

Building Community Capacity: the Development of a TBI Behavioral Health ECHO



Jennifer M Erickson, DO¹, Cherry Junn, MD², Charles Bombardier, PhD³, & Jesse Fann, MD MPH^{1,2}

1. University of Washington, Department of Psychiatry & Behavioral Sciences
2. University of Washington, Department of Rehabilitation Medicine
3. University of Washington, Department of Rehabilitation Medicine, Division of Rehabilitation Psychology

BACKGROUND

- Traumatic brain injury (TBI) is a significant cause of disability throughout the US.¹
- TBI increases the risk and complexity of multiple behavioral health conditions.¹⁻⁴
- Successful TBI recovery largely depends on access to and engagement in behavioral health treatment.³⁻⁵
- Treatment of post-TBI symptoms often falls to community providers who have little support.⁴
- Few interdisciplinary educational opportunities exist.

Project Extension for Community Healthcare Outcomes (ECHO)

- Since 2003, 4,962 ECHO programs have been created.^{5,6}
- Delivers specialized knowledge to providers outside of academic medical centers.^{5,6}
- No programs to date have specifically addressed TBI Behavioral Health (BH) challenges.^{5,6}
- None have addressed interdisciplinary education.^{5,6}

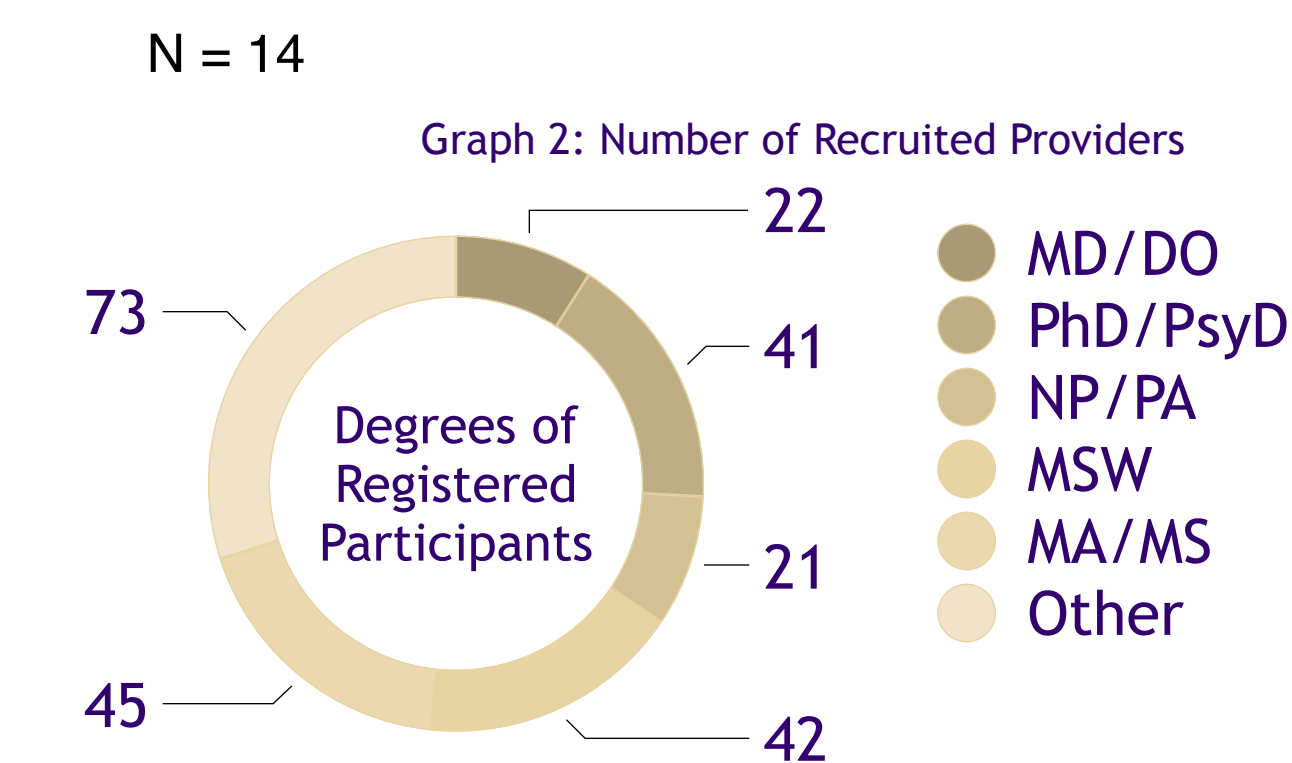
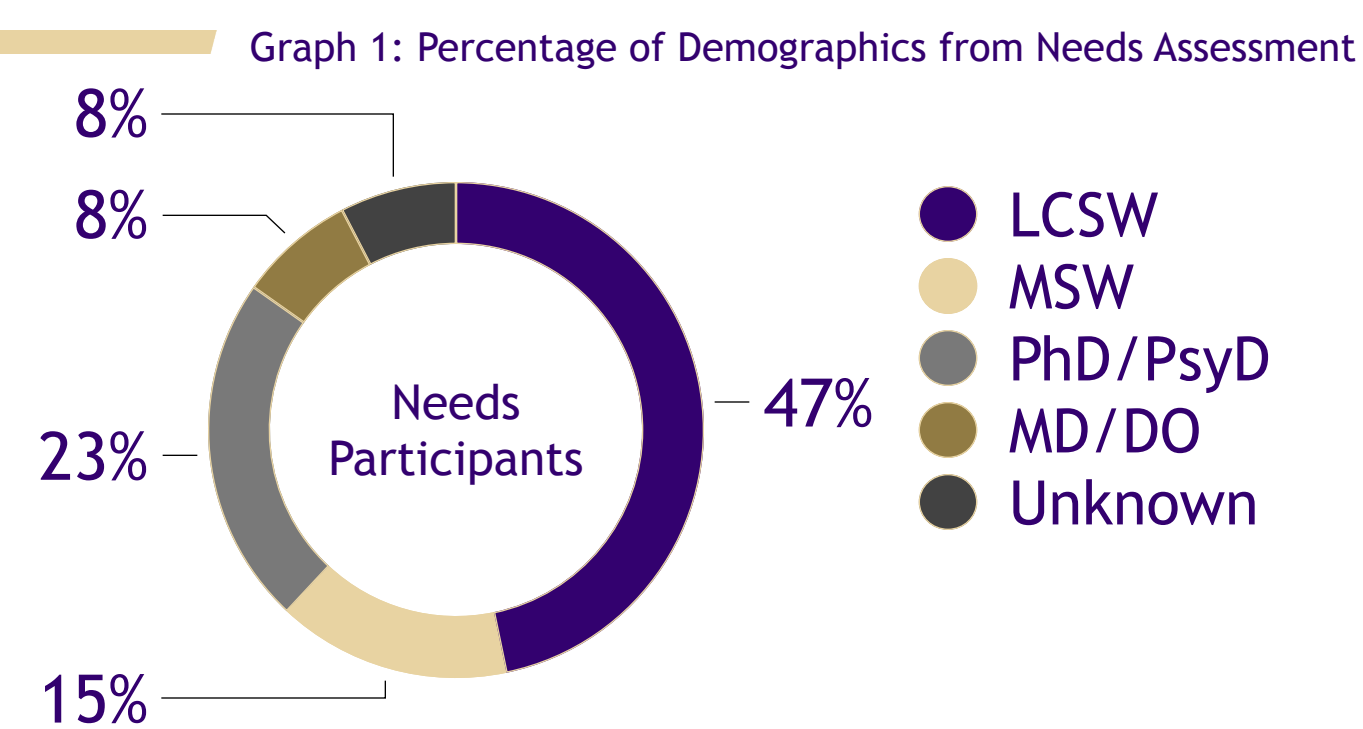
AIMS

- Engage community organizations about interest/ feasible/need assessment.
- Generate a curriculum based on needs assessment & multidisciplinary content expert experience.
- Recruit and launch the 1st TBI BH ECHO.

METHODS

- Outreach: Department of Social and Health Services, Department of Corrections (DOC), TBI Model Systems, & Brain Injury Alliance of Washington. (N = 4)
- Content Experts: Two from the Dept of Psych, 1 for Rehab Medicine, 1 for Rehab Psychology. (N = 4)
- Needs assessment survey sent to leads from outreach & content expert. (Graph & Table 1)
- Recruitment & Q1 eval completed (Graph & Table 2)
- Program launched January 2022 with monthly meetings that lasted 1.5 hrs. Increased to twice monthly in April.

RESULTS



N = 267

Table 1 Needs Assessment

Topic	How important is this topic? (Average 1-10)	How often is the management of this a concern in your practice? (Average 1-10)
Post-TBI Depression	10	5.8
Post-TBI Anxiety	8.75	5
Post-TBI SUD	8.75	5
TBI & Sleep disturbances	8.5	3
TBI & Anger/irritability	7.5	4
TBI & Headache/Pain management	9.5	6
TBI & Cognitive Impairment	7.25	3
TBI & Bipolar/Psychosis	9	4
TBI & PTSD	7.75	5
Neurodegenerative disorder after TBI	9	5
Persistent post-concussive symptoms	8.75	4
Apathy, Fatigue & TBI	8.5	4
Treating Seizures & Psychiatric Symptoms	8.75	6

Table 2 Didactic Schedule & Evals

Topic	Number in attendance	Number of Evals	Relevance (Average 1-5)	Quality (Average 1-5)
TBI Identification	22	20	4.3	4.4
Persistent Symptoms	21	20	4.5	4.7
Post-TBI Depression	24	20	4.8	4.6
Post-TBI Anxiety	27	*	*	*
TBI & PTSD	26	*	*	*
Post-TBI AUD	30	*	*	*
TBI & Bipolar/Psychosis	18	*	*	*
TBI & Sleep disturbances	28	*	*	*
TBI & Cognitive Impairment	27	*	*	*
TBI & Anger/irritability	41	*	*	*
Neurodegenerative Disorder after TBI	22	*	*	*
TBI & Headache/Pain Management	23	*	*	*
Apathy, Fatigue & TBI	31	*	*	*

* Evaluations collected Q6months. The next set is due on 10/31. To be updated before the conference

DISCUSSION

- Engagement with key community organizations and stakeholders has been invaluable. Without this effort, we would have potentially missed the interdisciplinary educational needs & failed to recruit from DOC.
- Although community management of particular TBI-related issues was seen as not an issue, qualitative feedback has suggested that this may be a community TBI identification issue.
- 267 individuals have registered to date
- 26 average number of attendees per session
- Most sessions are attended by interdisciplinary providers
- This engagement has led to an additional two years of funding for the program.

CONCLUSIONS

Complex medical needs have many different types of providers on the frontline and call for interdisciplinary educational interventions. Using this ECHO program as a model, CL Psychiatrists can be better prepared to engage these stakeholders in developing ECHO programs for other complex patient populations.

ACKNOWLEDGEMENTS

We would like to recognize the Garvey Institute for Brain Solutions for our initial funding & DSHS for their ongoing partnership.

REFERENCES

1. Taylor CA, Bell JM, Breiding MJ, Xu L. Traumatic brain injury-related emergency department visits, hospitalizations, and deaths—United States, 2007 and 2013. *MMWR Surveillance Summaries*. 2017 Mar 17;66(9):1.
2. Traumatic Brain Injury: Washington State Department of Health. <https://www.doh.wa.gov/YouandYourFamily/InjuryandViolencePrevention/TraumaticBrainInjuries>
3. Whelan-Goodinson R, Ponsford J, Johnston L, Grant F. Psychiatric disorders following traumatic brain injury: their nature and frequency. *The Journal of head trauma rehabilitation*. 2009 Sep 1;24(5):324-32.
4. Corrigan JD, Whitenack G, Mellick D. Perceived needs following traumatic brain injury. *The Journal of head trauma rehabilitation*. 2004 May 1;19(3):205-16.
5. Arora, S., Kalishman, S., Thornton, K., Dion, D., Murata, G., Deming, P., ... & Pak, W. (2010). Expanding access to hepatitis C virus treatment—Extension for Community Healthcare Outcomes (ECHO) project: disruptive innovation in specialty care. *Hepatology*, 52(3), 1124-1133.
6. Project ECHO. <https://hsc.unm.edu/echo/>