



Treating Veterans/Service Members with Cognitive Impairment after TBI: An I-HEAL Survey on Preparedness and Caregiver Inclusion

Marc A. Silva, PhD¹⁻², Jill Coulter, MA¹, Ashok Kumbamu, PhD¹⁻², Jessica L. Ryan, PhD¹⁻³,
Jolie N. Haun, PhD EDS^{1,4}, Megan Moore, PhD MSW^{3,5}, Risa Nakase-Richardson, PhD¹⁻³, Kristin Dams-O'Connor, PhD^{1,3,6}

¹James A. Haley Veterans' Hospital, Tampa, FL, ²University of South Florida, Tampa, FL, ³Tampa VA Research and Education Foundation, Tampa, FL,
⁴University of Utah, Salt Lake City, UT, ⁵University of Washington School of Social Work, Seattle, WA, ⁶Icahn School of Medicine at Mount Sinai, New York, NY

Introduction

- Cognitive impairment is present in 21-57% of traumatic brain injury (TBI) survivors, and is associated with poor treatment adherence, higher rates of rehospitalization, and premature mortality.¹⁻³
- According to the 2022 NASEM report, caregivers (often family members) are vital in facilitating recovery of people with TBI.⁴
- Objective:** Describe provider and healthcare system preparedness to work with individuals with cognitive impairment and caregivers to optimize health care delivery.

Methods

- Web-based survey distributed over professional organization mailing lists.
- Convenience sample of health care providers. (N=319)
- Brown-Forsyth Robust Test of Equality of Means.⁵
- Games-Howell post-hoc tests.

Figure 1: Provider Type

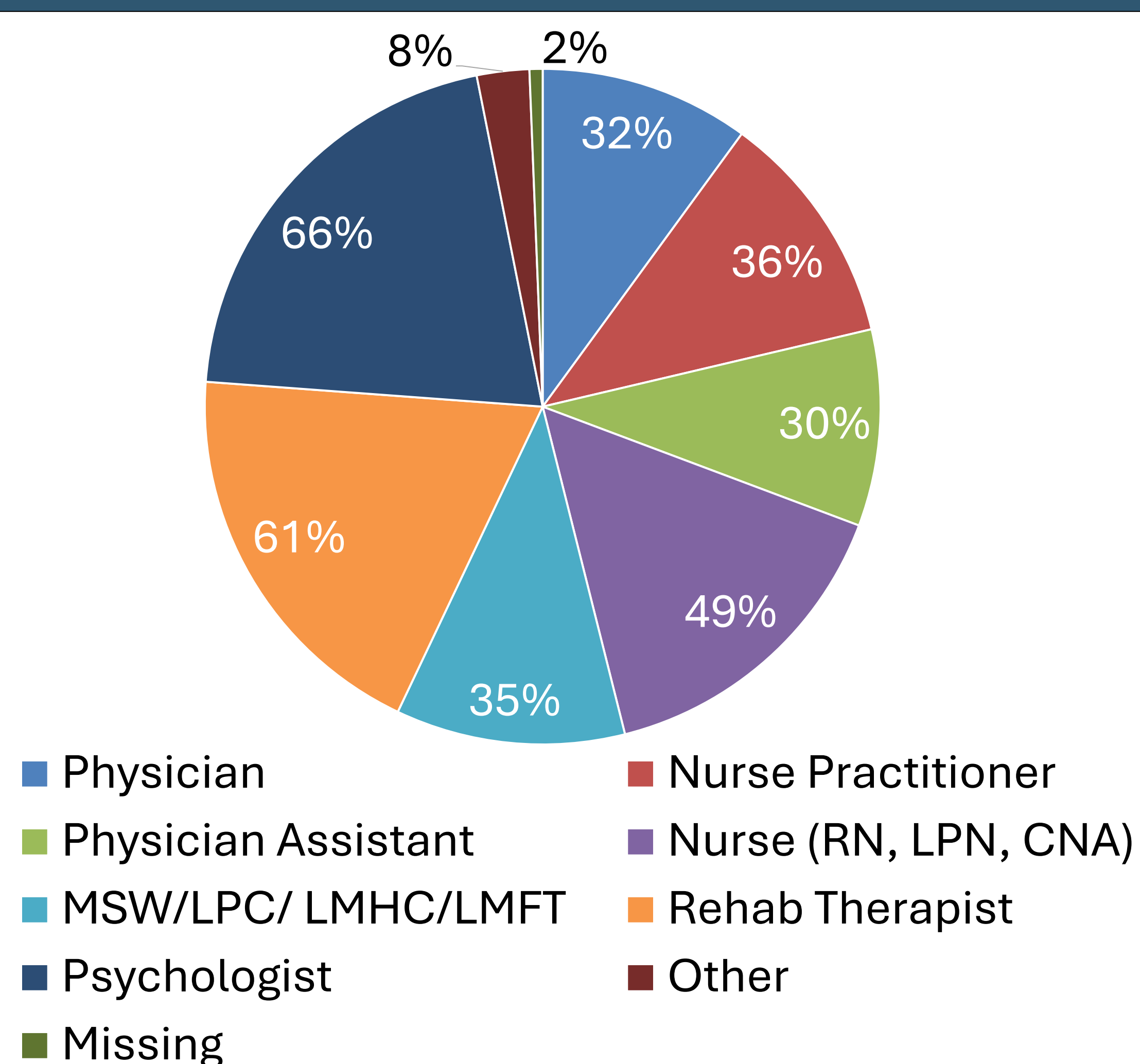


Table 1: Survey Respondents, Provider Type

Provider type	Civilian N=135		Military N=7		Veteran N=176	
	N	%	N	%	N	%
Medical Doctor (Physician)	12	37.5	2	6.3	18	56.3
LMHC, LPC, LMFT, or Social Worker	3	8.6	0	0	32	91.4
Nurse Practitioner (ARNP)	26	72.2	0	0	10	27.8
Nurse (RN, LPN, CNA)	28	57.1	0	0	21	42.9
Other	1	11.1	0	0	8	88.9
Physician's Assistant	23	76.7	3	10.0	4	13.3
Psychologist	27	40.9	2	3.0	37	56.1
Rehabilitation Therapist	15	24.6	0	0	46	75.4

Table 2: Omnibus Brown Forsyth Tests Comparing Provider Types

		α	ε^2
Q1	How qualified (trained, prepared) are you in delivering care to people who have cognitive difficulties during healthcare encounters/ interventions?	<.001	.064
Q2	Is your healthcare setting (e.g., procedures, staff, physical environment) prepared to deliver care to people who have cognitive difficulties?	.096	.016
Q3	How qualified (trained, prepared) are you in delivering care to a person with cognitive difficulties with a caregiver present?	<.001	.079
Q4	How important is it for you (healthcare team or office) to be alerted to an incoming patient with cognitive difficulties?	.896	-.013
Note: ε^2 Interpretation: Negligible: 0.00 to < 0.01; Small / Weak: 0.01 to < 0.06; Moderate: 0.06 to < 0.14; Large / Strong: ≥ 0.14			

Table 3: Pairwise Comparisons

Provider type	Q1		Q2		Q3		Q4	
	M	SD	M	SD	M	SD	M	SD
Medical Doctor (Physician)	7.41	2.42	5.94	2.98	7.94	2.11	7.63	2.34
LMHC, LPC, LMFT, or SW	7.03 ^A	2.57	5.71	3.10	7.71 ^A	2.19	7.94	2.87
Nurse Practitioner (ARNP)	7.69 ^B	1.65	7.08	1.61	7.31 ^B	1.47	7.97	1.36
Nurse (RN, LPN, CNA)	7.67 ^C	1.64	6.45	2.16	7.67 ^C	1.59	7.86	1.74
Physician's Assistant	7.73 ^D	1.53	6.87	1.96	7.37 ^D	1.13	7.77	0.97
Psychologist	7.30 ^E	2.35	6.77	2.56	7.36 ^E	2.58	7.50	2.99
Rehabilitation Therapist	8.82 ^{A,B,C,D,E}	1.36	7.03	2.54	8.98 ^{A,B,C,D,E}	1.27	7.51	2.65

Discussion

- Rehabilitation therapists report being the most prepared for developing strategies to support patients with cognitive impairment (and may be allies/resources for less prepared providers).
- Nurses, psychologists, and other mental health providers (LPCs, LCSWs, LMHCs, etc.) reported less preparation (and may benefit from a systems intervention).
- Providers who spend more time providing health care services to those with cognitive impairment reported higher preparedness.
- All providers (across license types or frequency of managing patients with cognitive difficulties) want to be notified that an incoming patient has cognitive difficulties.

References

- Tsai YC, Liu CJ, Huang HC, et al. A meta-analysis of dynamic prevalence of cognitive deficits in the acute, subacute, and chronic phases after traumatic brain injury. *J Neuroscience Nursing*. 2021;53(2):63-68.
- Saverino C, Swaine B, Jaglal S, et al. Rehospitalization after traumatic brain injury: a population-based study. *Arch Phys Med Rehabil*. 2016;97(2):S19-25.
- Wittine LM, Ketchum JM, Silva MA, et al. Mortality among Veterans following Traumatic Brain Injury: A VA Traumatic Brain Injury Model Systems Study. *J Neurotrauma*. 2025. 42(7-8): 745-757.
- National Academies of Sciences, Engineering, and Medicine. *Traumatic Brain Injury: A Roadmap for Accelerating Progress*. Washington, DC: The National Academies Press; 2022.
- Brown MB, Forsythe AB. The small sample behavior of some statistics which test the equality of several means. *Technometrics*. 1974;16(1):129-32.

Acknowledgements

- Financial Disclosures:** Funded by CDMRP Award # HT9425-23-1-0621 for Improving Health Care Access and Engagement for Veterans and Service Members with TBI Morbidity (I-HEAL). IRBNet # 1804543.
- Acknowledgment of VA Research Support:** This material is the result of work supported with resources and the use of facilities at the James A. Haley Veterans' Hospital. Administering institution: Tampa VA Research and Education Foundation.
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