BRAIN INJURY AND OVERDOSE: BUILDING CAPACITY AMONG PROVIDERS TO MEET THE NEEDS OF INDIVIDUALS WITH INTERCONNECTED BEHAVIORAL HEALTH CONDITIONS

BY JASMINE MCCLENDON
PRACTICUM GOAL

- To aid the BHA in both understanding and linking the complex relationship amongst substance use, overdose, and brain injuries.

- In doing so, this would aid and support substance abuse providers, harm reduction service providers, as well as family members and friends of clients, to be both successful in treatment programs and foster improved social, mental, and physical well-being.
OVERVIEW

Opioid Overdoses

- Over 32,000 deaths associated with an opioid in the U.S. in 2015
- In Maryland, there were over 1600 deaths due to opioid overdoses in 2016
- In 2017, State Gov. Hogan declared Maryland to be in a state of emergency in response to the opioid epidemic throughout the state

Traumatic Brain Injuries (TBIs)

- An often unmentioned consequences of opioid overdoses is brain injuries
- In 2013, TBIs accounted for nearly 2.8 million deaths, hospitalizations, and ED visits in the U.S.
- In Maryland, between 600-700 deaths occurred secondary to TBIs between 2012-2013
METHODS

- Assess existing literature on substance use, overdose, and TBIs
- Attend and engage in community trainings and team meetings
  - Overdose Fatality Review, Syringe Services Working Group
- Met with ‘experts in the field’
  - Dr. John Corrigan, Professor at the Department of Physical Medicine and Rehabilitation Center at Ohio State University; Director of Ohio Valley Center for Brain Injury and Prevention
  - Dr. Rao, Director of Brain Injury Program at John Hopkins Hospital
  - Dr. Roy, Assistant Professor of Psychiatry and practicing physician at Bayview Medical Center
- Observorship experiences
  - Healthcare for the Homeless
  - HOPES program
- Create general overview and accommodations fact sheets around TBI and opioid overdose
FINDINGS

- Overdoses can result in deprivation of oxygen to the brain, leading to injury
- Brain is highly susceptible to damage from lack of oxygen
- Some areas of the brain are more sensitive to lack of oxygen as compared to others:
  - Hippocampus
  - Basal Ganglia
  - Thalamus
  - **Frontal Lobe**
- Frontal lobe damage leads to potential loss of executive functions such as planning, organizing, emotional and behavioral control, problem solving, attention, memory for habits, flexible thinking, and more
- Executive functions are often required to participate, engage, and thrive in treatment
CASE STUDY

- **Decedent**: Beverly Tiega, HIV +, 37 y/o, Female
- **COD**: Heroin contaminated with Fentanyl, overdose
- **Notes from Scene**: Decedent and her partner both found to be unresponsive on the street by bystanders. Multiple contaminated needles found at the scene.
- **ED Records**: Patient with multiple ED visits, most recently on 4/21/18. Patient found to have multiple bruising on R posterior flank, and laceration above R eye. Patient reports “falling down the stairs”; denies any previous history of abuse. Previous XR shows fracture of L wrist, 8th and 9th R rib fractures
- **Social Services**: Subject placed in multiple foster homes after initial substantiation of parental neglect
- **PDMP**: Rx for 20 OxyContin by ED doc on 4/21/18, 4/1/28; 3/17/18 Rx for 30 Oxycodone by PCP on 3/1/18, 2/13/18, 12/31/17, 10/15/17
- **Women’s Shelter**: Asked to leave due to multiple physical and verbal conflicts with other residents and staff
ACCOMMODATIONS

Service Provider Agencies

- Small Group Settings
- Present information in multiple formats (Auditory, Visual, Verbal)
- Present information in small “chunks”
- Repeat presentations of “key information”
- Use of role playing

Family and Friends

- Be consistent- put things in the same place (wallet, keys, phone, etc.)
- Partition off “quiet space” at home
- Break task into small, manageable steps
- Create a daily schedule; “routinize” the day as much as possible
- Accessibility → things that are commonly used, keep them physically close (kitchen, office, etc.)
LIMITATIONS AND CHALLENGES

Limitations

- Literature review was comprehensive but may have missed studies due to language bias and any new studies published after completion of literature review
- No access to professional design software such as Photoshop or adobe illustrator for fact sheets

Challenge

- Lack of existing evidence-based literature
CONCLUDING REMARKS

Lessons Learned

- Time Management
- Importance of having a great team/colleagues to work with

Policy Implications

- Accommodations factsheets have already been disseminated at the 2018 BHA Annual Conference
- Currently being considered for adoption on a national level by NASHIA and SAMHSA
- Factsheets have already had implications as a resource for the BHA, service provider organizations, and family members of individuals living with a TBI
### DELIVERABLES

#### Traumatic Brain Injury and Opioid Overdose Fact Sheet

**Summary:**
- Traumatic brain injury (TBI) is one of the leading causes of death and permanent disability in the U.S., often resulting in long-term health conditions.
- The brain is the control center of our body, and its functions must be maintained to ensure proper body functioning.

**Linking TBI to Opioid Overdose**

<table>
<thead>
<tr>
<th>Reasoning with TBI and Opioid Overdose</th>
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<tbody>
<tr>
<td>1. TBI can cause changes in how the brain works, leading to impaired behavior and judgment.</td>
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<tr>
<td>2. Opioids can also impact brain function, leading to impaired thinking and behavior.</td>
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<td>3. Both TBI and opioids can contribute to substance abuse, as individuals may turn to opioids to manage pain or manage mental health issues.</td>
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</tbody>
</table>

**What is TBI?**
- A traumatic brain injury (TBI) occurs when the brain is injured by a bump, blow, or jolt to the head that disrupts normal brain function.

**What Changes?**
- Increased risk of depression
- Increased risk of anxiety
- Increased risk of psychosis
- Increased risk of suicide

**How Can I Help?**
- **Your role is more important**
  - Family may change
  - Taking care of your family member
  - Taking care of yourself
  - Taking care of you and your friend

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#### Living With A Traumatic Brain Injury

**Summary:**
- The factsheet provides information on how to live with a traumatic brain injury.
- It includes strategies for managing the effects of TBI.

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**What About Me?**
- Your role is more important
  - Family may change
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  - Taking care of yourself
  - Taking care of you and your friend

**Conclusion:**
- Understanding and managing the effects of a TBI is crucial for maintaining a healthy life.
REFERENCES


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