. This registry is statutorily authorized to “evaluate and improve the quality of patient management and care and the quality of trauma education, research, and injury prevention programs.”^{31,32} Colorado requires all licensed facilities, clinics, or pre-hospital providers to report information to the registry when a patient has a trauma injury. Colorado also publishes a data dictionary for the trauma registry.³³ Data are collected on patient demographics, injury specifics, pre-hospital information, assessments, diagnoses, and outcomes. Like Indiana, Colorado collects many data elements critical to TBI surveillance, including neurological assessments and vital signs. Despite the

	robust data available in Colorado, regular reports including data on TBI are not publicly available.
Indiana	Indiana monitors the occurrence of TBI in the state through vital records mortality data, hospital discharge (billing) inpatient and outpatient datasets, and the state trauma registry. IDOH is statutorily authorized to collect and analyze data necessary to evaluate the state trauma care system through the trauma registry.¹¹ Hospitals, trauma centers, and rehabilitation hospitals are required to submit data to the registry.¹⁹ Although not a TBI specific registry, the general trauma registry captures several data elements important for monitoring TBI, such as patient demographics, injury, pre-hospital status, care provided, assessment and evaluations, diagnosis, procedures, outcomes, and more. Additionally, Indiana's data relies on many diverse sources and helps paint an overall picture of the trauma landscape in the state. IDOH currently collects some of the data elements recommended specifically for monitoring TBI, including age, neurological assessments (i.e. the Glasgow Coma Scale (GCS), intracranial pressure, vital signs, type, and cause of injury.¹⁸ In addition to the trauma registry, Indiana utilizes several other data sources to monitor TBI and chronic conditions. First, IDOH collaborates with the Indiana Hospital Association (IHA) to obtain data on TBI including in-patient and outpatient aggregate diagnostic information from more than 120 hospitals in the state. Additionally, the Indiana Department of Homeland Security maintains data on EMS runs which contains data on pre-hospital care delivered to individuals experiencing BI. Indiana also utilizes the Behavioral Risk Factor Surveillance System (BRFSS) and Youth Risk Behavior Surveillance System (YRBSS) to monitor health behaviors and risk factors of adults and adolescents for other chronic health conditions.²⁰ In the 2022-2027 Indiana Traumatic Brain Injury State Plan, Indiana reported mortality and hospitalizations for BI, as well as the incidence of BIs across the state. Indiana does publish TBI Special Emphasis Reports, and IDOH offers a process for submitting a data request if more specific or detailed information is needed outside of the Special Emphasis Report publication. IDOH publishes the TBI Special Emphasis Report on a yearly basis, with the current year's report replacing the previous version.
Illinois	In addition to a general trauma registry, Illinois maintains a state registry that tracks data on head and spinal cord injuries as well as violent injuries (HSVI registry).^{34,35} This registry is statutorily authorized to collect data from all hospitals with emergency departments quarterly.³⁶ Looking at the required data elements for the HSVI registry, information is collected on patient demographics, details on the injury, pre-hospital care, assessment, diagnosis, and outcomes. Information on vital signs and intracranial pressure are not collected, potentially limiting the use of this data for TBI surveillance.³⁷

	The Illinois Department of Public Health has released three special emphasis reports highlighting TBI data since 2014. These reports were released in 2014, 2015, and 2021, which indicates occasional reporting.
Iowa	Iowa has a statutorily authorized trauma registry with a unique mechanism for collecting data on brain and spinal cord injuries.^{38–40} Iowa Health and Human Services relies on the Iowa Hospital Association (IHA) to serve as the intermediary in collecting this data from hospitals. Hospitals are required to submit data to the IHA. State statute outlines which diagnosis codes are required to report relevant to brain injuries and requires all hospitals to report data. Iowa publishes the trauma registry data dictionary.⁴⁰ Including patient demographics, injury information, pre-hospital care, assessment and screening, diagnosis, pre-existing conditions, and outcomes information. Priority TBI data elements such as vital signs, intracranial pressure, and GCS scores are collected through this registry. No information on data elements required to be reported to the hospital association was identified. While Iowa releases annual reports from the trauma registry, no reports were identified for the brain and spinal cord injury data collected through the hospital association.⁴¹ Iowa creates annual reports that include the details on trauma injuries in Iowa. While the report does not include specific references to brain injuries, it does provide data on head and neck trauma and neurological assessments, which are common in TBI evaluations. Iowa also produced a special report to the Council on Health and Human Services in November 2024.⁴² In this special report, they discussed another source of data which is the Behavioral Risk Factor Surveillance Survey (BRFSS).⁴³ BRFSS is used to understand the prevalence of brain injury in Iowa adults while the state uses the Youth Risk Behavior Surveillance System (YRBSS) to monitor the same in Iowan children.⁴⁴ Iowa implemented data collection on TBI in the BRFSS and YRBSS to supplement data from the trauma registry.
Kentucky	Kentucky’s Traumatic Brain Injury Trust Fund Board is statutorily tasked with establishing “a confidential medical registry for traumatic brain and spinal cord injuries.”²⁸ Kentucky’s state statute allows the Board to require healthcare professionals and provider organizations to report data to the registry.⁴⁵ However, a review of state websites and Google did not identify a publicly available registry. It appears that funding has been provided by the Kentucky Cabinet for Health and Family Services to develop a registry and report on the findings.⁴⁶ This grant is active until June 30, 2026, meaning a registry and public reporting may be done in the future.
Michigan	The Michigan Department of Health and Human Services manages the general trauma registry.⁴⁷ This registry is statutorily authorized with the purpose of “evaluating the delivery of adult and pediatric trauma care, developing injury prevention strategies for all ages, and providing resources for research and education.”⁴⁸ Reporting is required by any health facility licensed under Michigan’s public health code which includes

	hospitals, EMS personnel and facilities, ambulances, county medical care facilities, and more.⁴⁸ The data elements required to be reported to the registry are published in a data dictionary that is updated annually. It includes patient demographics, injury details, assessment and screening, pre-hospitals information, pre-existing conditions, diagnosis, and outcomes.⁴⁹ Michigan does not release any public reports from the registry or related to BI.
Ohio	Ohio operates a trauma registry, rather than a BI-specific registry. While most BI programming in Ohio is offered through OSUCOM, the Ohio Trauma Registry is operated and maintained by the Ohio Department of Public Safety.⁵⁰ In line with statutory authorization, the registry is used to collect information on adult and pediatric patients.⁵¹ The data collected on the trauma registry includes patient demographics, pre-hospital information, screening and assessments, pre-existing conditions, care, and outcomes. Information is collected related to GCS and vital signs.²² However, information related to intracranial pressure is not collected. Reports including data from the trauma registry are published annually, but these reports do not specifically call out TBI, rather they include information on GCS and trauma generally.⁵² Looking at other data sources, Ohio also monitors the prevalence of TBI through the state BRFSS. The state publishes biennial reports that integrate data from this survey with information from the state's trauma registry, hospital association records, and death certificates.⁵³ These reports provide a comprehensive overview of TBI in Ohio, including statistics on lifetime history of injury and associations with other health outcome measures included in BRFSS.

Four states (Colorado, Indiana, Michigan, and Ohio) reviewed utilize general trauma registries, which capture a broad range of injury data, but lack a specific focus on TBI. However, states like Illinois, Iowa, and Kentucky have dedicated TBI registries which offer a targeted approach to tracking TBI data. Four of the reviewed states (Illinois, Iowa, Kentucky, and Ohio) produce regular or occasional reports on the occurrence of TBI that are publicly available. Data sources for the reviewed states varied from Departments of Public Health and Offices of Medicaid to surveys like BRFSS and YRBSS.

Conclusions

Indiana has a solid foundation for supporting individuals with BI, yet opportunities remain to enhance workforce preparedness and to expand healthcare services and provide resources needed for Hoosiers living with BI. While the state Medicaid waiver and TBI plan provide essential services, they lack integration and innovation seen in more advanced state models. Comparative states like Colorado and Iowa offer valuable examples through centralized program oversight, robust screening initiatives, and

workforce development strategies like embedding TBI education into licensing, hospital discharge protocols, and public-facing tools.

Additionally, states like Ohio and Kentucky demonstrate how sustainable funding mechanisms, including court-related fines and non-governmental program leadership, can expand access and reduce reliance on general tax revenue. Indiana is well-positioned to build a more responsive, equitable, and coordinated system of care for Hoosiers living with BI.

The regulatory environment provides limited direct access to certain healthcare professionals such as PTs and OTs. This limited access requires a physician referral after a certain number of days/visits, which can lead to long wait times for care. Although the use of APRNs and PAs can reduce wait times when seeking healthcare services, they are required to maintain collaborative agreements with physicians.

Objective 3: Identify successes and challenges of both providing and receiving services for BI in Indiana

Barriers to Care

Licensed health professionals were surveyed and asked to identify what they believe are the greatest challenges to providing BI services. As shown in Table 3.1, the highest number identified inadequate insurance coverage as a major challenge to individuals accessing BI services (N = 917). Other commonly identified challenges included no or limited awareness by patient/family (N = 857) and inadequate social support for the individuals living with BI (N = 856).

License Type	No or Limited Awareness by Patient or Family		No or Limited Access to Transportation		Inadequate Social Support (e.g., Family, Friends)		Inadequate Insurance Coverage		Not Located Near Needed Services		Limited Coordination of Care	
	N	%	N	%	N	%	N	%	N	%	N	%
Athletic Trainer	0	0.0	0	0.2	1	0.1	0	0.0	0	0.0	0	0.0
CNA	46	5.4	35	5.0	42	4.9	47	5.1	21	3.3	48	5.9
Clinical Social Worker	35	4.1	27	3.8	34	4.0	35	3.8	23	3.6	35	4.3
HHA	29	3.4	29	4.1	35	4.1	30	3.3	21	3.3	35	4.3
LPN	49	5.7	53	7.5	56	6.5	57	6.2	39	6.1	40	4.9
OT	75	8.8	69	9.8	75	8.8	86	9.4	41	6.5	59	7.2
PT	101	11.8	90	12.8	96	11.2	118	12.9	62	9.8	85	10.4
Physician	65	7.6	52	7.4	59	6.9	76	8.3	66	10.4	89	10.9
Psychologist	20	2.3	19	2.7	20	2.3	26	2.8	19	3.0	24	2.9
QMA	13	1.5	8	1.1	10	1.2	10	1.1	6	0.9	10	1.2
RN	316	36.9	237	33.6	322	37.6	321	35.0	264	41.6	295	36.0
Respiratory Care Practitioner	17	2.0	12	1.7	20	2.3	19	2.1	16	2.5	15	1.8
Social Worker	12	1.4	12	1.7	14	1.6	10	1.1	14	2.2	15	1.8
SLP	79	9.2	63	8.9	72	8.4	82	8.9	43	6.8	69	8.4

<i>All</i>	<i>857</i>	<i>100.0</i>	<i>706</i>	<i>100.0</i>	<i>856</i>	<i>100.0</i>	<i>917</i>	<i>100.0</i>	<i>635</i>	<i>100.0</i>	<i>819</i>	<i>100.0</i>
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Licensed health professionals were also invited to participate in key informant interviews (KII) to provide in-depth qualitative information on the services they provide and their experiences with treating individuals living with BI, both patients and caregivers. Additional information about the methodology, data collection, analysis and results of the KIIs can be found in [Appendix C](#).

Successes and Challenges

Participants were asked to describe the successes and challenges they have experienced providing BI care (summarized in Table 3.2). Several responded that filling in gaps with service connection/navigation were successes in their work. When describing the challenges they have faced, these providers identified challenges with coverage of services, care navigation and resources.

Table 3.2 Successes and challenges to providing BI Services

Themes	Categories	Count	Quotes
Successes	Filling care gaps/specialized services	5	“...when we’re able to give a resource that we know they may benefit from or provide that navigation...”
	Service connection/navigation	5	
	Patient advocacy and skills development	4	“...the ones that actually...maintain their appointments and follow through with all those steps and actually [get] another job...I love it when [patients are] being [a] productive part of the community, making money and supporting themselves.”
Challenges	Need for covered services	4	“...the changing landscape in general is a huge challenge of what’s covered, what’s not waiver services, the timeline for those. There’s a huge lack of...that intermediate care.”
	Care navigation needs	4	
	Resource/Provider availability	3	“...my frustration [is] over healthcare benefits and insurance and limitations and cost of co-pays and such for [patients] that aren’t working because of their injury. Like, we’re trying to get them so they can work, but they can’t afford the insurance that pays for the services to help for that.”

Potential Solutions to BI Service Challenges

When asked to identify potential solutions to challenges with access to BI services and resources, many respondents identified solutions that could be implemented at the state-level and community level (see Table 3.3). The state-level solutions include expansion of coverage and BI resources and increased provider education. Other solutions included expansion of BI education, more opportunities for partnership and collaboration, expansion of services, and increased accessibility through expansion of the workforce.

Table 3.3 BI service solutions

Themes	Categories	Count	Quotes
Potential State Solutions	Medicaid/Insurance Expansion	3	“...any funding that [the IU Neural Resource Facilitation people] need to continue their facilitation program, that needs to stay in place. In fact, they probably need to expand because the more people know about them, the busier they’re going to get.” “...if there are ways to educate [providers] or some sort of resource that they could tap into, and I don’t know if that exists or not, but some sort of statewide resource or something...even if it’s just like ‘ask the expert’, like a curbside consult kind of thing to help those rural providers...”
	BI Resource/Advocacy Expansion	7	
	Provider BI Education/BI service Recommendations	5	
Other Solutions	General BI education and advocacy	8	“Well – I’m also part of a committee where it’s funded by a grant with the State of Indiana under one of the subcommittees...we’re trying to standardize some educational resources that we would hand out in the schools.”
	Partnerships and collaboration	5	
	Expanded BI services	5	
	Accessibility	3	“...more providers would mean that they could actually follow people along more intensely...”

To evaluate the demand for and accessibility of BI services in Indiana, collection of information from individuals living with a BI or their caregivers was also conducted as part of this assessment through both a survey and focus group. For more information about the survey instrument, focus group protocol, methodology, participants, data analysis, and additional results, see [Appendix E](#). This data can be used in concert with data collected on the workforce to identify how best to address gaps in services and resources, as well as capacity and demand.

Access to Care

To evaluate access to BI care in Indiana, respondents were asked whether they have a doctor who provides specialized care for their injury. Approximately 70.0% of participants reported having a doctor providing specialized BI care, while 30.0% reported not having one.

Among those who indicated not having a BI provider, the highest number (N = 9; 60.0%) reported being unable to find a BI doctor. Following this, 40.0% reported their primary care provider takes care of all their medical problems. More information is included in Table 3.4.

Table 3.4 Access to BI provider

	N	%
Have a Doctor Providing Specialty Care for BI (N=50)		
Yes	34	70.0
No	15	30.0
Non-Respondent	1	0.0
Time Since Doctor's Visit (N=34)		
Within the Past Year	30	88.2
Between 1 and 2 Years Ago	2	5.9
Between 2 and 5 Years Ago	1	2.9
5 or More Years Ago	1	2.9
Reasons for Not Having a BI Doctor (N=15)		
Primary Care Doctor Takes Care of All Medical Problems	6	40.0
Problems Paying for Medical Care	1	6.7
Problems Finding Transportation to Appointments	0	0.0
Unable to Find a BI Doctor	9	60.0
Unable to Find a BI Doctor Taking (My) Insurance	4	26.7
Other Reasons	4	26.7

Perceptions of Care

Tables 3.5a-c summarize respondents' level of agreement with statements related to BI services and resources. Most respondents indicated that they agree or strongly agree with the following statements: "The services available to me are important for my recovery," (82.0%); "I feel comfortable seeking services for my brain injury," (52.0%); "I can use telehealth or virtual services if needed." (62.0%).

On the other hand, a large percentage of respondents indicated that they disagree or strongly disagree with the following statements: "It is easy to find information about brain injury services," (60.0%); "Transportation to care is a barrier for me," (56.0%); "Healthcare providers have clearly explained my options," (54.0%); "I can afford the services I need for my brain injury." (54.0%).

Table 3.5a Level of agreement with BI services and resources statements

	I Know What Services Are Available for People With TBI		It Is Easy to Find Information About BI Services		Healthcare Providers Have Clearly Explained My Options		I Feel Comfortable Seeking Services for My BI		The Services Available to Me Are Important for My Recovery	
	N	%	N	%	N	%	N	%	N	%
Strongly Agree	4	8.0	0	0.0	0	0.0	10	20.0	25	50.0
Agree	20	40.0	10	20.0	12	24.0	16	32.0	16	32.0
Neutral	7	14.0	10	20.0	11	22.0	5	10.0	7	14.0
Disagree	13	26.0	18	36.0	21	42.0	14	28.0	0	0.0
Strongly Disagree	6	12.0	12	24.0	6	12.0	3	6.0	2	4.0

Table 3.5b Level of agreement with BI services and resources statements

	It Is Easy for Me to Get to the Places Where Services Are Offered		Transportation to Care Is a Barrier for Me		I Can Use Telehealth or Virtual Services if Needed		I Can Afford the Services I Need for My BI		Transportation Costs Make It Hard to Get Care	
	N	%	N	%	N	%	N	%	N	%
Strongly Agree	6	12.0	5	10.0	8	16.0	2	4.0	3	6.0
Agree	14	28.0	10	20.0	23	46.0	12	24.0	6	12.0
Neutral	11	22.0	6	12.0	10	20.0	9	18.0	13	26.0
Disagree	11	22.0	23	46.0	5	10.0	16	32.0	24	48.0
Strongly Disagree	8	16.0	5	10.0	3	6.0	11	22.0	3	6.0
Non-Respondent	0	0.0	1	2.0	1	2.0	0	0.0	1	2.0

Table 3.5c Level of agreement with BI services and resources statements

	I Have the Financial Support or Insurance I Need for My Care		The Care I Receive Is Relevant to My Needs		Healthcare Providers Listen to and Understand My Concerns		I Feel Involved in Decisions About My Treatment or Care	
	N	%	N	%	N	%	N	%
Strongly Agree	4	8.0	4	8.0	3	6.0	5	10.0
Agree	23	46.0	25	50.0	20	40.0	23	46.0
Neutral	10	20.0	6	12.0	10	20.0	11	22.0
Disagree	7	14.0	8	16.0	11	22.0	6	12.0
Strongly Disagree	6	12.0	6	12.0	6	12.0	4	8.0
Non-Respondent	0	0.0	1	2.0	3	6.0	1	2.0

Needs/Gaps

In the final section of the survey, respondents were asked to identify the areas of BI care where they were receiving help or still need help. The highest percentage of respondents reported receiving help in improving memory (86.0%) and solving problems (84.0%). On the other hand, less than 20% reported receiving help with registering to vote or participating in elections (16.0%), getting around the community (16.0%), or maintaining and improving relationships (14.0%). Even though a high number of respondents reported already receiving help with improving memory and solving problems, large percentages also reported needing more help with these areas (82.0% and 72.0%, respectively). See Table 3.6 for a full list of responses.

Table 3.6 Areas of BI care where respondents receive help and need help

	Receiving Help		Needs Help	
	N	%	N	%
Improving Memory	43	86.0	41	82.0
Solving Problems	42	84.0	36	72.0
Managing Daily Stress	35	70.0	33	66.0
Managing Emotions and/or Controlling Temper	37	74.0	35	70.0
Controlling Substance Use	19	38.0	17	34.0
Controlling or Minimizing the Impact of Physical Symptoms	25	50.0	29	58.0
Managing Money and/or Paying Bills	14	28.0	24	48.0
Increasing Independence in Housekeeping, Cooking, and/or Shopping	34	68.0	21	42.0
Improving Job Skills and/or Finding Employment	26	52.0	14	28.0
Being Successful in School	9	18.0	5	10.0
Getting Around the Community	8	16.0	11	22.0
Coordinating or Accessing Psychological Services/Support	15	30.0	16	32.0
Coordinating or Accessing Medical Services	15	30.0	10	20.0

Table 3.6 Areas of BI care where respondents receive help and need help

	Receiving Help		Needs Help	
	N	%	N	%
Coordinating or Accessing Rehabilitation Services	18	36.0	10	20.0
Engaging in Recreational/Leisure Activities	14	28.0	13	26.0
Finding Opportunities to Socialize with Others	10	20.0	15	30.0
Maintaining and/or Improving Relationships	7	14.0	14	28.0
Improving Overall Health	19	38.0	14	28.0
Performing Activities of Daily Living	20	40.0	1	2.0
Getting Informational Support	14	28.0	13	26.0
Registering to Vote or Participating in Elections	8	16.0	0	0.0
Improving Nutrition	14	28.0	9	18.0
Improving Sleep	22	44.0	12	24.0
Engaging in Regular Exercise	17	34.0	12	24.0

When discussing how they live with a BI, the major themes included community support, adaptive or structured living, and managing BI or self-advocacy (Table 3.7). Community support was seen as a pivotal part of encouragement and ongoing skill development for people with a BI. The daily structures and systems needed to accommodate and manage the symptoms of their BI was reported as a self-managed strategy with little support from BI providers. Limited transportation was highlighted as a major barrier to accessing services.

Finally, participants were asked to comment on their experience with providers and the providers level of knowledge about treating a BI. Overall, participants agreed that health professionals have limited necessary knowledge and that can have a serious impact on their treatment.

Table 3.7 Emerging themes from focus group responses

Themes	Categories	Count	Notable Quotes
Living With BI	Community Support	3	“I actually lead a support group for young adults with traumatic brain injury...And the thing that I noticed the most about living well with brain injury is that there's community around them that understand them. You can have all the services you can get, but once you leave that rehab setting, they're pretty much left on their own...”
	Adaptive/Structured Living	4	
	Managing BI/Self-advocacy	2	“...we have to do a lot of compensatory strategies using [my son's] phone...I've had to really come up with some unique strategies on our own because a lot of people just don't get it.” “The therapist keeps reminding me to balance my life and budgeting my energy with the responsibilities I have.”
BI Service Needs	Transportation needs	2	“We have tried using caregiving when I worked, and we were very disappointed with the level of caregiving expertise that we received.” “Unfortunately, it boils down to funding. [Public transportation services] don't have enough drivers, so they're ran thin. And so, they're having to get a lot of people moved around in a set period of time. If they had more drivers and more vehicles, then we wouldn't have these issues.”
	Continuation of Coordinated Care	2	
	Resource Facilitation	1	“For me it was a delayed diagnosis. [Providers] don't know the services to send you to, the providers to send you to. And you're just navigating this maze of trying to find your way out into the right place because they don't understand what the impact is of having any kind of brain injury.”
	Centralized resources	1	

Conclusions

Across multiple data sources, the assessment illustrates that individuals living with BI and the licensed professionals who care for them encounter several interrelated barriers that affect access to services in Indiana. Providers most frequently identified service coverage, limited patient and family awareness, and insufficient social support as key challenges to delivering effective care, findings that were echoed in qualitative interviews describing persistent gaps in coverage, care navigation, and available resources. At the same time, providers emphasized the meaningful impact of helping patients connect to services and fill care gaps—highlighting the value of coordinated navigation and advocacy. Similarly, service users and caregivers reported difficulty finding BI informed providers and accessing transportation, while also noting that many available services are important to their recovery. Despite receiving support in some areas, such as memory and problem solving, many participants continued to report unmet needs across daily functioning, coordinated services, and community integration. These findings suggest that strengthening insurance and service coverage, expanding provider education, and enhancing navigation and resource coordination could improve access to BI care and better support individuals and families across the continuum of recovery in Indiana.

Objective 4. Provide workforce-related recommendations for opportunities to continue to support and expand BI services in Indiana, as BI continues to be considered as a chronic condition.

Cross-Cutting Themes

Across all activities and findings, several themes consistently emerge that highlight systemic gaps and statewide needs in Indiana's BI system of care. A central theme is the need for ongoing professional BI services and support, as individuals with BI frequently require long-term, specialized interventions that extend well beyond the acute phase of injury. This includes categorizing BI as a chronic, dynamic condition, rather than static, demonstrating that a person with BI can experience many changes in the effects of the injury across their life. Being labeled as a chronic condition provides better opportunity for coverage of necessary services.

Another major theme is barriers to receiving appropriate services, which is reflected in challenges such as lack of specialized care, the need for more program coordination, lack of coverage information for providers, and limitations such as transportation and social support.

A pervasive theme across the report is the need for improved provider training and education, including clearer clinical guidelines, stronger requirements for brain injury screening and referral, expansion of continuing education, and integration of BI-specific training into higher education programs across health professions.

Another recurring theme is the gaps in service delivery, coordination, and funding, showing fragmentation across systems and the need for more aligned, better-resourced pathways of care.

Recommendations

- 1. Continue workforce development by ensuring health profession students in Indiana are prepared to treat individuals with BI.** Indiana, like other states, does not currently have any required training or specialized education for licensed health professionals providing BI care. To develop the workforce, BI education could be integrated into higher education curricula by partnering with colleges, universities, and national credentialing bodies to embed TBI content into programs for nursing, social work, PT, OT, SLP, and psychology to prepare future professionals to better serve individuals with BI with specialized care.
- 2. Build capacity of the current workforce by strengthening BI knowledge among existing healthcare professionals by incorporating BI continuing education.** Workforce development could also be enhanced by integrating BI education into pre-service training and licensing requirements. Indiana could consider partnering with the Indiana Professional Licensing Agency (IPLA) to include BI-specific continuing education requirements for licensure renewals. This approach could potentially help ensure that experienced professionals stay current on best practices, as well as have specialized knowledge of BI care. Additionally, this could build capacity of the current workforce to increase the percentage of licensed professionals providing BI care.
- 3. Increase the number of individuals receiving specialized BI care by exploring opportunities to improve statewide coordination of healthcare and behavioral health services programming.** Indiana currently operates several programs that intersect with the needs of individuals living with BI, including the TBI waiver, Indiana Health Coverage Plan, and mental health coverage programs. However, individuals living with BI in Indiana still report barriers to accessing BI care. Strengthening

coordination between these programs may help ensure people living with BI have access to both necessary and specialized healthcare and behavioral health services, as well as increase the number of individuals currently receiving care. Access to allied health services, such as OT, PT, and SLP can be particularly beneficial. Additionally, expanding access to behavioral health services, such as substance use or mental health counseling, may also improve individual wellbeing.

4. **Increase social support for individuals living with BI, caregivers, and licensed health professionals providing BI care through public awareness campaigns.** Indiana could consider developing a public awareness and educational program for BI to create a social support structure for all individuals involved in BI care or those who could be impacted by BI. The state could utilize a publicly available resource, such as the Center for Disease Control's (CDC) [HEADS UP](#) toolkit, which can be used by healthcare providers, educators, coaches, and families to promote and educate on BI prevention, recognition and responses. The development of a public awareness campaign using these materials could potentially raise awareness and improve early detection and outcomes of BI. Strategic partnerships with schools, athletic programs, and community organizations could also enhance the reach of public awareness. These toolkits could also be excellent resources for professionals providing BI care who need specialized training or awareness of how to best treat individuals with BI. The campaign could also be used to advocate for BI as a chronic, dynamic condition and could increase awareness of necessary resources for individuals living with BI and those providing their care.
5. **Increase access to care by considering additional revenue sources that may be used to expand the reimbursement scope.** Indiana currently supports SCBI research funds through the collection of motor vehicle registration fees. However, other states, such as Iowa, Kentucky, and Colorado, have successfully supplemented their funds with additional revenue sources, including surcharges for traffic violations, helmet infractions, and DUI convictions. These strategies allow for increased trust fund revenue without relying on general tax dollars and diversification of the types of initiatives and services that can be supported through the fund. For example, Kentucky uses its fund to reimburse direct healthcare services through a cost-share model for individuals not eligible for Medicaid waivers. Iowa, Colorado, and Ohio also support direct healthcare services, though without the cost-share component. Additional revenue could further support workforce development initiatives, such as creating educational materials, training modules, and professional development programs for healthcare providers serving Hoosiers with BIs. This funding could also potentially be used to create incentives for licensed health professionals to provide specialized BI care to increase capacity of the workforce.
6. **Increase workforce capacity and resources by increasing awareness on the magnitude of TBI in the state by enhancing public reports.** While Indiana currently operates a surveillance system for TBI, public reports are limited. The state does publish surveillance products through the TBI Special Emphasis Reports and the [Trauma and Injury Prevention Dashboard](#). To improve accessibility and transparency, Indiana could consider making all previously published Special Emphasis Reports available on the IDOH website. Additionally, the state could explore producing more comprehensive reports every five years. These expanded reports would raise public awareness of the impact of TBI in Indiana, highlight risk factors, and inform prevention strategies.

7. **Increase workforce capacity by integrating BI-specific questions and social determinants of health items on other data sources.** Surveillance data are one way that BI services are regulated in Indiana. This data helps the state keep a finger on the pulse of the demand for BI services, which in turn helps identify what workforce needs might be. Currently, IDOH participates in the BRFFS and YRBSS systems in Indiana. However, Indiana could consider adding BI-specific questions to the current surveys to allow the state to track adults and adolescents with BI throughout their lives. Developing and integrating BI-specific questions would allow for additional insight into the causes of BI, specifically those caused by domestic violence and other mechanisms.

Additionally, there is an opportunity to consider collecting social determinants of health information through the general trauma registry. For example, marital status is not currently captured, but it could be an important factor considering the role family support plays in long-term care post injury incidence. Previous instances of TBI are also not documented, making it difficult to assess the cumulative injury burden. Post-acute assessments, which provide insight into recovery and rehabilitation, are another valuable data point, though they typically occur outside hospital settings and would require a separate data collection mechanism beyond the trauma registry.¹²

Collecting additional data on specific subpopulations, such as military or pediatric patients, could also significantly enhance Indiana's TBI surveillance efforts. Military personnel often experience blast-related or penetrating injuries that differ from civilian trauma, while pediatric patients require age-specific assessments due to distinct injury mechanisms and developmental factors. Incorporating tailored data elements for these groups would improve the accuracy, relevance, and comprehensiveness of surveillance data and provide opportunity to better understand the impact of BI on Hoosiers and grow a capable and trained workforce to best meet the needs of the population.

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Appendices

Appendix A. Glossary of Terms

Allied Healthcare. Allied healthcare refers to a category of healthcare professionals that provide diagnostic, therapeutic, and rehabilitative services. For this report, allied healthcare includes occupational therapists (OT), physical therapists (PT), respiratory therapists (RT), and speech-language pathologists (SLP).

Administration for Community Living (ACL). The ACL is a federal agency that administers the TBI State Partnership Grant Program. The ACL provides technical assistance for TBI State Partnership grantees to promote access to services for people living with BI and their families.

Acquired Brain Injury (ABI). ABI is another way to categorize BI that includes TBI, as well as other types of BI, including stroke, hypoxia, or infection. This term is used when a reviewed state uses the term in its official documents (waivers, state plans, etc.).

Behavioral Risk Factor Surveillance (BRFSS). BRFSS is a health survey for adults that uses responses to everyday health habits to understand health problems in communities. For this report, BRFSS is a data point explored in terms of surveillance.

Brain Injury (BI). BI refers to damage to the brain resulting from internal factors, such as lack of oxygen or exposure to toxins. For purposes of this research, BI is defined as a broader term for TBI and can include injuries caused by non-traumatic events. This term is used when referring to a person living with BI and when a reviewed state uses the term in its official documents (waivers, state plans, etc.).

Brain Injury Medicaid Waivers. Medicaid waivers are state-specific programs that provide specific care services that are not usually covered by Medicaid. Different types of brain injury Medicaid waivers are available to individuals living with BI. Some of these waivers include TBI waivers, ABI waivers, BI waivers, and general Home and Community-Based (HCBS) waivers.

Glasgow Coma Scale (GCS). GCS is a scoring system doctors use to measure the responsiveness of a person after a head injury. For the purposes of this report, it is used as a data element for surveillance.

Indiana Hospital Association (IHA). IHA is an association for hospitals and health systems in Indiana. For the purposes of this report, IHA is involved in the trauma surveillance of the state.

Indiana Spinal Cord and Brain Injury Research Fund (ISCBIRF). The ISCBIRF is a statutorily established trust fund that can be used to support research on the treatment and recovery of individuals with BI.

Indiana BI Advisory Stakeholder Council. The Indiana BI Advisory Stakeholder Council serves as a forum for brain injury stakeholders and individuals with brain injury to identify needs and service gaps and recommend policy changes to state government.

Indiana Department of Health (IDOH). IDOH is the lead health agency of the state. IDOH oversees the creation of the Indiana State TBI Plan, the Spinal Cord and Brain Injury Research Fund grant program, and the Spinal Cord and Brain Injury Research Fund Board.

Indiana Department of Homeland Security (IDHS). IDHS is the Indiana state agency responsible for emergency planning, and operations, including first responder training.

Indiana Family and Social Services Administration (FSSA). FSSA is an Indiana state agency that administers the Indiana Medicaid waivers, including the TBI waiver.

International Classification of Diseases (ICD). ICD is a World Health Organization standardized system for the coding of diseases. In this report, it is used as a required data element when discussing surveillance.

National Association of State Head Injury Administrators (NASHIA). NASHIA is a national organization that works with state governments and partners to improve the care needs of individuals with BI and support their state-level BI systems.

Physical Medicine and Rehabilitation (PM&R). PM&R is a medical specialty that focuses on restoring function for an individual who has been disabled as a result of disease, disorder, or injury. For this paper, PM&R is focusing on the ongoing treatment of individuals with BI.

NeuroResource Facilitation. NeuroResource Facilitation is an evidence-based service model that helps individuals living with brain injuries navigate and access necessary services, information, and referrals to help manage their care and support their caretakers.

State Trauma Plan. A state trauma plan is an organized strategy to improve the care of patients in an emergency. It includes information regarding EMS, trauma centers, and injury prevention to ensure a state has an organized emergency response when needed.

Surveillance. For the purposes of this report, surveillance is the ongoing collection, analysis, and reporting of injury and/or TBI-specific data. All states reviewed have their own approach to surveillance and how they collect data.

Traumatic Brain Injury (TBI). TBI refers to an alteration in brain function caused by an external force, such as a blow or jolt to the head. For the purposes of this research paper, TBI is used when the reviewed state uses the term in its official documents (waivers, state plans, etc.).

BI State Plan (Plan). A BI state plan is a strategic document developed by a state that outlines the state's vision, goals, and coordinated efforts to improve care and resources for individuals living with BI.

Youth Risk Factor Surveillance (YRFSS). YRFSS is a health survey for youth that uses responses to everyday health habits to understand health problems in schools and communities. For this report, YRFSS is a data point explored in terms of surveillance.

Appendix B. Health Professionals Survey

Methodology

Survey Development

To ensure that the most accurate data were collected from health professionals, preliminary research was conducted to inform the questions that would be included in this survey. Areas of investigation included, professional background, BI services provided, perceived challenges with BI services in Indiana, and knowledge of the different areas of BI care.^{15–17}

Survey questions were preceded by an introductory summary of the purpose of the survey, data security, and how data would be used. The survey was reviewed and approved by the project team, then developed in the online survey distribution system.

Contact Information

Contact information for health professionals who are actively licensed in Indiana was obtained through secure file transfer from the Indiana Professional Licensing Agency (IPLA). Information included full name, email address, professional license type, and license status. Altogether, contact information for over 320,000 licensed health professionals was obtained.

Survey Distribution

The survey was developed and distributed using the Research Data Capture (REDCap™) online survey and data management tool. Each health professional was given a unique survey link for the sake of tracking and linking survey responses to administrative license numbers and supplemental data collected during license renewal. Undeliverable emails, as well as health professionals not interested in participating, were captured through the Bowen Center email account and stored in separate folders for removal. Data collection occurred from August 8 to 25, 2025, with reminder emails to non-respondents and those who had partially completed their survey sent roughly four business days before the survey was closed.

Data Management

Survey data were exported to Excel files and securely stored in the project folder on SharePoint. Data were then imported into Statistical Analysis System (SAS™) for data management, formatting, and analysis. The participant identifiers used in REDCap™ were linked back to the license number in the data file provided by IPLA. This was used to link to license renewal data stored in the Indiana Health Professions Database.

Survey Instrument

Hello!

The State of Indiana is currently conducting a needs assessment of TBI services in the state, and part of this assessment includes gathering information from health professionals who may be providing TBI services.

This assessment is being conducted as part of a collaborative effort between the Indiana Department of Health, the Indiana University School of Medicine Department of Physical Medicine and Rehabilitation, and the Bowen Center for Health Workforce Research and Policy.

Completing this survey is completely voluntary, meaning you can skip questions or decide not to complete this survey. This survey should take no longer than 10 minutes to complete. The information you provide will solely be used for reporting and informing state activities as it related to TBI care, resources, and services. No personally identifiable information will be used in any reporting.

If you have any questions about this survey, please contact the Bowen Center at 317.278.9284. If you understand the purpose of this assessment and are willing to complete this survey, please click next at the bottom of the page.

Thank you for taking the time to complete this survey!

1. What is your profession? (SINGLE-SELECT)
 - a. Advanced Practice Registered Nurse
 - b. Certified Nurse Aide
 - c. Home Health Aide
 - d. Mental Health Counselor
 - e. Occupational Therapist
 - f. Physical Therapist
 - g. Physician
 - h. Psychologist
 - i. Qualified Medical Aide
 - j. Registered Nurse
 - k. Social Worker
 - l. Speech-Language Pathologist
 - m. Other [Open Text]
2. Do you provide services for the treatment of traumatic brain injury?
 - a. Yes
 - b. No
3. Which setting best describes where you provide services for TBI? (SINGLE-SELECT)
 - a. Acute Care Hospital
 - b. Ambulatory Center
 - c. Client's Home
 - d. Community-Based Program
 - e. Office/Clinic
 - f. Public or Non-profit organization
 - g. Rehabilitation Hospital or Center
 - h. School
 - i. Skilled Nursing Facility
 - j. Other [Open Text]

4. How many professionals at your practice provide services to persons with TBI? (SINGLE-SELECT)

- a. 10 people or less
- b. 11 – 24
- c. 25 – 49
- d. 50 – 99
- e. 100 – 249
- f. 250 – 499
- g. 500 or more
- h. Unsure

5. What age of TBI patients/survivors do you serve? (MULTI-SELECT)

- a. 10 and younger
- b. 11 – 19
- c. 20 – 34
- d. 35 – 49
- e. 50 – 64
- f. 65 and Older

6. Which of the following services do you provide as part of TBI treatment? (MULTI-SELECT)

- a. Behavioral management, Treatment, and Counseling
- b. Case Management/Coordination/Social Work
- c. Family Counseling
- d. Housing Support/Home Modification Support
- e. Medical Services (surgery, intensive care)
- f. Occupational therapy
- g. Patient Advocacy
- h. Personal Assistance
- i. Physical therapy
- j. Prescription of medication for TBI
- k. Screening/Assessment for TBI
- l. Social Skills training
- m. Speech-Language Therapy
- n. TBI Education
- o. Vocational Rehabilitation

7. Please identify the three barriers below that you believe need to be addressed for TBI services in Indiana.

- a. No or limited awareness of resources of patient/family
- b. No or limited access to transportation
- c. Inadequate social support (i.e. family/friends)
- d. Inadequate insurance coverage
- e. Not located near needed services
- f. Limited coordination of care

8. Which of the following certifications have you obtained? (MULTI-SELECT)

- a. Certified Brain Injury Specialist
- b. Certified Brain Injury Specialist Trainer
- c. Provisional Certified Brain Injury Specialist

9. Please indicate your level of knowledge about the following facets of TBI prevention and care.

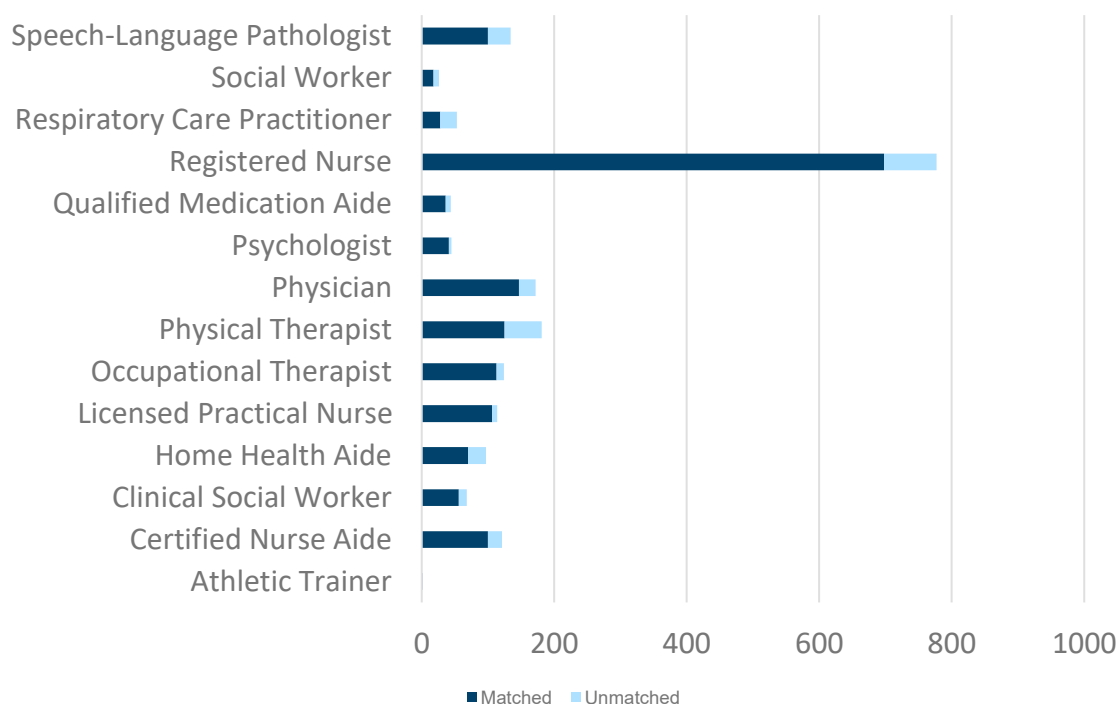
	Highly Knowledgeable/ Expert	Limited Knowledge	No Knowledge/ Training Needed
Case Management	☐	☐	☐
Cognitive Deficits	☐	☐	☐
Mental and Behavioral Health Care	☐	☐	☐
Rehabilitation Strategies	☐	☐	☐
Resources/Referrals	☐	☐	☐
Screening and Assessment for TBI	☐	☐	☐
TBI Substance Use/Abuse	☐	☐	☐
Transition from Hospital/Facility to Home and Community	☐	☐	☐

Additional Survey Findings

Respondent Demographics

Health professionals were matched to supplemental survey and licensure data collected during their respective license renewal periods. The information collected included demographics, education, practice characteristics, services provided, and populations served. Figure 5.1 provides a summary of the total number of health professionals who were matched to the supplemental data.

Figure 5.1 Total number of health professionals matched or unmatched to supplemental data



Health professionals who reported providing BI treatment were predominantly female, though 58.5% of physicians were male (Table 5.1). Additionally, most were White, though CNAs, HHAs, and QMAs were predominantly non-White.

Table 5.1 Demographic characteristics of health professionals providing BI treatment

	N	% Male	% White	% Hispanic/Latino
Athletic Trainer	1	100.0	100.0	0.0
Certified Nurse Aide*	100	—	22.0	2.0
Clinical Social Worker	56	12.5	82.1	5.4
Home Health Aide*	70	—	12.9	1.4
Licensed Practical Nurse	106	2.8	78.3	3.8
Occupational Therapist	113	5.3	93.8	0.0
Physical Therapist	125	21.6	82.4	2.4
Physician	147	58.5	81.0	0.0
Psychologist	41	41.5	85.4	4.9
Qualified Medication Aide*	136	—	13.9	0.0
Registered Nurse	698	7.2	78.2	3.6
Respiratory Care Practitioner	28	17.9	75.0	0.0
Social Worker	18	16.7	77.8	16.7

Speech-Language Pathologist	100	2.0	96.0	2.0
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*Home and community-based professionals were not asked about sex/gender

Workforce Training and Capacity

Table 5.2 provides a summary of the qualifying and highest education health professionals reported having, and Table 5.3 provides employment and capacity characteristics.

Table 5.2 Educational characteristics of health professionals providing BI treatment

	Total	Qualifying Education		Highest Education	
		% with Bachelor's or Lower	% with Master's or Higher	% with Bachelor's or Lower	% with Master's or Higher
Athletic Trainer	1	100.0	0.0	0.0	100.0
Certified Nurse Aide	100	—	—	33.0	0.0
Clinical Social Worker	56	3.6	85.7	0.0	89.3
Home Health Aide	70	—	—	22.8	0.0
Licensed Practical Nurse	106	93.3	0.0	93.4	0.0
Occupational Therapist	113	20.4	77.0	17.7	79.7
Physical Therapist	125	28.0	72.0	—	—
Physician	147	—	100.0	—	100.0
Psychologist	41	0.0	100.0	0.0	100.0
Qualified Medication Aide	36	—	—	27.9	0.0
Registered Nurse	698	88.4	2.9	71.0	20.3
Respiratory Care Practitioner	28	96.5	0.0	89.3	10.7
Social Worker	18	16.7	83.4	11.2	88.9
Speech-Language Pathologist	100	—	—	0.0	100.0

Note: Dashes indicate that the question was not included in the health professional's respective survey.

Table 5.3 Employment and Capacity characteristics of health professionals providing BI treatment

	Total	% Actively Practicing in Respective Field	% Planning to Increase Hours in Patient Care	% Planning to Decrease Hours in Patient Care	% Providing Telehealth	Average FTE
Athletic Trainer	1	0.0	0.0	0.0	—	1.00
Certified Nurse Aide	100	23.0	11.0	0.0	—	0.76
Clinical Social Worker	56	85.7	10.7	5.4	69.6	0.67
Home Health Aide	70	12.9	2.9	0.0	—	0.68
Licensed Practical Nurse	106	81.1	9.4	3.8	9.4	0.79
Occupational Therapist	113	91.2	10.6	1.8	15.9	0.64

Physical Therapist	125	94.4	8.8	7.2	22.4	0.72
Physician	147	98.6	4.8	9.5	51.7	0.77
Psychologist	41	100.0	12.2	2.4	78.1	0.63
Qualified Medication Aide	36	25.0	5.6	0.0	—	0.79
Registered Nurse	698	84.0	6.9	3.9	14.5	0.80
Respiratory Care Practitioner	28	96.4	10.7	3.6	7.1	0.75
Social Worker	18	66.7	5.6	0.0	44.4	0.75
Speech-Language Pathologist	100	97.0	8.0	6.0	—	0.79

Note: Dashes indicate that the question was not included in the health professional's respective survey.

Population Served

Of the 4,449 health professionals who reported providing BI treatment services, 1,230 (27.6%) reported serving adults and 1,129 (25.4%) reported providing services to geriatric patients. Table 5.4 provides more information on the populations for which health professionals report providing BI treatment.

Table 5.4 Total professionals serving each population age group, broken down by profession type.

License Type	Pediatrics Patients (Ages 19 and Younger)		Adults (Ages 20 - 64)		Geriatric Patients (Ages 65 and Older)	
	N	%	N	%	N	%
Athletic Trainer	1	0.2	0	0.0	0	0.0
Certified Nurse Aide	6	1.1	50	4.1	69	6.1
Clinical Social Worker	20	3.5	51	4.2	35	3.1
Home Health Aide	27	4.8	55	4.5	30	2.7
Licensed Practical Nurse	25	4.4	64	5.2	69	6.1
Occupational Therapist	49	8.6	83	6.8	92	8.2
Physical Therapist	75	13.2	134	10.9	124	11.0
Physician	98	17.3	111	9.0	96	8.5
Psychologist	17	3.0	33	2.7	22	2.0
Qualified Medication Aide	1	0.2	20	1.6	18	1.6
Registered Nurse	172	30.3	484	39.4	435	38.5
Respiratory Care Practitioner	13	2.3	35	2.9	30	2.7
Social Worker	10	1.8	20	1.6	16	1.4
Speech-Language Pathologist	54	9.5	90	7.3	93	8.2
All	568	100.0	1,230	100.0	1,129	100.0

Appendix C. Key Informant Interviews with Health Professionals

Methodology

Key informant interview (KII) questions were completed by the Bowen Center team and approved by the BI project team. These questions covered four areas: 1) professional background, 2) successes and challenges with BI services, 3) the observed impact of BI, and 4) potential solutions to challenges with BI services in Indiana.

Key informants were identified by the BI team and initial invitations were sent by the Bowen Center team. One-hour interviews were scheduled during the month of October 2025. All interviews were recorded, and notes were transcribed for qualitative analysis.

For qualitative analysis, two Bowen Center team members independently reviewed each response and assigned a categorical theme. Next, the Bowen Center team members convened and came to consensus on these categories before grouping them into emerging themes. The themes were further organized by the five question areas.

Recruiting and Data Collection Strategy

Purpose

KIIs are used to provide crucial information as it relates to care and services provided to people in Indiana who have experienced a BI. This technique of collecting high-level information from selected perspectives can be helpful in gaining insights into BI care and services. These interviews can also provide context for a topic that would not otherwise be considered. This document outlines the strategy for identifying key stakeholders that should be recruited to participate in a KII.

Recruitment

To ensure that the information collected from KIIs is robust and representative of the target population for this research, potential key informants should represent diverse perspectives. Below is a list of potential perspectives that can be represented in KIIs.

Administrators from:

- Rehabilitation hospitals
- Outpatient rehabilitation facilities and centers (e.g., Rehabilitation Hospital of Indiana, Franciscan, etc.)
- Brain physicians (e.g., physical medicine and rehabilitation, neuropsychology)
- Social services (e.g., Easterseals Crossroads brain injury services)

Identifying Key Informants

The following qualifications should be considered when identifying potential key informants for this needs assessment.

Experience with BI

This can include a professional (licensed or unlicensed) with experience in providing care or services to people experiencing BI. This should not include people with a lived experience as their information is collected in focus groups.

Knowledgeable

Key informants should be able to provide unique insights based on their experience in their respective fields.

Available

Potential informants should be willing to engage in the interview and provide information they believe would be helpful to understanding and improving BI services in Indiana. KIIs will be offered for a limited time in the fall of 2025. If potential informants are not available during this time, they will be excluded from data collection.

Minimal Bias in Their Perspective

Information provided by these key informants should be provided without assumptions. Instead, they should be willing to provide their personal experience and summarize what they have observed beyond themselves.

Sampling

The total number of interviews conducted should not exceed a total of 10. Each perspective should be represented by at least one key informant. The mechanism for recruiting potential key informants will be done through initial contact with professional associations and other associations, such as the Indiana Hospital Association. This collaborative approach will help in reaching potential key informants. If this mechanism is not feasible, a snowball approach will then be utilized. KIIs should begin no later than September 15, 2025, and end not later than October 31, 2025.

Data Collection

Key Informant Interviews

Information will be collected from key informants through minimally structured interviews. These interviews should ask open-ended questions that capture information on the following topics.

- Personal observations on the impact of BI on the general population or specific populations
- Greatest challenges of BI they have encountered
- Identified gaps in access to BI care and resources
- Potential strategies or solutions to improving access.

All interviews will be recorded through Zoom (for virtual interviews) or using tape recorders (for in-person interviews). The moderator and timekeeper will take notes throughout the interview.

Questions

Background

1. Can you briefly describe your work and how it connects to treatment for brain injury?
2. What types of services do you provide for brain injury care?

3. What has been your greatest success with providing brain injury services or resources? And what is your greatest challenge?
4. What, if any, types of training for brain injury care do you provide to health care professionals?

Perspective

5. What impact have you observed brain injury having on the populations that you serve?
6. Based on your experience, what has been the level of awareness in brain injury resources and care among patients? What about providers?
7. Based on your experience, what do you see as a major issue or challenge in brain injury care or services in Indiana?
8. What do you think the state of Indiana can do to address this challenge?
9. Are there any other opportunities for improving access to brain injury care or resources in Indiana?

Closing

10. Is there anything else that you would like to discuss related to brain injury?

Data Management

After the key informant interview has ended, the Zoom recording will be downloaded by the meeting host and transcribed using the Wreally website (<https://transcribe.wreally.com/transcriptions>). The file downloaded from Zoom will be uploaded to the website for transcription, which should take no longer than 1 – 3 business days. The exported file will be in a .txt file and will need to be reviewed. The online transcription tool may sometimes incorrectly transcribe words or phrases. The project staff will need to review and edit the transcriptions while listening to the audio recording according to the following parameters:

1. Identify the speaker using brackets.

Example:

[MODERATOR]

What has been the greatest struggle in living with your BI?

[PARTICIPANT 2]

Well, for me the greatest struggle has been getting in contact with my case manager on a regular basis. I usually have to wait a few days before she gets back with me. So now, my wife and I have to remember to plan far ahead before an appointment or something to make sure I get what I need from her in time.

[PARTICIPANT 3]

Um, I had a struggle with remembering appointments. I've had to reschedule so many, but now that I have a personal assistant who has been great at getting me places on time.

2. Edit/Correct any incorrectly transcribed words or phrases.

3. Save the updated transcription to the SharePoint project folder.

4. Create an Excel spreadsheet that has a row for each focus group participant and a column for each question. This will help facilitate the qualitative analysis. This file should also be saved to SharePoint

After the Excel spreadsheet has been created, a duplicate sheet will need to be created to allow multiple project team staff to conduct qualitative analysis. A new column should be created after each question. This is where the project staff will provide their first draft of categories.

Qualitative Analysis

The first step in qualitative analysis is coding. To properly code each response, the project staff must independently assign one or more concise labels to each response. These codes should be a distilled label that objectively captures the intent of the response. Coding should not include labels that identify a potential need or make assumptions about responses.

Professional Background

Table 5.5 provides a summary of the professional background of key informants. Many KII participants were clinical providers, with a few serving allied health professionals and resource facilitators.

All participants indicated having extensive experience in providing clinical and non-clinical services to individuals who have experienced a BI, and a wide spectrum of services were reported. One informant indicated having a standard approach to providing BI care.

“We’re certified brain injury specialists, so we’ve been trained for [brain injury care] and use evidence-based practice”

Patient and family education was included in many responses, even when describing the details of the services these professionals provide. This was exemplified by one response.

“I might see patients who have trouble with their thinking, like attention, processing, problem solving, reasoning, memory. Treating that and providing patient and family education and strategy so that they can maximize at their best and function at their best level of independence.”

Regarding training of health professionals for BI care, this service was less commonly reported. However, one key informant described providing training in various comorbidities related to BI care.

“So sometimes, my focus is brain injury and substance abuse, sometimes brain injury and mental health, brain injury and domestic violence.”

Table 5.5 Professional background

Themes	Categories	Count	Quotes
BI Provider	Clinical Provider	7	“We see patients are all range of [brain] injuries, whether that’s concussion patients or more severe.”
	Allied Professional	3	
	Resource Facilitator	3	“We’re certified brain injury specialists, so we’ve been trained for [brain injury care] and use evidence-based practice”
BI Services	Referral Services/Care Navigation/Patient Education	8	“Everything we do is very individualized and holistic. So, when people call us, they think they know what they need...which may not be the direction we’re going to send them in.”
	Rehabilitation/Vocational services	4	
	Patient Assessment and Screening	5	“I might see patients who have trouble with their thinking, like attention, processing,
	Specialized Services	4	

Table 5.5 Professional background

Themes	Categories	Count	Quotes
	BI Acute or Outpatient Clinical Care	4	problem solving, reasoning, memory. Treating that and providing patient and family education and strategy so that they can maximize at their best and function at their best level of independence.”
BI Training	Academic/Clinical Training	3	“So sometimes, my focus is brain injury and substance abuse, sometimes brain injury and mental health, brain injury and domestic violence.”
	Non-Clinical Training	5	“I’d say the [training] I’ve done most is training on a specific brain injury coping skills intervention that myself and a colleague developed...at the Rehabilitation Hospital of Indiana.”

Observed Impact of BI

After providing the context of their professional background, professionals were asked to describe what they have observed as the impact of BI as well as the challenges associated with these injuries, as displayed in Table 5.6. In response, participants highlighted that BI is a dynamic and chronic condition, it can have a negative financial impact, and it can change social dynamics. These ideas were captured by one respondent who described what people with a BI can experience.

“...someone’s life can be turned upside down in an instant. So, you know, loss of job, loss of driving privileges. [They’re] not a student any longer. You know, [they] can’t communicate, or [they] can’t think anymore. [They are] living dependently.”

Several challenges associated with BI services were highlighted by respondents. However, the most common challenges were coverage for BI services and limited provider knowledge. One response captured the potential impact this lack of knowledge and education can have on the timely recovery of BI patients.

“We work with people who come from any background – including medical – and they don’t know anything about [BI] resources and services.”

Table 5.6 Identified impact and challenges of BI

Themes	Categories	Count	Quotes
General BI Impact	BI as a dynamic and chronic condition	9	“...someone’s life can be turned upside down in an instant. So, you know, loss of job, loss of driving privileges. [They’re] not a student any longer. You know, [they] can’t communicate, or [they] can’t think anymore. [They are] living dependently.”
	Negative financial impact	3	
	Social dynamic changes	6	

			...it uproots their life and changes it sometimes temporarily, sometimes from the long run...[brain injury] is not static...so no one's recovery is linear."
BI Challenges	BI service coverage	6	"We work with people who come from any background – including medical – and they don't know anything about [BI] resources and services."
	Residential care needs	4	
	Continued care needs	4	
	Limited community supports	3	"We have no residential care in Indiana, like it's not funded so Medicaid won't pay for it, you know, so people can't get – if they need residential supervised living, it's not funded anymore."
	Workforce/resource needs	4	
	Limited provider BI knowledge	4	
			"...those of us that work in it every day will say, 'Oh my goodness, like, they shouldn't be going back to work. They shouldn't be driving.' And then providers in the community six weeks later are allowing them to do those things. And it just – that education piece just isn't there."

Appendix D. Survey for Individuals Living with a Brain Injury

Methodology

Survey Development

Preliminary research was conducted to inform development of questions that would be included in this survey. The questions which collected information on whether and how respondents obtained a brain injury were derived from a brain injury screening tool.¹⁸ Questions which asked respondents to identify the areas where they need or are receiving help were sourced from a brain injury rehabilitation needs survey.¹⁹ Other questions that were included in this survey collected information on demographics, access to care, and barriers to care and resources. An introductory page was also included which included an overview of the needs assessment, indication that participation in the survey was voluntary, and assurance of data security.

After survey questions were finalized and approved, an electronic version of the survey was built in Qualtrics. The survey was structured to ensure easiest readability for respondents. Dissemination of this survey occurred in collaboration with the Indiana Brain Injury Association and took place between August 25 to September 22. After the survey was closed, all survey data were exported to an Excel workbook and analyzed using SAS. Overall, 106 individuals responded to the survey, with 64 survey responses (59.3%) being completed through submission of responses (see Table 5.1).

Survey Instrument

Hello!

The State of Indiana is reviewing the care provided to people with a brain injury. As part of this review, they are sending out a survey to gather feedback from individuals living with brain injury.

This review is being done by researchers from the Indiana Department of Health, Indiana University School of Medicine, and the Bowen Center for Health Workforce Research and Policy.

Taking the survey is optional. You can skip questions or decide not to take it at all. Not taking the survey will not affect the services you receive for your TBI. The survey should take about 10 minutes to complete.

The researchers of this review will only use this information to help create reports and improve state programs. Your personal details will not be included in any reports.

If you have questions about the survey, you can call the Bowen Center at 317.278.9284. If you understand the purpose of this statewide review and you are ready to take the survey, click "next" at the bottom of the page.

Thank you for your time!

Please tell us about yourself! (If you are completing this survey on behalf of a loved one, please answer based on their information).

Please think about injuries you have had during your lifetime, especially those that affected your head or neck. It might help to remember times you went to the hospital or emergency room. These injuries may have happened during a car or motorcycle accident, during a bicycle crash, being hit by something, falling down, playing sports, or during military service.

1. Thinking about any injuries you have had in your lifetime, were you ever knocked out or did you lose consciousness?

- ☐ Yes
- ☐ No

(If YES, go to 1a and 1b; if NO, go to question 2)

What was the longest time you were knocked out or unconscious? (Please choose only one; if you are unsure, please make your best guess.)

- ☐ Less than 30 minutes
- ☐ Between 30 minutes and 24 hours
- ☐ 24 hours or longer

How old were you the first time you were knocked out or lost consciousness?

_____ years old

2. Have you ever lost consciousness from a drug overdose or being strangled or choked?

- ☐ Yes
- ☐ No

3. Have you ever been told by a doctor or other health professional that you had any of the following?

- ☐ Epilepsy or seizure
- ☐ Stroke or a transient ischemic attack
- ☐ Cerebral palsy
- ☐ Brain cancer
- ☐ Brain infectious, like meningitis or encephalitis
- ☐ Toxic exposure, like lead or pesticides
- ☐ Dementia, like Alzheimer's Disease
- ☐ Progressive disease, like AIDS, multiple sclerosis, Parkinson's Disease or Huntington's Disease (If yes, which one: _____)

Only continue if 1a = Yes (TBI) OR any selection under item 3 (ABI)

4. What is your sex?

SINGLE-SELECT

- ☐ Male
- ☐ Female
- ☐ Prefer not to say

5. Please select your race and ethnicity. Select all that apply.

MULTI-SELECT

- ☐ White/Caucasian
- ☐ Black or African American

- ☐ Asian
- ☐ Hispanic/Latino/Spanish origin
- ☐ American Indian or Alaska Native
- ☐ Native Hawaiian/Pacific Islander
- ☐ Some Other Race
- ☐ Prefer not to say

6. What is your age?

SINGLE-SELECT

- ☐ 18– 34
- ☐ 35– 44
- ☐ 45– 54
- ☐ 55 – 64
- ☐ 65 or older

7. What type of insurance do you have?

SINGLE-SELECT

- ☐ Private Insurance
- ☐ Medicare
- ☐ Medicaid
- ☐ Tricare/VA
- ☐ No insurance

8. Are you employed?

SINGLE-SELECT

- ☐ Yes, part-time
- ☐ Yes, full-time
- ☐ No, looking for employment
- ☐ No, disabled
- ☐ Prefer not to say

[PAGE BREAK]

9. Do you have a doctor who provides specialty care for your brain injury?

- ☐ Yes (go to 9a)
- ☐ No (go to 9b)

9a. If yes, how long has it been since you visited your brain injury doctor?

- ☐ Within the past year (anytime less than 12 months ago)
- ☐ Within the past 2 years (1 year but less than 2 years ago)
- ☐ Within the past 5 years (2 years but less than 5 years ago)
- ☐ 5 or more years ago

9b. If no, why don't you have a brain injury doctor?

- ☐ My primary care doctor takes care of all of my medical problems
- ☐ I have problems paying for my medical care

- I have problems finding transportation to appointments
- I can't find a brain injury doctor
- I can't find a brain injury doctor who takes my insurance
- Other reason(s) not mentioned above (specify)

10. Do you currently have a primary care provider or family doctor who you see for your general medical care and other health problems?

- Yes (go to 10a)
- No (go to 10b)

10a. If yes, how long has it been since you visited your primary care doctor?

- Within the past year (anytime less than 12 months ago)
- Within the past 2 years (1 year but less than 2 years ago)
- Within the past 5 years (2 years but less than 5 years ago)
- 5 or more years ago

10b. If no, why don't you have a primary care doctor?

- I don't think I need a primary care doctor.
- My brain injury doctor takes care of all of my medical problems
- I have problems paying for my medical care
- I'm afraid my primary care provider might not understand my disability
- I have problems finding transportation to appointments
- I can't find a primary care doctor who takes my insurance
- Other reason(s) not mentioned above (specify)

11. Please provide your zip code (for urban/rural status)

[PAGE BREAK]

Please rate your agreement with the following statements using the scale below:

I know what services are available for people with TBI.	Strongly Agree •	Agree •	Neutral •	Disagree •	Strongly Disagree •
It is easy to find information about brain injury services.	Strongly Agree •	Agree •	Neutral •	Disagree •	Strongly Disagree •
Healthcare providers have clearly explained by options.	Strongly Agree •	Agree •	Neutral •	Disagree •	Strongly Disagree •
I feel comfortable seeking services for my brain injury.	Strongly Agree •	Agree •	Neutral •	Disagree •	Strongly Disagree •
The services available to me are important for my recovery.	Strongly Agree •	Agree •	Neutral •	Disagree •	Strongly Disagree •

It is easy for me to get to the places where services are offered.	Strongly Agree •	Agree •	Neutral •	Disagree •	Strongly Disagree •
Transportation to care is a barrier for me.	Strongly Agree •	Agree •	Neutral •	Disagree •	Strongly Disagree •
I can use telehealth or virtual services if needed	Strongly Agree •	Agree •	Neutral •	Disagree •	Strongly Disagree •
I can afford the services I need for my brain injury	Strongly Agree •	Agree •	Neutral •	Disagree •	Strongly Disagree •
Transportation costs make it hard to get care.	Strongly Agree •	Agree •	Neutral •	Disagree •	Strongly Disagree •
I have the financial support or insurance I need for my care.	Strongly Agree •	Agree •	Neutral •	Disagree •	Strongly Disagree •
The care I receive is relevant to my needs	Strongly Agree •	Agree •	Neutral •	Disagree •	Strongly Disagree •
Healthcare providers listen to and understand my concerns	Strongly Agree •	Agree •	Neutral •	Disagree •	Strongly Disagree •
I feel involved in decisions about my treatment or care.	Strongly Agree •	Agree •	Neutral •	Disagree •	Strongly Disagree •

**The following will ask you about common rehabilitation needs after a brain injury.
(In the electronic version, each item will be given a separate page with these questions).**

- Improving memory
- Solving problems
- Managing daily stress
- Managing emotions and/or controlling temper
- Controlling substance use (i.e., drugs, alcohol, marijuana)
- Controlling or minimizing the impact of physical symptoms (e.g., headaches, insomnia, fatigue, imbalance, and/or tinnitus)
- Managing money and/or paying bills
- Increasing your independence in housekeeping, cooking, and/or shopping
- Improving job skills and/or finding employment
- Being successful in school (e.g., assignments, exams, course selection, making use of student support/disability services)
- Getting around in the community
- Coordinating or accessing psychological services/support
- Coordinating or accessing medical services

- Coordinating or accessing rehabilitation services
- Engaging in recreational/leisure activities
- Finding opportunities to socialize with others
- Maintaining and/or improving relationships
- Improving your health
- Performing activities of daily living (such as toileting, feeding, personal hygiene, dressing, and/or medication management)
- Getting informational support (such as advice, advocacy, or helping others understand my needs)
- Registering to vote or participating in elections (e.g., understanding voting options, getting to polling places, or using accessible ballots)
- Improving your nutrition
- Improving your sleep
- Engaging in regular exercise

1. Have you received help with this?

- Yes
- No

2. Do you currently need (more) help with this?

- Yes
- No

If yes, to either 1 or 2:

3. What makes it easier for you to get help with this?

[Open-ended]

4. What makes it harder for you to get help with this?

[Open-ended]

Additional Findings

TBI History and Diagnosis

As shown in Figure 5.2, 70.3% of respondents indicated that they experienced being knocked out or losing consciousness. When asked about the length of time they were knocked out or unconscious, just under half (48.9%) reported being unconscious for 24 hours or longer (Figure 5.3).

Respondents were also asked the age in which they first lost consciousness. Approximately 35.6% reported being aged 11 – 19 when they first experienced being knocked out or losing consciousness (Figure 5.4). When asked if they ever lost consciousness from a drug overdose or strangulation, nearly all indicated that they had never experienced this (Table 5.7). Finally, respondents were asked to identify any brain-related conditions they had received a diagnosis for. The highest percentage indicated being diagnosed with a stroke (20.3%) or epilepsy/seizure (20.3%).

Figure 5.2 Ever knocked out or lost consciousness

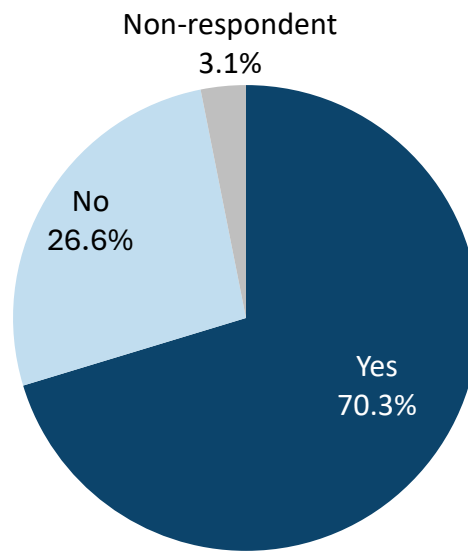


Figure 5.3 Longest time knocked out or unconscious

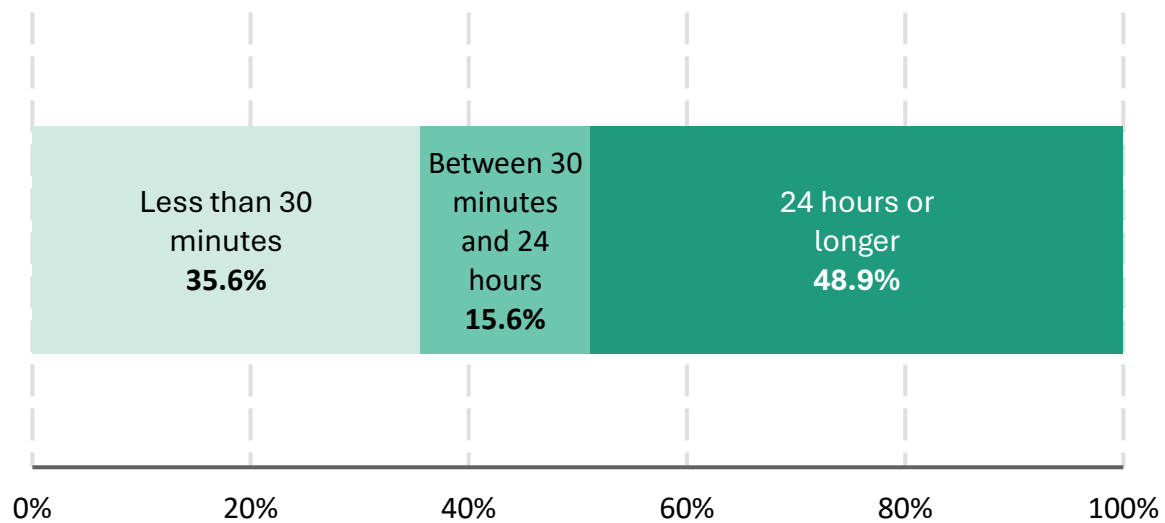


Figure 5.4 Age when knocked out or unconscious

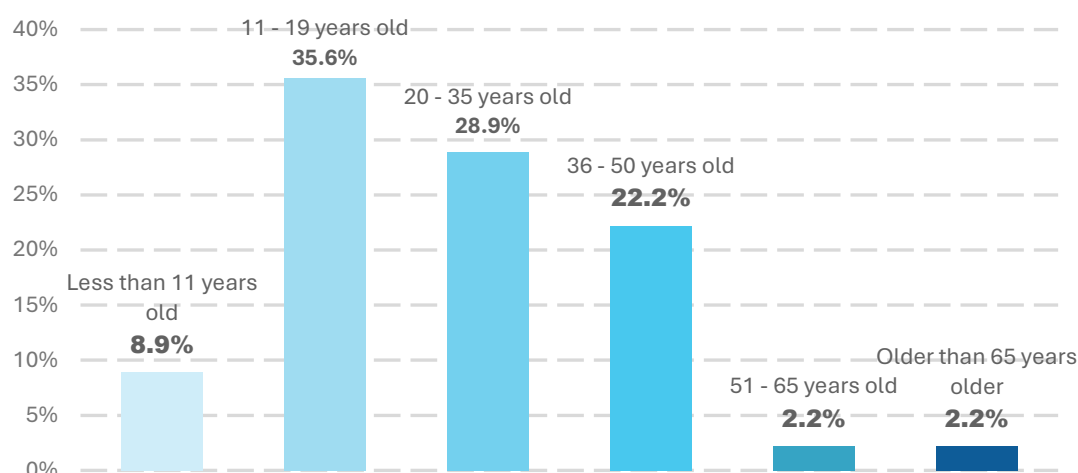


Table 5.7 Brain injury screening results, losing consciousness and brain diagnosis

	N	%
Lost consciousness from drug overdose or being choked/strangled		
Yes	0	0.0
No	62	96.9
Non-Respondent	2	3.1
Condition Diagnosis		
Epilepsy/Seizure	13	20.3%
Stroke	13	20.3%
Cerebral Palsy	0	0.0%
Brain Cancer	0	0.0%
Brain Infection	1	1.6%
Toxic Exposure	1	1.6%
Dementia	2	3.1%
Progressive Disease	1	1.6%

Respondent Demographics

Figure 5.5 provides a summary of the gender distribution of respondents to the survey for individuals with a lived experience. The majority (54.0%) identified as male. When examining age distribution by gender, male respondents who have experienced a BI were more likely to be ages 18 – 34 (40.7%), while the majority of female respondents were ages 45 – 64 (54.6%). Figure 5.6. provides more information on age and gender. Racially, survey respondents were primarily White, even when stratified by gender (81.8% for females and 88.9% for males). Figure 5.7 provides more information on race and gender.

When asked about their economic characteristics, 48.0% of respondents indicated being privately insured and an equal percentage reported being covered by Medicare (22.0%) or Medicaid (22.0%).

Additionally, 34.0% of respondents reported being employed full-time, followed by 30.0% who reported being on disability. More information is available in Table 5.8.

Figure 5.5 Gender distribution of individuals who have experienced a BI

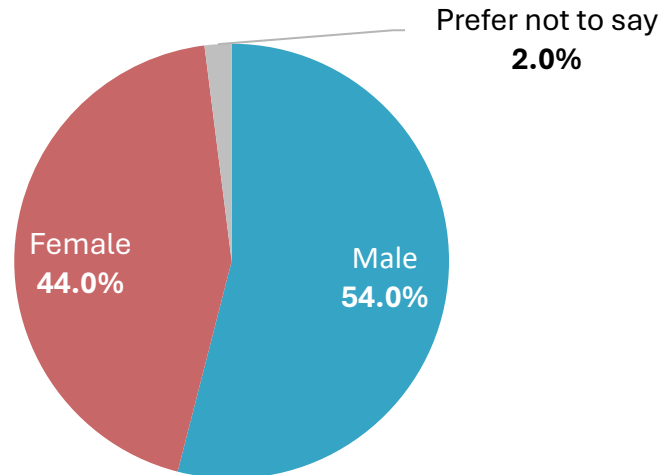


Figure 5.6 Age distribution by gender

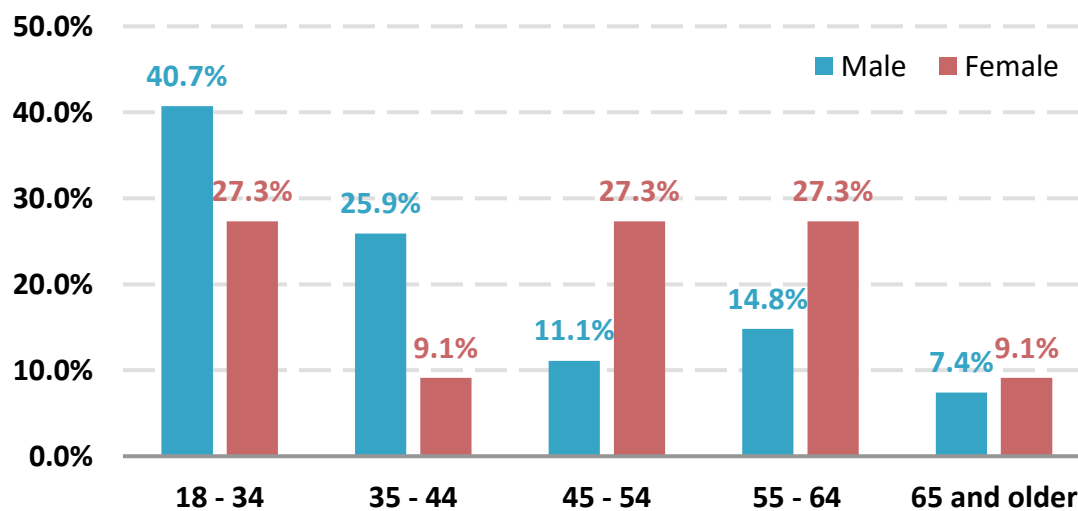


Figure 5.7 Race by gender

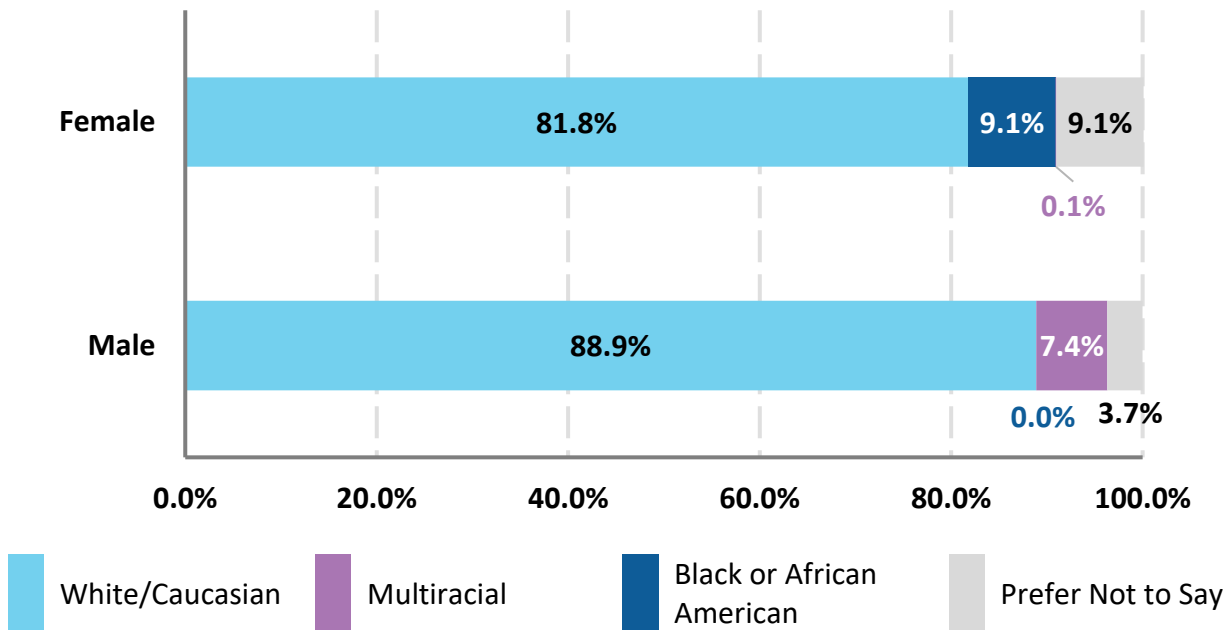


Table 5.8. Economic demographics

	N	%
Insurance Status		
Private Insurance	24	48.0
Medicare	11	22.0
Medicaid	11	22.0
No Insurance	3	6.0
Non-Respondent	1	2.0
Employment Status		
Working Part-Time	10	20.0
Working Full-Time	17	34.0
Looking for Employment	4	8.0
Disabled	15	30.0
Prefer Not to Say	2	4.0

Appendix E. Focus Group for Individuals Living with BI/Caregivers

Methodology

Participant Recruitment

Respondents to the electronic survey who indicated interest in participating in the focus group were contacted via email using the contact information provided in the survey. The focus group was hosted virtually via Zoom on October 29, 2025. Invitations were sent to participants two weeks prior to the date of the focus group, and reminders were sent one week and two days before the date.

Survey respondents were eligible to participate in the focus group if they 1) reported experience with some type of brain injury in their lifetime, 2) live in Indiana, and 3) were able to communicate or have a caregiver who could communicate for them. A total of four participants met the criteria and participated in the focus group.

Focus Group Protocol

In-Person Environment

- Make sure rooms are large enough to accommodate wheelchairs or assistive technology
- Make sure the room is comfortable and includes refreshments (water, fruit, granola bars)
- Make sure everyone can hear the moderator clearly

Virtual Environment

- Make sure each focus group participant can hear the moderator clearly
- Have a presentation ready with housekeeping items (preferably on rotation)

Recorders

- Have at least two recorders to cover each side of the tables (in case one goes out in the middle of focus groups)
- Make sure to check the batteries of the recorders and test for function before the start of the focus groups

Notetaking

- Make sure that focus group assistants have the notetaking templates

Moderator Guide:

Hello, and welcome! Thank you for joining this focus group and for participating in the Indiana BI needs assessment.

My name is _____, I will be moderating this focus group discussion. I also have with me _____ and _____, who will be helping me with keeping time and taking notes.

As a reminder, the purpose of this focus group is to gather insight into your experience in receiving services for BI health care professionals and state programs. The information you provide in this focus will be very important to understanding the potential gaps and opportunities that exist in Indiana with regard to BI services.

Are there any questions?

Before we get started, there are some housekeeping items I'd like to review. First, I want to emphasize that your participation in this focus group is voluntary, meaning you can answer the questions you feel comfortable answering and skip others that you are not comfortable answering.

Second, this focus group session will be recorded; this is only to make sure that the data we collect is as accurate as possible. No one will be personally identified in any analysis or reporting. So, once again, this focus group will focus on your experience in receiving BI services. This focus group should take no more than 45 minutes. Before we get into questions, I would like to have you all and share your first name and your favorite activity.

Section 1: Level-setting questions

1. When you think about “living well” with a brain injury, what does that mean to you?
2. What helps you manage your daily life with a brain injury? What gets in the way?

Section 2: Exploratory questions

Preliminary results from the qualitative responses to the electronic survey will be presented as a “word cloud” to demonstrate the most commonly reported barriers to getting help for managing BI.

3. What would help make it easier to get to the BI services and resources you need?
4. Please describe an experience where you had an issue with insurance.
5. What is the best way for you to learn about the resources that can help you manage your BI?
6. What types of family or social support help you manage your brain injury
7. What do you wish health care professionals would know about treating someone with a brain injury

Closing:

8. Of everything we’ve discussed, what feels most important to you?
9. Is there anything we didn’t ask about that you think we should know?

Thank you so much for sharing your time and your experiences with us today. What you’ve shared is incredibly valuable and will help shape services across Indiana. We appreciate your voice.

Appendix F. Policy Review

Additional Findings: Workforce Regulation

Table 5.9 State regulations summary chart

Profession	Regulatory Review						
	Colorado	Indiana	Illinois	Iowa	Kentucky	Michigan	Ohio
Physician	unlimited license	unlimited license	unlimited license	unlimited license	unlimited license	unlimited license	unlimited license
Advanced Practice Registered Nurse (APRN)	independent practice	with physician	with physician	independent practice	with physician	with physician	with physician
RN	Practice scope defined by state with national accreditation guidance	Practice scope defined by state with national accreditation guidance	Practice scope defined by state with national accreditation guidance	Practice scope defined by state with national accreditation guidance	Practice scope defined by state with national accreditation guidance	Practice scope defined by state with national accreditation guidance	Practice scope defined by state with national accreditation guidance
Physician Assistant (PA)	with physician	with physician	with physician	independent practice with provisions, until 2 years of collaboration.	supervision agreement with physician	supervision agreement with physician	supervision agreement with physician
SW	2 levels of licensure	3 levels of licensure	3 levels of licensure	3 levels of licensure	3 levels of licensure	4 levels of licensure	3 levels of licensure
Psychologist	prescriptive authority	no prescriptive authority	prescriptive authority	prescriptive authority	no prescriptive authority	no prescriptive authority	no prescriptive authority
OT	direct access	limited access . Allows 42 days of care before referral from a physician	direct access	direct access	direct access	direct access	direct access
PT	unrestricted direct access	direct access with provisions, allows 42	direct access with provisions, initial	direct access	direct access	direct access with provisions, after	direct access with provisions, after 6

		days of care before referral from a physician	evaluation without a referral.			10 visits or 21 days (whichever is first) must have referral from PCP.	visits or 30 days (whichever is first) must have a referral from PCP.
Respiratory Care Practitioner	no direct access	no direct access	no direct access	no direct access	no direct access	no direct access	no direct access
Pharmacist	dependent prescriptive authority	dependent prescriptive authority	dependent prescriptive authority	independent prescriptive authority	dependent prescriptive authority	dependent prescriptive authority	independent prescriptive authority
CNA	federal standards	federal standards	federal standards	federal standards	federal standards	federal standards	federal standards
SLP	direct access	direct access	direct access	direct access	direct access	direct access	direct access
LPN	Practice scope defined by state with national accreditation guidance	Practice scope defined by state with national accreditation guidance	Practice scope defined by state with national accreditation guidance	Practice scope defined by state with national accreditation guidance	Practice scope defined by state with national accreditation guidance	Practice scope defined by state with national accreditation guidance	Practice scope defined by state with national accreditation guidance

Additional Findings: State Waivers

Table 5.10 Waiver review summary table

State	Colorado	Illinois	Indiana	Iowa	Kentucky	Michigan	Ohio
Waiver Type	BI-specific	BI-specific	BI-specific	BI-specific	BI-specific	General HCBS	General HCBS
Healthcare Services Covered							
Behavioral Health Services	X	X	X	X	X	X	
Home Health Services	X	X	X	X	X	X	X
Nursing Services		X				X	X
Allied Health Services		X			X	X	
Residential-Based Care	X	X	X	X	X	X	X
Medical Monitoring and Treatment				X			

Additional Findings: State Plans

Table 5.11 State plans summary table

State	Colorado	Illinois	Indiana	Iowa	Kentucky	Michigan	Ohio
Type of Plan	BI-specific	None	BI-specific	BI-specific	General aging	General trauma	BI-specific
Workforce Named Priority	Yes		Yes	Yes	No	No	Yes
Major Themes Across State Goals							
Infrastructure and System Development	X		X				X
Access to Services and Resources	X		X	X	X		X
Service Delivery and Workforce Development	X		X	X			X
Data Collection and Surveillance						X	X
Education, Awareness, and Prevention	X		X	X			X

Additional Findings: State TBI Programs

Table 5.12 TBI program summary table

State	Program Features		
	Advisory Board	Lead Agency	BI State Plan
Colorado	Colorado Advisory Council on Brain Injury	MINDSOURCE (CO Brain Injury Network)	Yes

Illinois	N/A	Illinois Department of Human Services	No
Indiana	Indiana Brain Injury Stakeholder Council	Indiana Department of Health	Yes
Iowa	Department of Health and Human Services Board	Iowa Department of Health and Human Services	Yes
Kentucky	The Traumatic Brain Injury Trust Fund Board	Kentucky Cabinet for Health and Family Services	No
Michigan	N/A	Michigan Department of Health and Human Services	No
Ohio	The Brain Injury Advisory Committee	The Ohio State University Wexler School of Medicine	Yes

Additional Findings: State Funding Approaches

Table 5.13 TBI funding summary table

Category	State						
	Colorado	Illinois	Indiana	Iowa	Kentucky	Michigan	Ohio
Sources of Funding	Appropriations funded through court fees and fines, Federal Funding	N/A	Appropriations from General Assembly, Non-commercial motor vehicle registration fees, Federal Funding	Appropriations from General Fund through Department of Health and Human Services, Federal Funding	Funded through court fees and fines, Federal Funding	N/A	Appropriations from General Assembly, Federal Funding
Use of Funds	Direct Services, Research, Education	N/A	Registry, Research, Board administration, State Trauma System	Direct Services, Training and Capacity Building, Community Engagement	Direct Services, Case Management, Residential Services, Respite Care, Rehabilitative Therapies	N/A	Research, Direct Services, Training, Capacity building, Reporting system, Prevention
Federal Awardee	Yes	No	Yes	Yes	Yes	No	Yes

Additional Findings: Data Surveillance Strategies

Table 5.14 State BI surveillance overview table

State	BI Surveillance Elements		
	Registry Type	Surveillance Reporting Practices	Data Sources to Support Surveillance
Colorado	General Trauma	No regular public reporting	Colorado Department of Public Health & Environment

Illinois	Brain & Spinal Cord Injury	Occasional public reporting	Illinois Department of Public Health
Indiana	General Trauma	Occasional public reporting	Indiana Department of Health, Indiana Hospital Association, Indiana Department of Homeland Security, BRFSS, YRBSS
Iowa	Brain & Spinal Cord Injury	Regular public reporting	Iowa Department of Health and Human Services, BRFSS, YRBSS
Kentucky	Brain & Spinal Cord Injury	Regular public reporting	Kentucky Cabinet for Health and Family Services
Michigan	General Trauma	No public regular reporting	Michigan Department of Health and Human Services, Michigan Medicaid
Ohio	General Trauma	Regular public reporting	Ohio Department of Public Safety, BRFSS, Ohio Hospital Association, Ohio Department of Health

Appendix G. Additional Findings Educational Regulation by State

Table 5.15 Indiana educational regulation summary

	Education Standard	Link to Statute	TBI-Specific Requirement (Yes/No)	Credentialing	Link to Statute
Physician	Degree in Medicine (MD) or Osteopathy (DO)	IC 25-22.5-1-1.1	No	License	IC 25-23-1-19.4
APRN	Graduate of accredited graduate-level program	IC 25-23-1-19.4	No	License (RN)	IC 25-23-1-19.4
RN	Min. 2 years educational program	IC 25-23-1.1	No	License	IC 25-23-1-19.4
PA	Graduate of an approved PA or surgeon assistant program	IC 25-27.5-6	No	License	IC 25-27.5-6
CSW	Master's degree or higher in social work	IC 25-23.6-5	No	License	https://www.aswb.org/wp-content/uploads/2020/08/Education-requirements-for-social-work-licensure-beyond-accredited-degrees.pdf
Psychologist	Doctoral degree in psychology	868 IAC 1.1-4.1	No	License	IC 25-27.5-6
OT	Occupational therapy degree	IC 25-23.5-1	No	License	IC 25-27.5-6

PT	Doctoral degree in physical therapy accredited by Commission on Accreditation in Physical Therapy	IC 25-27-1	No	License	IC 25-27.5-6
RT	Graduate from school or program approved by Commission on Accreditation of Allied Health Education Programs	844 IAC 11-1-2	No	License	IC 25-34.5-1-6
Pharm	Graduate with a professional degree from a school of pharmacy accredited by the American Council for Pharmacy Education	IC 25-26-13-11	No	License	IC 25-26-13-11
CNA	Graduate of state-approved CNA training program	https://surry.edu/uploads/docs/License-Contacts-by-State-CNA-I.pdf	No	Certification	410 IAC 16.2 IC 16-27.5-3-1
SLP	Master's degree	IC 25-35.6-1-5	No	License	IC 25-35.6-1-5
LPN	Graduate of a state-accredited program of practical nursing	IC 25-23-1-12	No	License	IC 25-23-1-1.2

Table 5.16 Illinois educational regulation summary

	Education Standard	Link to Statute	TBI Specific Requirement (Yes/No)	Credentialing	Link to Statute
Physician	Degree in Medicine (MD) or Osteopathy (DO)	https://www.fsmb.org/u.s.-medical-regulatory-trends-and-actions/guide-to-medical-regulation-in-the-united-states/about-physician-licensure/	No	License	https://www.opm.gov/policy-data-oversight/classification-qualifications/classifying-general-schedule-positions/standards/0600/gso621.pdf
APRN	Graduate of accredited graduate-level program	225 ILCS 65-5 (4)	No	License	225 ILCS 65-5
RN	Graduate of professional nursing education program approved by the Department of Financial and Professional Regulation	225 ILCS 65/60-10 (2)	No	License	225 ILCS 65/60-10 (2)
PA	Graduate of an accredited PA program	https://www.aapa.org/download/19739/	No	License	https://www.aapa.org/download/19739/
CSW	Master's degree in social work	https://www.aswb.org/licenses/how-to-get-a-license/licensing-	No	License	225 ILCS 20/3

		requirements-by-state-or-province/			
Psychologist	Doctoral degree in clinical, school, or counseling psychology	https://www.apaservices.org/practice/ce/state/state-info#illinois	No	License	https://www.apaservices.org/practice/ce/state/state-info#illinois
OT	Occupational therapy degree from an accredited or approved program	225 ILCS 75/3	No	License	225 ILCS 75/3
PT	Doctor of physical therapy degree accredited by Commission on Accreditation in Physical Therapy	225 ILCS 90/1	No	License	68 ILAC 1340.20
RT	Graduate of respiratory care program approved by Respiratory Care Board	225 ILCS 106	No	License	225 ILCS 85
Pharm	Graduate of educational training program accredited by Accreditation Council for Pharmacy Education	225 ILCS 85	No	License	225 ILCS 85
CNA	Graduate of a state-approved CNA program	https://surry.edu/uploads/docs/Licens	No	License	225 ILCS 510

		ure-Contacts-by-State-CNA-I.pdf			
SLP	Master's degree	https://www.asha.org/advocacy/state/illinois-state-information/	No	License	https://www.asha.org/advocacy/state/illinois-state-information/
LPN	Graduate of a practical nursing education program approved by the Department of Financial and Professional Regulation	225 ILCS 65/55-5	No	License	225 ILCS 65/50-10

Table 5.17 Kentucky educational regulation summary

	Education Standard	Link to Statute	TBI Specific Requirement (Yes/No)	Credentialing	Link to Statute
Physician	Degree in Medicine (MD) or Osteopathy (DO)	https://www.fsmb.org/u.s.-medical-regulatory-trends-and-actions/guide-to-medical-regulation-in-the-united-states/about-physician-licensure/	No	License	https://kbml.ky.gov/board/Pages/Kentucky-Medical-Practice-Act-Statutes-and-Regulations.aspx
APRN	Graduate of an education program that prepares a registered nurse for	314.042	No	License	314.042

	an advanced practice role accredited by the U.S. Department of Education				
RN	Graduate of a program for registered nurses in an approved school of nursing	314.041	No	License	314.011
PA	Graduate of an accredited PA program	https://www.aapa.org/download/19739/	No	License	https://www.aapa.org/download/19739/
CSW	Master's degree in social work	https://www.aswb.org/licenses/how-to-get-a-license/licensing-requirements-by-state-or-province/	No	License	https://www.aswb.org/licenses/how-to-get-a-license/licensing-requirements-by-state-or-province/
Psychologist	Doctoral degree in psychology	https://www.apaservices.org/practice/ce/state/state-info#kentucky	No	License	https://www.apaservices.org/practice/ce/state/state-info#kentucky
OT	Graduate of an occupational therapy program accredited by Accreditation Council for Occupational Therapy Education	201 KAR 28:060	No	License	319A.080
PT	Doctor of physical therapy degree	201 KAR 22:020	No	License	201 KAR 22:070

	accredited by Commission on Accreditation in Physical Therapy				
RT	Graduate of a school or program approved by Commission on Accreditation of Allied Health Education Programs	314A.010	No	License	314A.110
Pharm	Graduate of a pharmacy school approved by Accreditation Council for Pharmacy Education	https://pharmacy.ky.gov/statutesandregulations/Documents/Kentucky%20Pharmacy%20Lawbook,%202024.pdf	No	License	https://pharmacy.ky.gov/statutesandregulations/Documents/Kentucky%20Pharmacy%20Lawbook,%202024.pdf
CNA	Completion of at least 74 hours of approved nurse's aide instruction	https://surry.edu/uploads/docs/License-Contacts-by-State-CNA-I.pdf	No	Certificate	907 KAR 01:450
SLP	Master's degree	https://www.asha.org/advocacy/state/kentucky-state-information/	No	License	https://www.asha.org/advocacy/state/kentucky-state-information/
LPN	Graduate of an educational program in practical nursing at an approved school	314.051	No	License	314.011

	of nursing by the Board of Nursing				
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Table 5.18 Ohio Educational Regulation Summary

	Education Standard	Link to Statute	TBI Specific Requirement (Yes/No)	Credentialing	Link to Statute
Physician	Degree in Medicine (MD) or Osteopathy (DO)	https://www.fsmb.org/u.s.-medical-regulatory-trends-and-actions/guide-to-medical-regulation-in-the-united-states/about-physician-licensure/	No	License	4731.14
APRN	Master's degree or above in a nursing specialty or related field	4723.41(2)	No	License	4723.41(2)
RN	Graduate of an education program approved by the Board of Nursing	4723.7.02	No	License	4723.011
PA	Master's degree and graduate of an accredited PA program	https://www.aapa.org/download/19739/	No	License	https://www.aapa.org/download/19739/
CSW	Bachelor's degree or higher in social work	https://www.aswb.org/licenses/how-to-get-a-	No	License	https://www.aswb.org/licenses/how-to-get-a-

		license/licensing-requirements-by-state-or-province/			license/licensing-requirements-by-state-or-province/
Psychologist	Doctoral degree in psychology or school psychology	https://www.apaservices.org/practice/ce/state/state-info#ohio	No	License	https://www.apaservices.org/practice/ce/state/state-info#ohio
OT	Completion of academic requirements of an educational program as determined by the Occupational Therapy, Physical Therapy, and Athletic Trainers Board	755.07	No	License	755.07
PT	Doctor of physical therapy degree accredited by Commission on Accreditation in Physical Therapy	4755.42	No	License	4755.42
RT	Associate degree in respiratory care and education program that meet Commission on Accreditation for Respiratory Care	Rule 4761-4-01	No	License	Rule 4761-4-01
Pharm	Degree in pharmacy from a	4729.08	No	License	4729.08

	school recognized by the state board of pharmacy				
CNA	Completion of Ohio Department of Health Nurse Aide Training and Competency Evaluation Program	https://odh.ohio.gov/know-our-programs/nurse-aide-training-and-competency-evaluation-program-natcep/nurse-aide/nurse-aide	No	License	3721.32
SLP	Master's degree	https://www.asha.org/advocacy/state/ohio-state-information/	No	License	https://www.asha.org/advocacy/state/ohio-state-information/
LPN	Graduate of an educational program in practical nursing at an approved school of nursing by the Board of Nursing	4723.7.02(c)	No	License	4723.01 4723.7.02(c)

Table 5.19 Michigan educational regulation summary

	Education Standard	Link to Statute	TBI Specific Requirement (Yes/No)	Credentialing	Link to Statute
Physician	Degree in Medicine (MD) or Osteopathy (DO)	https://www.fsmb.org/u.s.-medical-regulatory-trends-and-actions/guide-to-medical-	No	License	333.17011

		regulation-in-the-united-states/about-physician-licensure/			
APRN	Completion of advanced training specialty certification approved by the Board	333.1721	No	License	333.1721
RN	Graduate of a program accredited by Commission for Education in Nursing, Commission for Nursing Accreditation, Commission on Collegiate Nursing Education	https://council.legislature.mi.gov/JCAR/Files/2024%20Documents%20Received/Final%20JCAR%20Packages/2022-036%20LR%20(JCAR%2024-05)%20Board%20of%20Nursing%20-%20General%20Rules/2022-036%20LR%20Board%20of%20Nursing%20-%20General%20Rules_DraftRuleVersion_8.htm	No	License	https://ars.apps.lara.state.mi.us/AdminCode/DownloadAdminCodeFile?FileName=R%20338.101%20to%20R%20338.10705.pdf&ReturnHTML=True

PA	Graduate of an accredited PA program	https://www.aapa.org/download/19739/	No	License	https://www.aapa.org/download/19739/
CSW	Master's degree in social work	https://www.aswb.org/licenses/how-to-get-a-license/licensing-requirements-by-state-or-province/	No	License	https://www.aswb.org/licenses/how-to-get-a-license/licensing-requirements-by-state-or-province/
Psychologist	Doctoral degree in psychology	https://www.apaservices.org/practice/ce/state/state-info#michigan	No	License	https://www.apaservices.org/practice/ce/state/state-info#michigan
OT	Graduate of an occupational therapist education program accredited by Accreditation Council for Occupational Therapy Education	R 338.1223	No	License	333.18307
PT	Doctor of physical therapy degree accredited by Commission on Accreditation in Physical Therapy	https://www.michigan.gov/lara/-/media/Project/Websites/lara/bpl/Physical-Therapy/Licensing-Info-and-Forms/Physical-Therapist-Licensing-Guide.pdf?rev=02454dfe8729494c8bb	No	License	https://www.michigan.gov/lara/-/media/Project/Websites/lara/bpl/Physical-Therapy/Licensing-Info-and-Forms/Physical-Therapist-Licensing-Guide.pdf?rev=02454dfe8729494c8bb

		c2b446e29b65f&hash=38BF6116FF274B98D4F414D8069B8D86			c2b446e29b65f&hash=38BF6116FF274B98D4F414D8069B8D86
RT	Associate degree and completion of a training program accredited by Commission on Accreditation for Respiratory Care	https://www.michigan.gov/lara/-/media/Project/Websites/lara/bpl/Respiratory-Care/Licensing-Info-and-Forms/Respiratory-Care-Licensing-Guide.pdf?rev=2405431edf56490e8c1e2a49f99e48c9&hash=C57F890BAACB55180CB8CE5D28A86F68	No	License	https://www.michigan.gov/lara/-/media/Project/Websites/lara/bpl/Respiratory-Care/Licensing-Info-and-Forms/Respiratory-Care-Licensing-Guide.pdf?rev=2405431edf56490e8c1e2a49f99e48c9&hash=C57F890BAACB55180CB8CE5D28A86F68
Pharm	Graduate of a pharmacy education program accredited by the Accreditation Council for Pharmacy Education	https://www.michigan.gov/lara/-/media/Project/Websites/lara/bpl/Pharmacy/Licensing-Info-and-Forms/Info/Pharmacist-Licensing-Guide.pdf?rev=bb1db4c265234175a951df1568d07df6&hash=89646F0BFBAAB3EFBA6B0A823C4661AA	No	License	333.17711

CNA	Completion of a state-approved CNA training program	333.21911(1)(i)	No	License	333.21911
SLP	Master's degree	https://www.asha.org/advocacy/state/michigan-state-information/	No	License	https://www.asha.org/advocacy/state/michigan-state-information/
LPN	Completion of a Licensed Practice Nurse education program	https://www.michigan.gov/lara/-/media/Project/Websites/lara/bpl/Nursing/Licensing-Info-and-Forms/Nursing-Licensing-Guide.pdf?rev=89a38afb10e24196a81876de96877069&hash=4563EC587E94D54102F08F82DD2A589C	No	License	333.17201

Table 5.20 Colorado educational regulation summary

	Education Standard	Link to Statute	TBI Specific Requirement (Yes/No)	Credentialing	Link to Statute
Physician	Degree in medicine (MD) or osteopathy (DO)	https://www.fsmb.org/u.s.-medical-regulatory-trends-and-actions/guide-to-medical-regulation-in-the-	No	License	CRS 12-240

		united-states/about-physician-licensure/			
APRN	Completion of an appropriate graduate degree as determined by the Board of Nursing	https://regulations.justia.com/states/colorado/700/716/rule-3-ccr-716-1/section-3-ccr-716-1-14/	No	License	https://regulations.justia.com/states/colorado/700/716/rule-3-ccr-716-1/section-3-ccr-716-1-14/
RN	Graduate of a Board of Nursing-approved nursing program	3 CCR 716-1	No	License	3 CCR 716-1
PA	Graduate of an accredited PA program	https://www.aapa.org/download/19739/	No	License	https://www.aapa.org/download/19739/
CSW	Master's degree in social work	https://www.aswb.org/licenses/how-to-get-a-license/licensing-requirements-by-state-or-province/	No	License	https://www.aswb.org/licenses/how-to-get-a-license/licensing-requirements-by-state-or-province/
Psychologist	Doctoral degree with major in psychology or equivalent	https://www.apaservices.org/practice/ce/state/state-info#colorado	No	License	https://www.apaservices.org/practice/ce/state/state-info#colorado
OT	Graduate of an educational program of occupational therapy approved	CRS 12-270	No	License	CRS 12-270

	by the Board of Occupational Therapy				
PT	Doctor of physical therapy degree accredited by Commission on Accreditation in Physical Therapy	CRS 12-285-107	No	License	4 CCR 732-1
RT	Not clearly defined	CRS 12-300	No	License	CRS 12-300
Pharm	Graduate of an approved professional degree program approved by the Board of Pharmacy	CRS 12-280	No	License	CRS 12-280
CNA	Completion of a state-approved nurse aide program	https://drive.google.com/file/d/1wZxFyh7G9Hy5Rr8BedN1kt975xmuAuN/view	No	License	3 CCR 716-1
SLP	Master's degree	https://www.asha.org/advocacy/state/colorado-state-information/	No	License	https://www.asha.org/advocacy/state/colorado-state-information/
LPN	Graduate of a Board of Nursing-approved nursing program	3 CCR 716-1	No	License	https://www.sos.state.co.us/CCR/GenerateRulePdf.do?ruleVersionId=9556