NATIONAL HEALTH CARE for the HOMELESS COUNCIL

Housing Instability and Brain Injury: Understanding the Connection and Opportunities for Services and Systems

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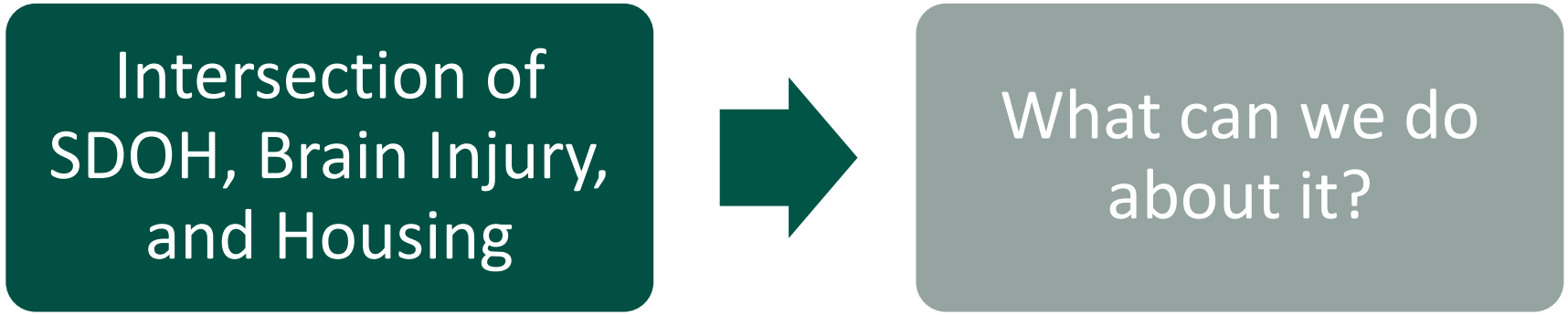
February 28th, 2025

Objectives

- By the end of this presentation, attendees will be able to describe how social determinants of health (SDOH) impact recovery and housing stability in people with a brain injury.
- By the end of this presentation, attendees will be able to identify at least 2 strategies that can be used within their day-to-day settings to support people with brain injury experiencing housing instability or homelessness.
- By the end of this presentation, attendees will be able to identify at least 2 system-wide strategies that can be to increase access to services for people with brain injury experiencing housing instability or homelessness.



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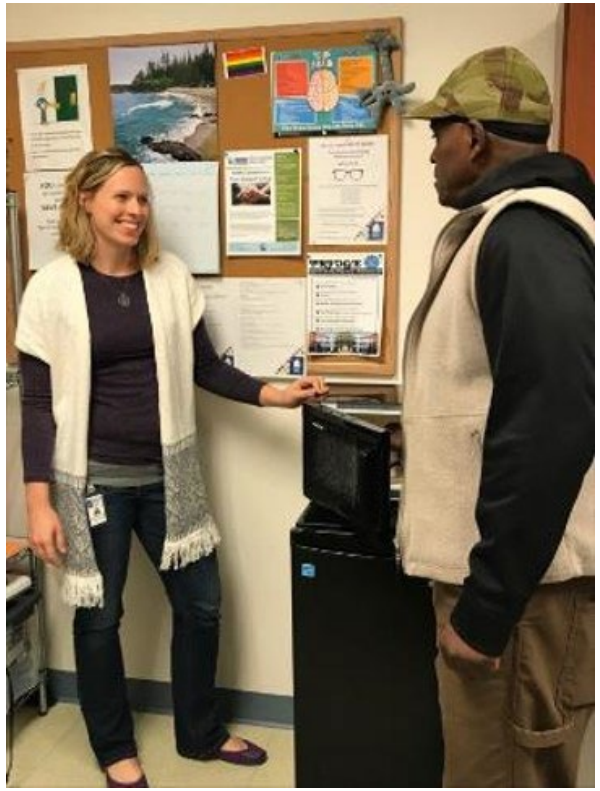

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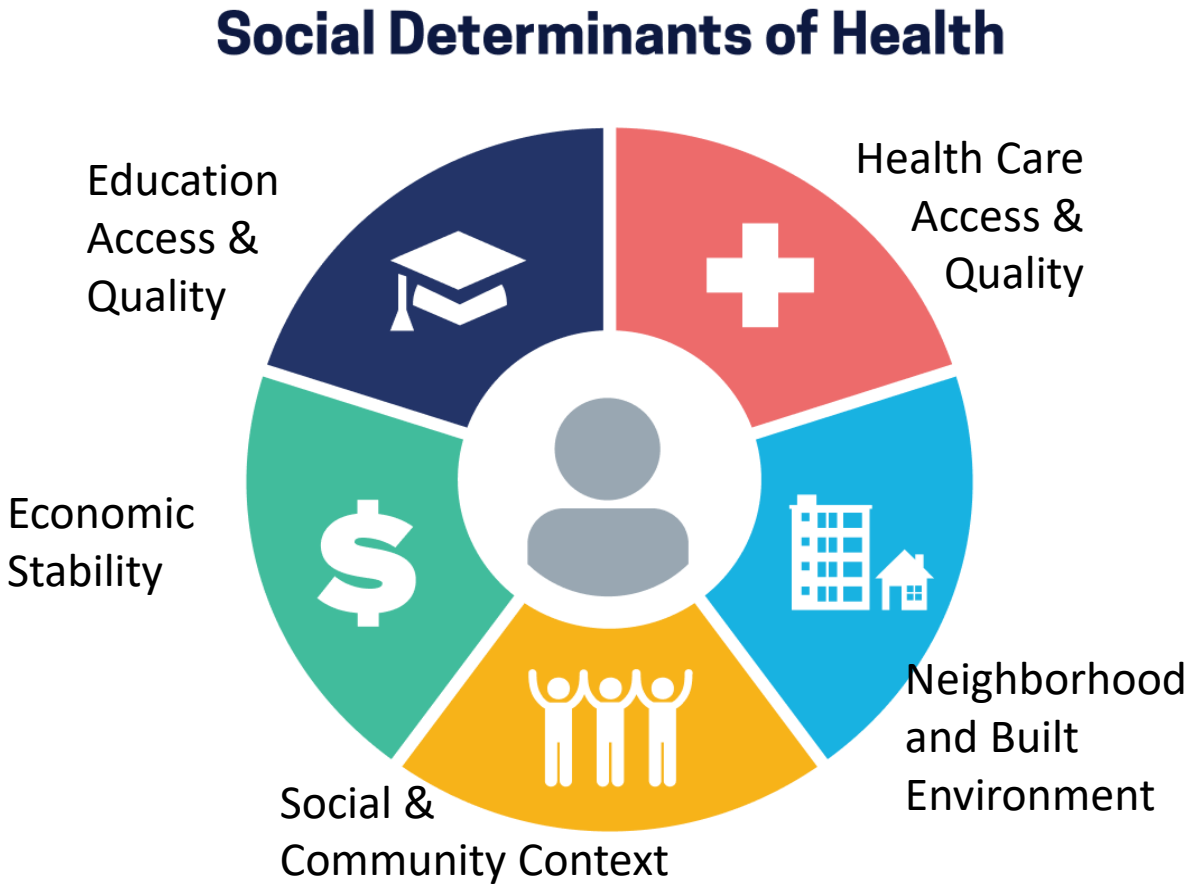
Social Determinants of Health and Brain Injury

Defining Social Determinants of Health

"Conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks."

Social determinants of health are the primary cause of health inequities across communities.



https://www.cdc.gov/socialdeterminants/

Children from low-income families, or who have disabilities or experience social discrimination have lower academic performance and are less likely to graduate from high school or go to college

Lower education is associated with poorer health and shorter life span

Lower education levels are associated with lower-paying jobs and increased risk of chronic health conditions

https://odphp.health.gov/healthypeople/objectives-and-data/browse-objectives/education-access-and-quality

Populations identified as having decreased reading and comprehension skills (functional literacy) include:

- Lower income
- BIPOC communities
- Unemployed
- Older adults
- Inner-city and rural residents
- Incarcerated
- Those who didn't graduate high school
- Those living in poverty

(Bastable et al., 2011; Haderlie & Clark, 2017)

1 in 10 people in the US live in poverty - impacting many people's ability to access health care and housing

Steady employment is linked to improved health

People with disabilities and lower education have more limitations in the workforce and more economic instability

https://odphp.health.gov/healthypeople/objectives-and-data/browse-objectives/economic-stability

Economic Stability and Disability in the United States:

11.6% of the U.S. population is living in poverty making less than $12,400 per year

The annual income for a Supplemental Security Income (SSI) recipient is around $9,528

People with disabilities live in poverty at more than twice the rate of people without disabilities

(National Council on Disability, 2017; US Census Bureau 2022)

Increased social support can impact multiple health factors including mental health, cognition, and recovery from trauma

Robust social support networks can protect against negative impacts of the environment

Certain sub-populations are more likely to have smaller social and community networks (e.g., LGTBQIA, older adults, those with mental health diagnoses)

https://odphp.health.gov/healthypeople/objectives-and-data/browse-objectives/education-access-and-quality

Social supports and networks for adults in poverty:

Are smaller

Are not as protective against stress

Do not provide economic benefit

(Evans et al. 2008; Henley et al. 2005; Lubbers et al., 2020; Moskowitz et al., 2013)

The neighborhood someone lives in has significant impact on their health and well-being

Minoritized populations and those in poverty are more likely to live in neighborhoods with increased health risks (e.g. unsafe water or air)

Neighborhood structure and resources can impact access to transportation, health care, and resources needed for survival (e.g. food)

https://odphp.health.gov/healthypeople/objectives-and-data/browse-objectives/neighborhood-and-built-environment

Transportation barriers impact those who are:

Living with a disability

Living in rural communities

Low income

(Goins, 2005; Rosenbloom, 2007; Verbich & El-Geneidy, 2015)

People without health insurance are less likely to have a PCP and able to afford medical care and medications they need

Many individuals lack access to primary care providers due to insurance or distance from health care settings

Health events that result in lack of income have significant impacts on poverty and financial status

https://odphp.health.gov/healthypeople/objectives-and-data/browse-objectives/health-care-access-and-quality

Housing instability and decreased economic standing is associated with:

poorer health access

being uninsured

postponing needed care

postponing medications

higher hospitalization rates

(Reid et al. 2008; O'Donnell 2024)

Adverse Childhood Experiences (ACES)

Potentially traumatic events that occur in childhood

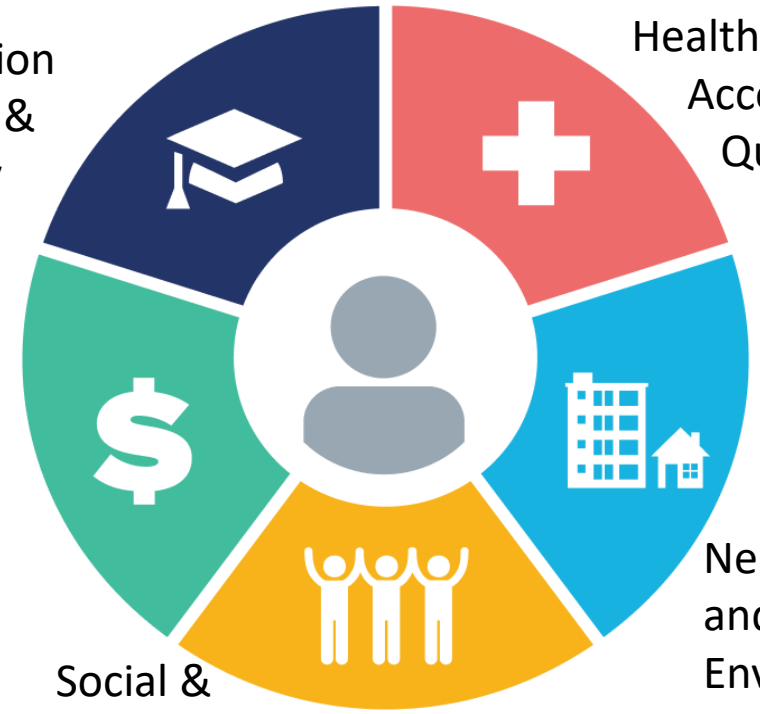
- Experiencing violence, abuse, or neglect
- Witnessing violence in the home or community
- Having a family member attempt or die by suicide
- Experiencing discrimination

Or aspects of the environment that affect safety, stability, and bonding:

- Substance use or mental health problems
- Instability due to parental separation.
- Instability due to household members being in jail or prison
- Housing instability/homelessness
- Food insecurity

https://www.cdc.gov/aces/about/index.html; Felitti et al., 2019; Merrick et al., 2019

Social Determinants of Health



Social Determinants of Health
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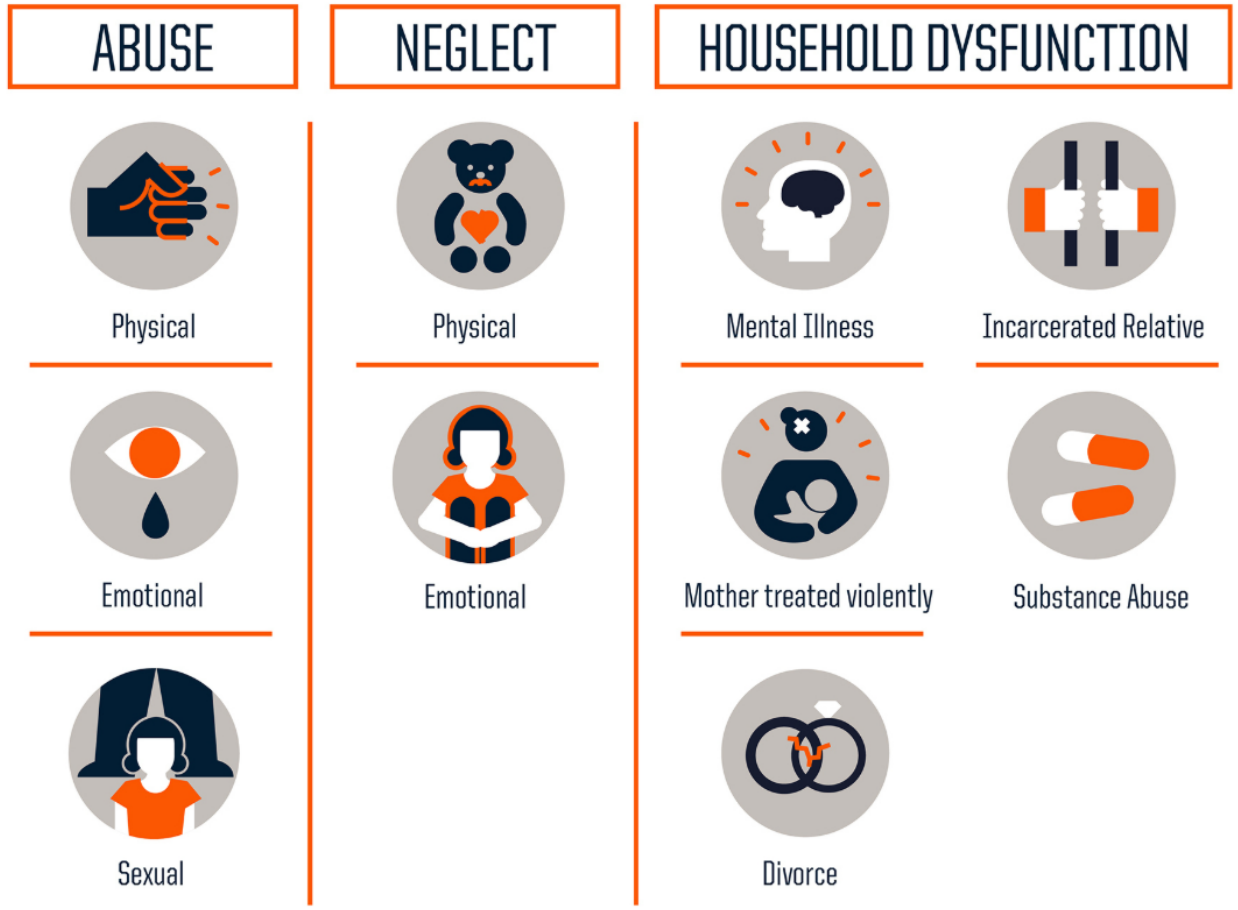
Healthy People 2030

ACES



Source: Centers for Disease Control and Prevention
Credit: Robert Wood Johnson Foundation

Long-term health consequences and increased risk for chronic health and behavioral conditions … and brain injury

Homelessness and Housing Instability

Where Does Homelessness Happen?

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Understanding the definitions of homelessness

Shelter/Mission

Organized shelter for individuals experiencing homelessness

Vehicles

Street/Outside

Abandoned Buildings

or other places generally not considered safe or fit for occupancy

Encampments

Typically including: residents sleeping outside in tents or other physical structures, storing belongings in the same location for a sustained period

Single Room Occupancy (SRO)/ Hotels/Motels

or other day-to-day paid housing

Transitional Housing

Time-limited housing intended to support a transition to permanent housing

Considered “homeless” by the US Department of Housing and Urban Development [HUD]

https://nhchc.org/where-does-homelessness-happen/

Considered “homeless” by the US Department of Health & Human Services (HHS)

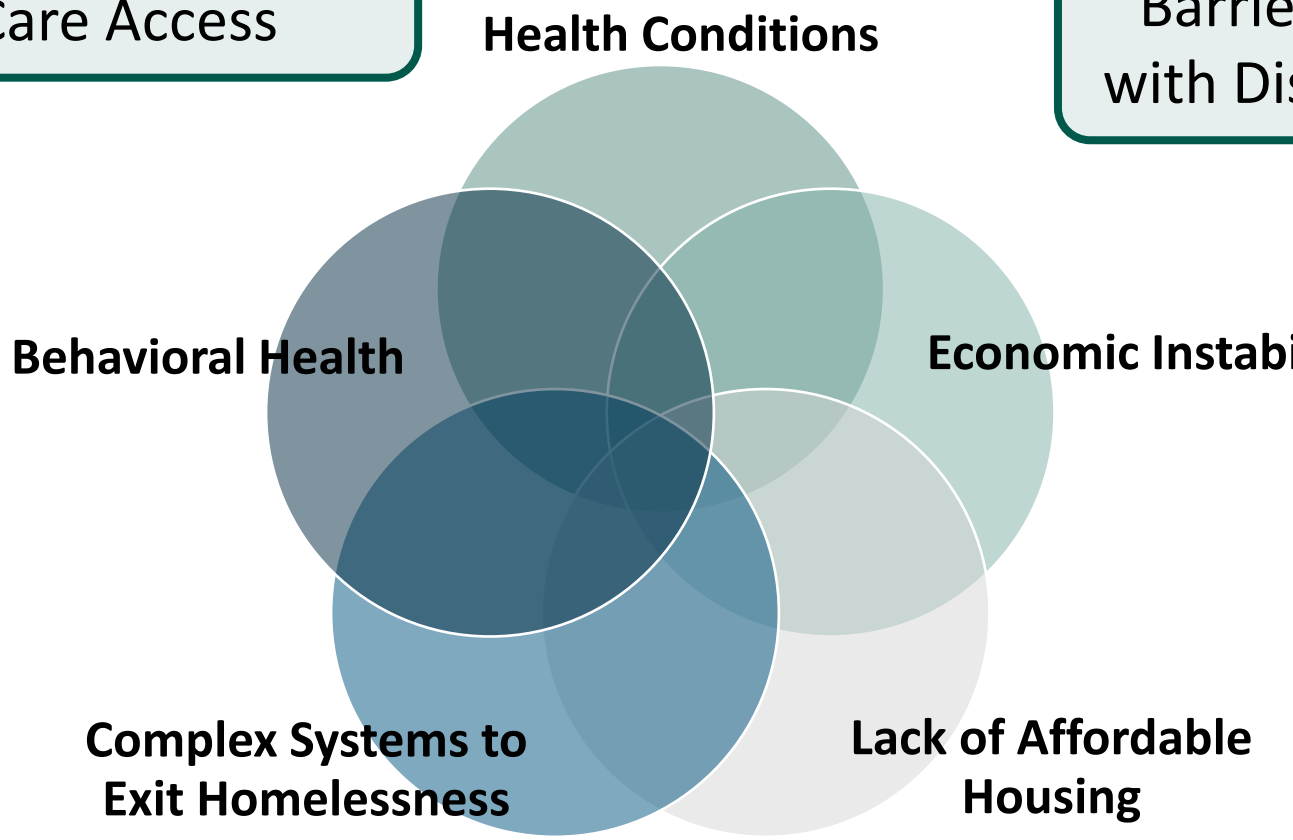
https://nhchc.org/where-does-homelessness-happen/

So, what causes homelessness?

Inequitable Health Care Access

Barriers for Individuals with Disabilities/ Ableism

Stigma

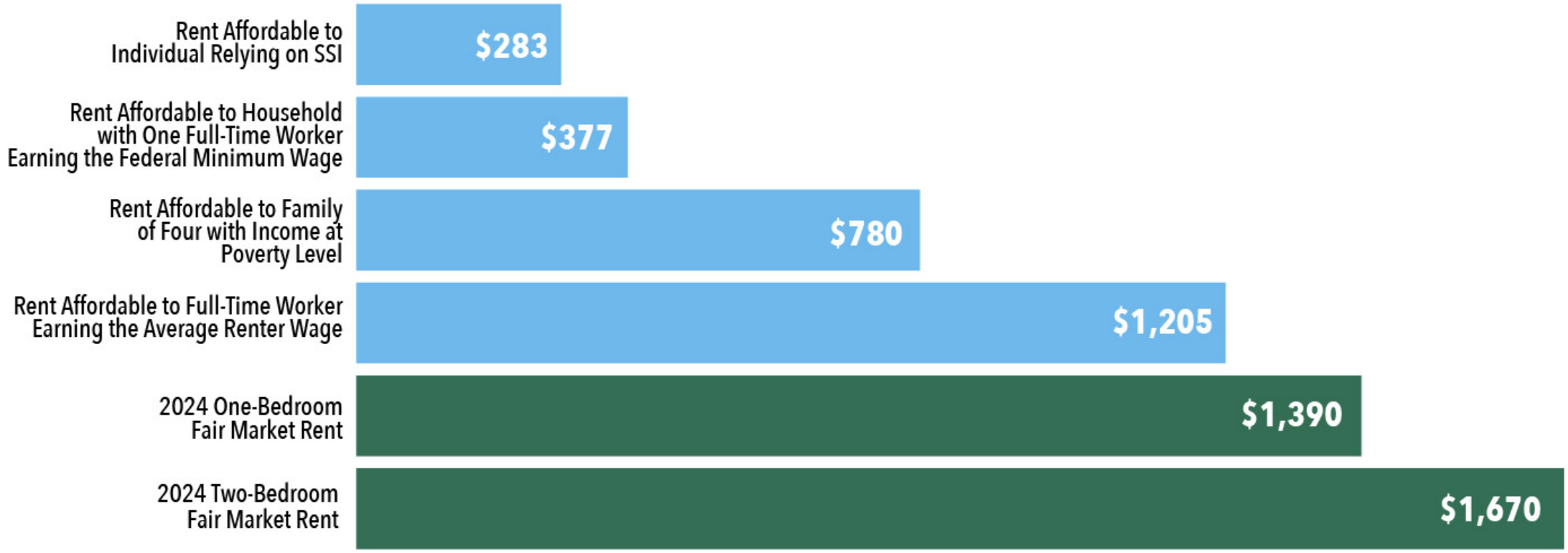


Systemic Racism

Social Determinants of Health

RENTS ARE OUT OF REACH

- Current affordable housing stock only meets 1/3 of demand
- 1% of housing stock is wheelchair accessible
- Less than 5% can accommodate moderate mobility disabilities



OUT of REACH
THE HIGH COST OF HOUSING

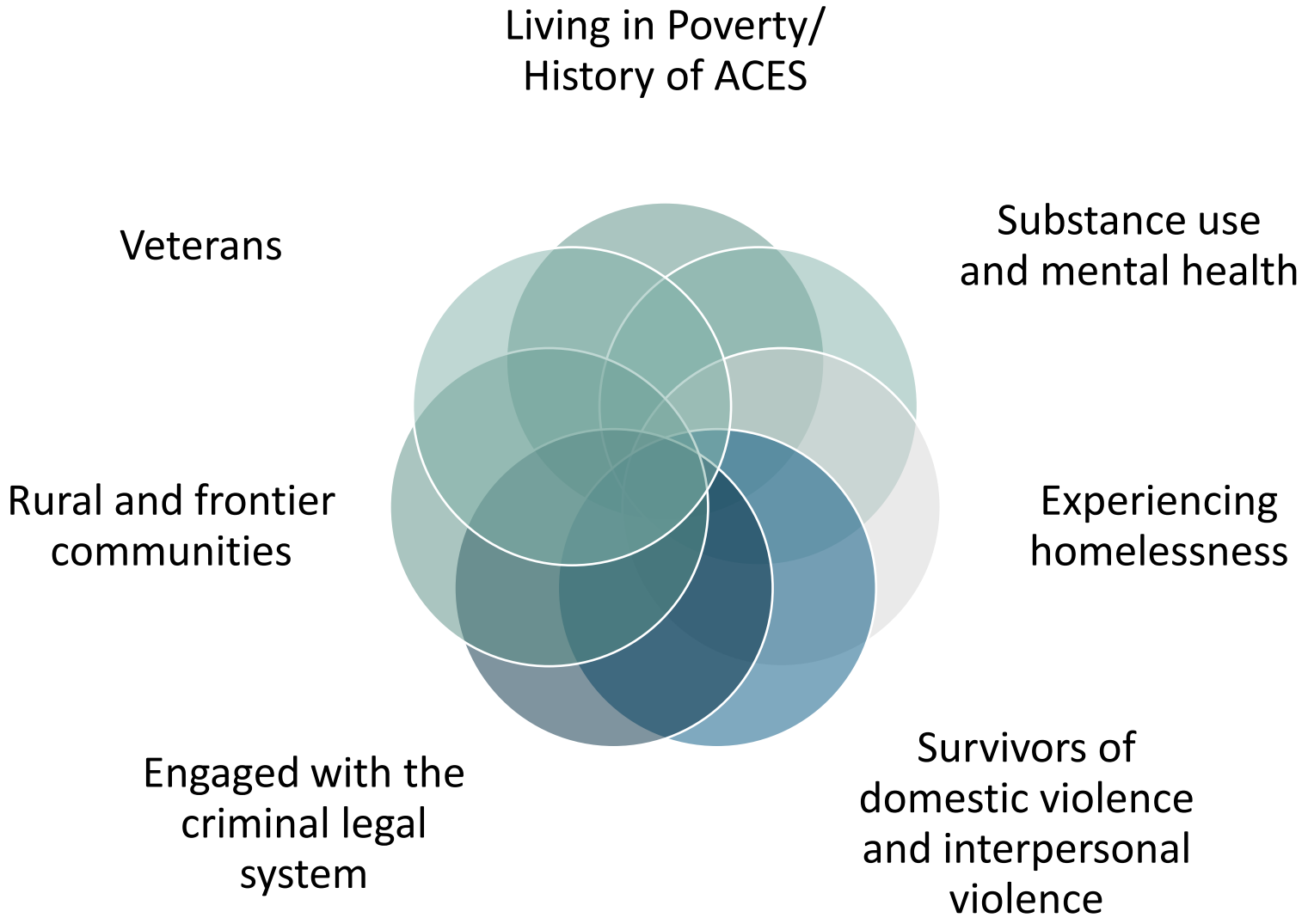
Source: NLIHC calculation of weighted-average HUD Fair Market Rent. Affordable rents based on income data from BLS QCEW, 2022 adjusted to 2024 dollars; and Social Security Administration, 2024 maximum federal SSI benefit for individual.

50 AN UNWAVERING PATH FORWARD TO HOUSING JUSTICE

www.nlihc.org/oor

SDoH and Brain Injury: What's the Connection

Populations Impacted by SDoH and BI



Experiencing Poverty / History of Aces

Overall poorer access to health care

Environments of those living in poverty increase risk of sustaining a BI

Caregivers may not be able to give comprehensive long-term support

Poverty may worsen when ability to return to employment is limited after injury

(Heffernan et al., 2011; Kisser et al., 2017; Ma et al., 2019; Reid et al. 2008; Sander at al., 2009; Song et al, 2018)

Adults Experiencing Homelessness

More than 50% of adults experiencing homelessness have sustained a TBI

There is a high correlation of mental health symptoms and a history of BI for adults experiencing homelessness

More than 25% of adults experiencing homelessness have sustained a moderate – severe TBI

(Bennett et al., 2024; O'Connor et al., 2022; Stubbs et al., 2020; Topolovec-Vranic et al., 2017; Zeiler et al., 2021)

Domestic and Interpersonal Violence Survivors

BI is under-identified in survivors of domestic and interpersonal violence

A woman's face, neck, and head are most frequently injured during physical DV

Emerging studies indicate victims of DV/IPV have below average recoveries from BI

One study of 5 DV agencies found 85% of survivors experienced blows to the head.

The same study found 83% of survivors experienced strangulation

(Corrigan et al., 2003; Nemeth et al., 2019; Ohio Domestic Violence Network, 2019; St. Ivany et al., 2018)

Engaged with the Criminal Legal System

Up to 60% of those incarcerated have a history of BI

There is also a high correlation with history of BI and ongoing mental health symptoms and substance use

History of BI may contribute to having a higher risk of re-offending

Juvenile offenders are more likely to have a BI than the general (youth) population

(CDC, 2015; Gordon et al., 20217; Farrer et al., 2011; Matheson et al., 2024; Nagel et al., 2021; O'Rourke et al., 2016; Williams et al., 2009)

Rural and Frontier Communities

- Not seeking care for mild – moderate BI
- Risk from daily life roles and activities
- Lack of access to long-term brain injury support and resources
- Limited community re-integration
- Underdiagnosed long-term psychiatric needs

(CDC, 2015; Harrison et al., 2017; Temple, 2020; University of Missouri, 2012)

Veterans

Dishonorably discharged for behaviors related to BI and/or PTSD

A report to Congress in 2017 found over 10,000 former service members may have been discharged following BI

Veterans without benefits will receive care in community settings

Dishonorable discharge status is associated with homelessness, criminal justice involvement, and the presence of substance use and/or mental health conditions

(Brenner et al., 2017; Holliday & Pederson, 2017; Phillips, 2017; US Government Accountability Office, 2017; Twamley et al., 2019)

People With Mental Health Conditions or Who Use Drugs

- More likely to be impacted by ACES
- Opioids prescribed as a way to manage long-term chronic pain
- Increase in anoxic injury due to overdose and resuscitation through Naloxone
- Challenges in engaging in substance use programming as a result of brain injury
- Long-term substance use and impact on cognition
- Increased stigma and decreased care experienced by those with substance use

(Adshead et al., 2021; American Academy of Family Physicians, 2016; Chan et al., 2022; McHugo et al., 2017; Substance Abuse and Mental Health Services Administration (SAMHSA), 2016)


BI as a cause of homelessness
BI is a consequence of homelessness
BI contributes to long-term homelessness

SDoH and Brain Injury Recovery

Contributors to brain injury recovery

- Age of injury
- Severity of injury
- Location of injury
- Length of post-trauma amnesia

Predictors of social integration and positive outcomes after BI

- Social Support
- Social History/ Vulnerability
- Cognitive Reserve

(Cusimano et al., 2021; Ma et al., 2019; Nelson et al., 2023; Satz et al., 1993; Sharbafshaaer, 2018; Stern 2009; Walker et al., 2018)

Cognitive Reserve

What were literacy and education skills prior to BI?

Will the current cognitive skills impact ability to resume work?

Can the person manage complex IADLs in the community?

Can the person navigate systems to access needed resources?

Were cognitive impacts identified and treated?

Are there comorbid conditions impacting cognition?

Social Support

Is there a stable place for the person to discharge to or live?

Can others afford to support the person?

Do they transportation to appointments?

Does the person have someone that can compensate for things affected by the BI?

Is there emotional support?

Are the existing support systems able to support the recovery process?

Healthcare Access

Does the person have access to insurance?

Does the insurance cover the health care needed?

Does the person live somewhere that providers can treat BI and its effects?

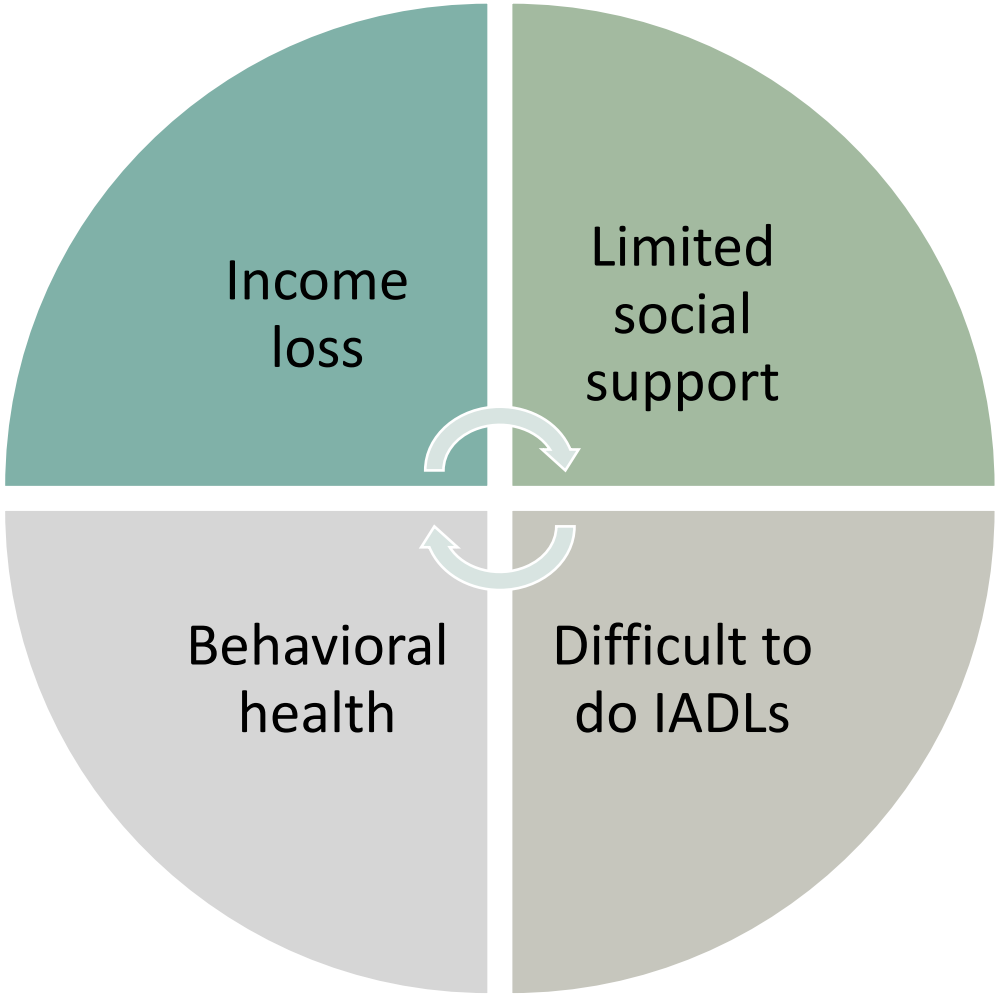
Can the person prioritize their healthcare?

Does the health care provided accommodate for a lack of resources?

Is there bias in the care provided or from providers?

51% - 92% of those experiencing homelessness experienced their first TBI ***before*** their first experience of homelessness or marginal housing

How does this result in homelessness?



(Stubbs et al., 2022; Young et al., 2020; Zeiler et al., 2021)

Trajectories into Housing Instability and Homelessness

Factors correlating to homelessness and brain injury include:

- Gender
- Education level
- History of ACES
- Substance use
- Physical environment

(Zeiler et al., 2021)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Associations of ACES, BI, and Homelessness

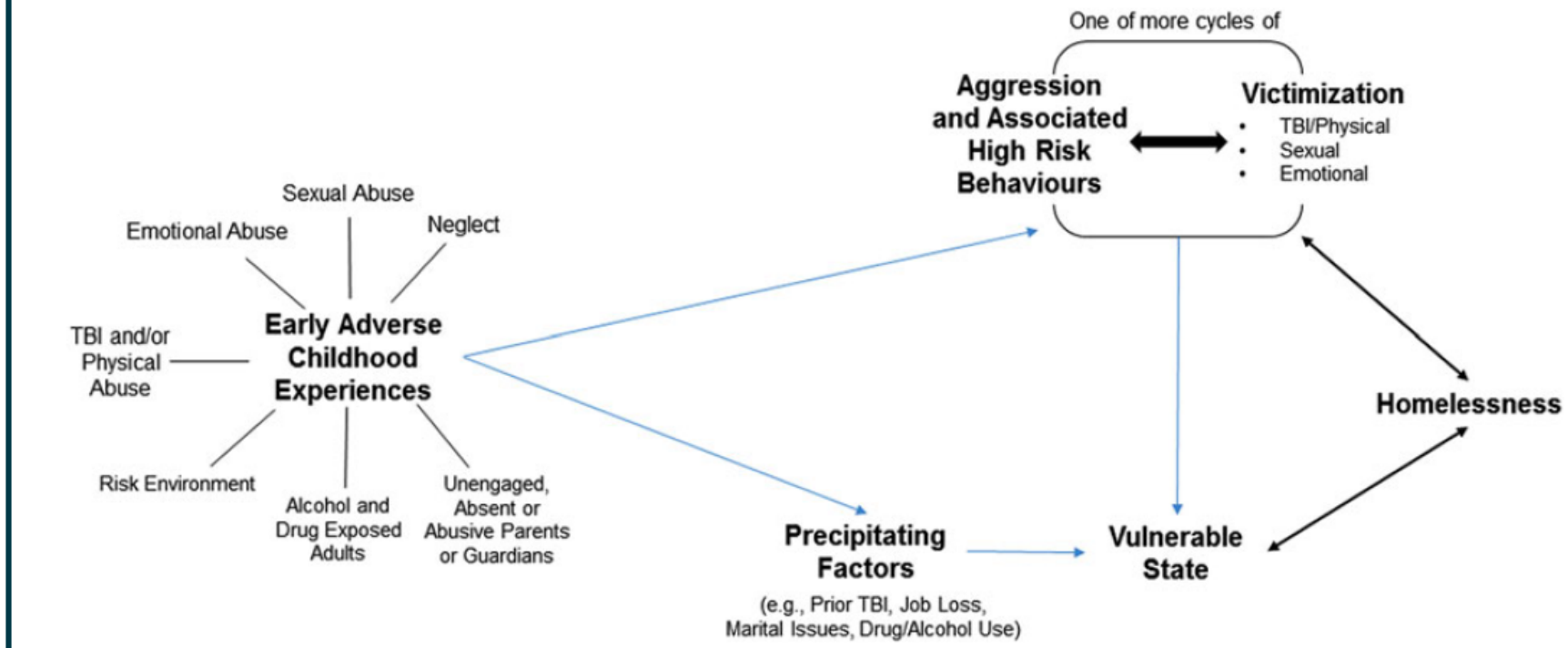


FIG. 2. Proposed web of association between early adverse childhood experiences/influences (including TBI), cycles of aggression and victimization, and homelessness. Early adverse childhood experiences are shown to be associated with violent behaviors or other precipitating factors, which may make a person vulnerable to homelessness or TBI. Homelessness itself may create a vulnerable state and/or increase the likelihood of aggressive behaviors or victimization. TBI, traumatic brain injury.

Cusimano et al., 2021, p. 11

Brain Injury Risk While Homeless

Causes are more likely to be injuries sustained outside (e.g. on the street) or by assault as a result of environmental risk

Homelessness increases substance use – which increases risk for brain injury

Sustaining a brain injury while homeless increase mortality risk after injury

(Dell et al., 2021; McMillan et al., 2015; Nikoo et al., 2017; Park et al., 2024; Young et al., 2020)

Barriers to health care for those experiencing homelessness or housing instability include:

Cost	Lack of insurance coverage	Feeling labeled, stigmatized, or invisible to health care providers
Limited or poor transportation	Lack of access to telephones & mail	Inability to take time off work
Difficulty reaching their provider through the phone	Feeling discriminated against	Forgetting the appointment
Wait times at the office	Difficulty scheduling an appointment	Health Literacy

(Allen et al., 2017; Baggett et al., 2010; Cocozza Martins, 2008; Ford et al., 2018; Kaplan-Lewis & Percac-Lima, 2013; Nickasch & Marnocha, 2009)

Disability and Homelessness

25-40% of people experiencing homelessness have a disability

When denied access to shelter (because shelters are inaccessible or because the shelter feels they are inappropriate/unsafe to stay there) –
70% of people with disabilities stay in outside locations

High levels of health conditions, chronic illness, and geriatric conditions are risk factors for functional impairment and developing challenges with function at earlier ages

(Abbs et al., 2020; Brown et al., 2019; Cimino et al., 2015; Fazel et al., 2014; NAEH, 2023)


BI as a cause of homelessness
BI is a consequence of homelessness
BI contributes to long-term homelessness

Homeless Services & Systems

Shelter

- Emergency shelter
- Low-barrier shelter
- Recovery/abstinence based shelter
- Transitional housing
- Encampments/outside

Housing

- Continuum of Care
- Coordinated Entry
- Permanent Supportive Housing
- Affordable/subsidized housing

Health Care

- Health center
- Street medicine
- Free clinics
- Medical respite care

Basic Needs

- Day centers
- Drop-in centers
- Meal programs
- Mail
- Social Services
- Case management

Additional Factors Impacting Cognition

Medical

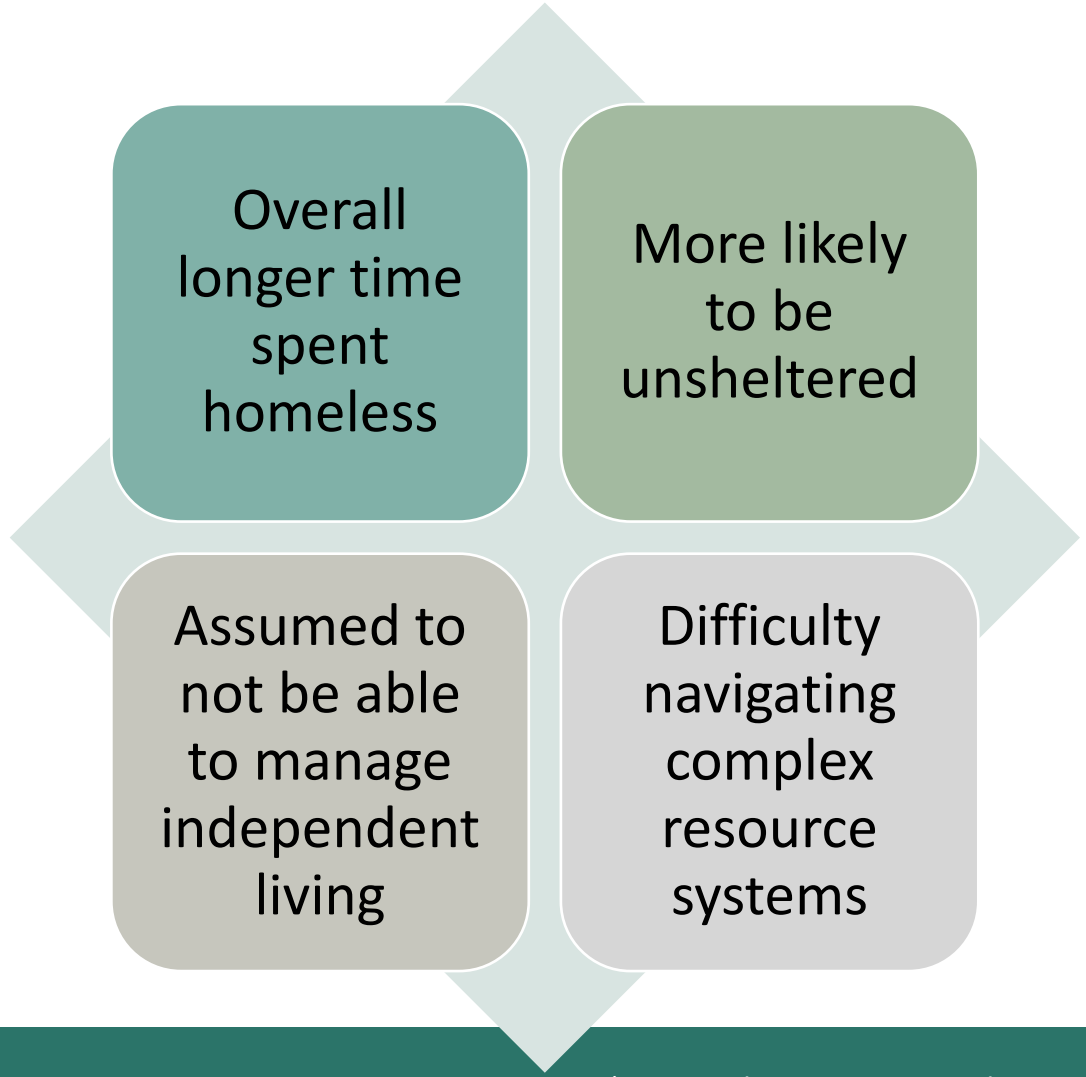
- Developmental Disability
- HIV
- Substance use
- Mental health diagnosis
- Medical interventions/being in an ICU
- Chronic Conditions

Environmental

- Unstable, unsafe, or inadequate housing
- Poor nutrition / Lack of access to food
- Sleep deprivation
- Trauma
- Stress
- Low literacy

(American Occupational Therapy Association, 2019; Lynch & Lachman, 2020; Wei et al., 2019)

What happens after a person becomes homeless?



(Gicas et al., 2020; Stone et al., 2019; Synovec et al., 2023; Young et al., 2020)

Check-in and Discussion

Are these populations that I am currently seeing in my workplace?

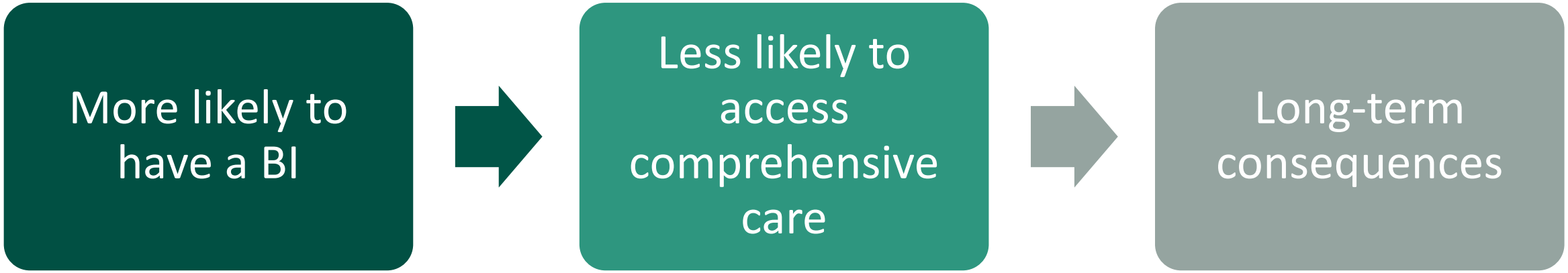
- If no, why might that be the case?

What are some initial ideas about how we can be more inclusive of those affected by SDoH?

Addressing SDoH and Housing within Brain Injury Services

What do we know about approaches for BI in people experiencing homelessness?

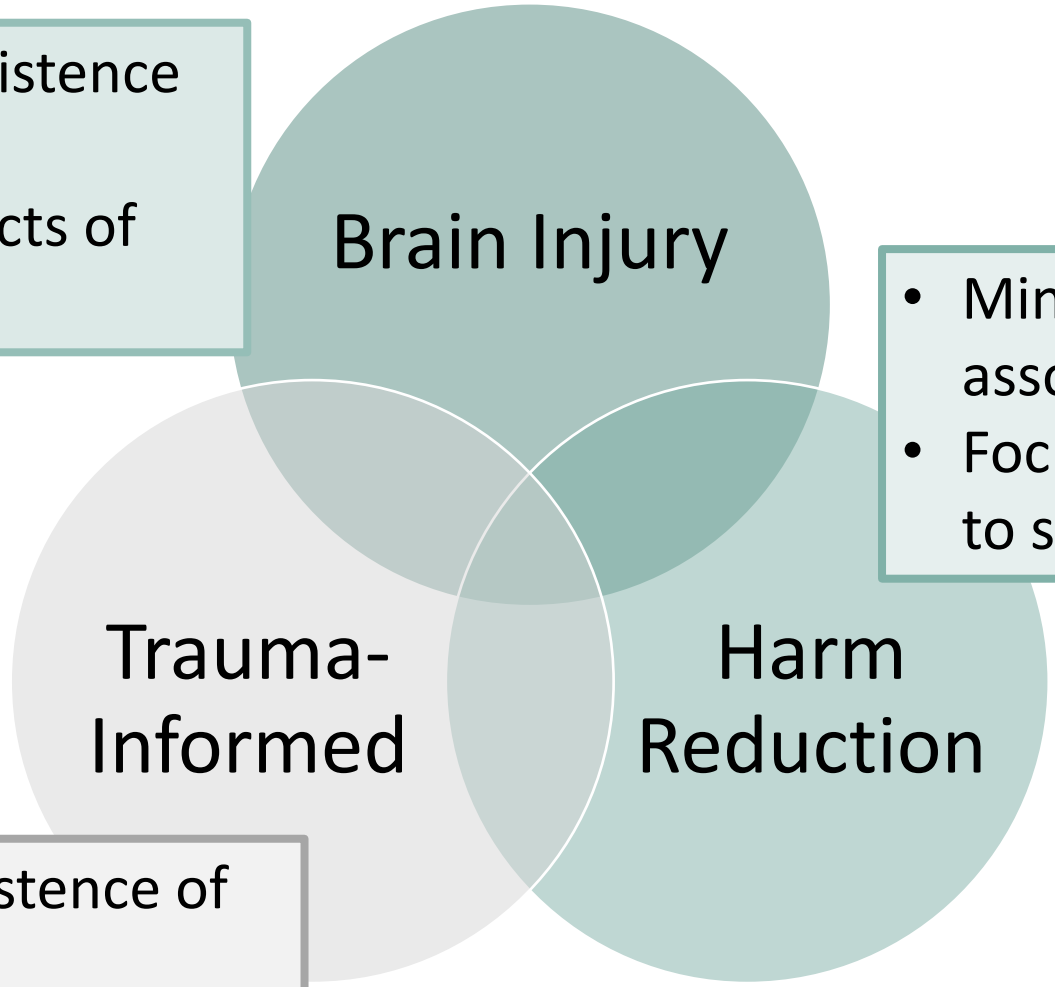
- Most unhoused patients who receive treatment for a BI do not have access to or attend rehabilitation services post injury
- Overall have lower rehabilitation outcomes when hospitalized in acute care brain injury units
- Brain injury practice guidelines do not integrate the needs of those impacted by DOH



Dell et al., 2021; Carroll et al., 2021; Chan et al., 2022a; Chan et al., 2022b; Chan et al., 2023; Eshun et al., 2024; Park et al., 2014

Approaches to Care: Aligning Models

- Recognizes the likely existence of brain injury
- Accommodates for effects of brain injury



- Minimizes the harms associated with substance use
- Focuses on low-barrier access to services

- Recognizes the likely existence of trauma
- Responds to trauma and avoids re-traumatization

Addressing BI & Homelessness

Within Brain Injury and Rehabilitation Programs

Recognize Multiple Impacts on Ability to Engage in Services

Effects of Brain Injury

- Cognition – executive function
- Ability to return to work
- Ability to self-manage

Social Supports

- Who is the available support system?
- Are they able to support and how?
- Are they unsafe or unsupportive?

Social Determinants of Health

- Is there housing?
- Are there other forms of income or finances?
- Are services accessible?

Priorities and Capacity

- Are there other needs the person needs to address first?
- Are they capable of following what was recommended?

Include these considerations as part of the treatment plan.

What might this look like?

Social Supports

- Ask questions to both the person and support systems about what is realistic
- Adapt practices if caregiver is not available
- Be willing to engage with “informal” caregivers

Assess Effects of Brain Injury

- Evaluate executive function and functional cognition
- Complete observational functional assessment of more complex skills/ IADL and work
- Evaluate skills needed to return to community

Priorities and Capacity

- Use motivational interviewing to identify concerns and needs
- Approach without judgment
- Integrate person into the goal setting

SDOH

- Screen for SDOH as part of intake and treatment planning process
- Engage with community resources who can meet these needs
- Assess accessibility of services to those affected by SDOH

Screening for SDoH

PRAPARE Tool

- Developed for community health centers to screen for SDoH
- Available in 25 languages
- Acceptability found for different levels of health literacy

https://prapare.org/

HOUSED Beds

- Specific for unhoused/ unsheltered to determine a more effective treatment plan

https://bettercareplaybook.org/resources/housed-beds-clinical-tool-taking-history-unsheltered-homeless-patient

EPIC SDoH

- Has specific SDoH questions that can be integrated into EPIC systems for screening and intervention

https://www.epicshare.org/share-and-learn/houston-methodist-sdoh

Staffing Training and Skills

Trauma Informed Care

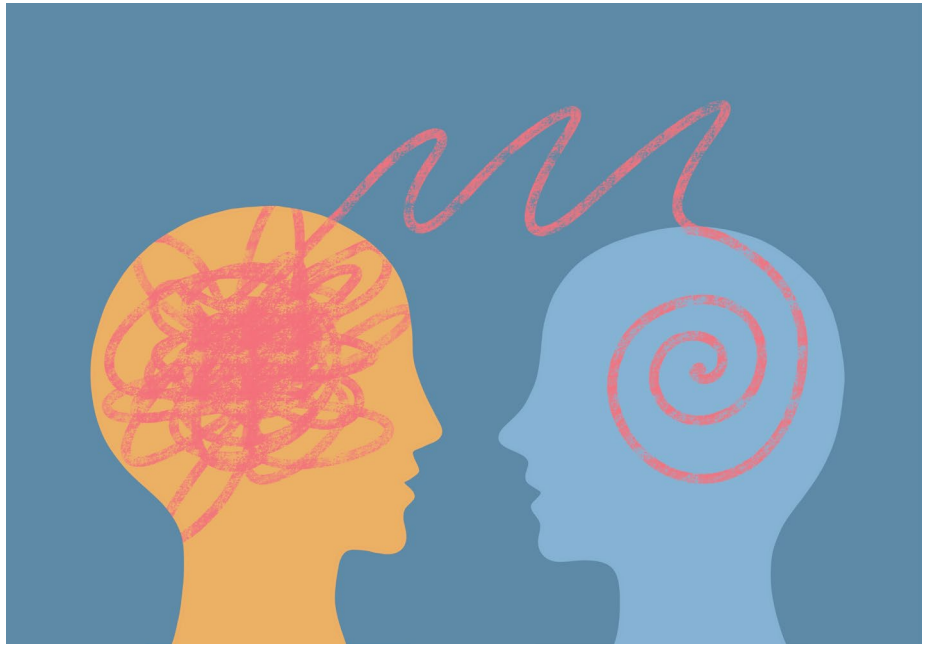
Motivational Interviewing

Social Determinants of Health

Harm Reduction

Bias/ Stigma Training

Ensure an Understanding of Homelessness



- People will be focused on meeting basic needs and survival
- Symptoms of recent trauma(s) may be present
- Focus should be on engagement and relationship building
- Understand that people simply may not have capacity to add on additional services or engage with additional resources
- Transitions, even when positive (like moving into housing), can be challenging
- Acknowledge support systems and non-traditional caregivers
- Learn from those with lived experience

Modifying Care and Discharge Plans When the Person is Unhoused

- Longer hospitalization to complete more rehabilitation and increase function before discharge
- Implementing strategies to address mental health, substance use, and pain to prevent AMA and early discharge
- Connect with community supports as you would a caregiver
- Warm hand-offs to community resources and supports
- Identifying and providing adaptive equipment

Hospital Discharge Toolkit

Findings Document

https://nhchc.org/resource/creating-care-and-discharge-plans-for-people-experiencing-homelessness-who-are-hospitalized-toolkit/

Introduction Videos

Discipline-Specific Checklists

- Prescribing providers
- Nursing
- Occupational Therapy
- Physical Therapy
- Social Work

Additional Resources

Systems Level

Screening for SDoH and housing needs

Organizational support to modify plans of care

Increasing access to services

Integration with existing homeless services

Within Homeless and Housing Services

Identify and Address Brain Injury within Homeless Services and Programs

Screen for Brain Injury

- Integrate screening in regular practices
- Use a recommended screening for the population

Train Providers & Staff

- How to screen
- Strategies to compensate for and address needs of clients with BI
- How to safely engage and address behavior and emotional needs

Ensure Accessibility of Services

- Are systems easy to navigate?
- Are services accessible to all types of needs?

Build Partnerships

- Identify services for people with BI and eligibility criteria
- Facilitate connections and warm-handoffs

Include these considerations when adapting and developing services.

What might this look like?

Ensure Accessibility of Services

- Adopt “no wrong door” policies
- Use health literacy guidelines throughout the organization
- Simplify systems and processes

Screen for Brain Injury

- Use researched tools such as the OSU TBI-ID
- Integrate process into systems to ease burden on providers (such as EHRs or HMIS)
- Develop processes to follow-up on results (documentation, care plan changes, referrals)

Build Partnerships

- Creating a direct referral system between agencies
- Case conferencing to determine who might be eligible for services
- Work collaboratively to address needs

Train Providers & Staff

- Agency wide screening
- Trauma-informed care and motivational interviewing
- Learn specific accommodations and strategies for cognitive and emotional/ behavioral needs

Approaches to Care: Screening [1 of 2]

- Encourage inclusion of **recommended** questions that would identify a history of head injuries
- Integrate questions into regular screening practices
- Educate on need for screening in all levels of providers (not just medical providers)
  - Screening can be done by case managers and homeless service providers

Approaches to Care: Screening [2 of 2]

- Help identify how this information can be documented and where – and how to avoid duplication of screening
  - HMIS
  - Medical records
- Provide, encourage, and train use on the OBISSS
- Encourage proper identification of a BI so that someone's behavior doesn't get misdiagnosed and result in not accessing program services
  - Often this is identified as behavioral health or substance use

Approaches to Care: Equipping & Supporting Staff

First, spend time to understand the program/ services, their primary mission, and day to day workings of the program

Identify or understand the program participants they have had the most challenges with and frame how BI may be contributing

Identify “champions” to help serve as an internal resource on brain injury

Provide training to staff on how to effectively identify and respond to the needs of people with BI in their services

Offer ongoing consultation and support

Training and Equipping Staff

Provide initial education around brain injury, what it looks like, and how it affects unhoused populations

- This may be tailored to the specific population served (e.g. IPV survivors, Veterans)
- Understand overlap between brain injury and other co-occurring behavioral needs

Provide training on strategies to support people with brain injury in their programs

- This is where understanding the program and expectations is critical
- Strategies will need to be adapted to the resources available to the programs and the population served
- Collaboration with a “program champion” might be helpful to identify what strategies will be most effective in their setting

Provide training on how to modify program systems and structures to be more accessible

Strategies for Partnerships: Collaboration [1 of 2]

Identify ways for BI and homeless services programs to work together for:

- Referrals
- Providing services
- Advocacy (community and state level)

Cross-training to build understanding the needs of services and the population(s)

- Allow staff time to learn from each other across agencies

Strategies for Partnerships: Collaboration [2 of 2]

Include community members/ people who are unhoused or with lived experience in training, advocacy, and program changes to understand where they experience barriers and how things can be improved

Ensure your BI programs are equipped to support people experiencing homelessness

- Your staff may need trauma-informed care and bias trainings
- Consider how to implement low barrier services
- Be willing to communicate with different caregivers and staff of programs

Strategies for Partnerships: Building Pathways to Services

Identify ways to make more direct pathways to needed services between each organization

- Consider how to communicate between entities and with those that are not yet brain injury informed

How can we create warm-handoffs to help people access services and not fall through the cracks?

Integrate best practices in both service streams to support people:

- Use of peer supports, navigators, and community health workers
- Low barrier services
- Checking in with the person to see how things are going and what changes have happened

Integration of Rehab in Housing Services

Integrate rehabilitation and brain injury providers into services where people are already receiving care

Consider health centers, behavioral health, substance use programs, and permanent supportive housing

In-house case conferencing and communication

Advocacy

Integrate Services

- “De-silo” medical and mental health services
- Improve communications among services and providers

Educate Across Systems

- Educate systems that people encounter (criminal justice, substance use recovery etc.) on brain injury

Enable Providers

- Give opportunity for training, practice, and collaboration
- Increase provider flexibility within systems

Advocate for Affordable & Accessible Housing

- Does our community have adequate affordable housing?
- Does our community have adequate accessible housing?

What might this look like?

Enable Providers

- Include time for training within regular working hours
- Provide opportunity to engage in shared learning
- Allow for time to learn and implement strategies learned

Integrate Services

- Provide brain injury services within homeless services and/or integrate social services into BI programs
- Community case conferencing across programs and entities

Advocate for Accessible and Affordable Housing

- Housing developed should meet the needs of the community
- Develop regulations that support equitable affordable housing development

Educate Across Systems

- Provide training in all entities that will encounter individuals with brain injury and/or SDOH
- Develop partnerships for learning and support

Take-Aways and Next Steps

Internal needs assessment –	**Where is our organization now?**
	What of these recommendations can we start with?
	What long-term goals do we want to work towards?
	What resources exist in our community that we can connect with?
	How can we support community partners in advocacy efforts?

Questions and Reflections?

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