

Access to Mental Health Care for Children & Adolescents with TBIs

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Disclosures

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 - K23HD078453- Prior

Outline

1. Current State

- Access to mental health services for children with Moderate & Severe TBI
- Risk factors (intervention opportunities) for inadequate access to post-TBI mental health services
 - Clinical level
 - Health Systems
 - Health Policies
 - Individual (Patient & Families)

2. Multilevel interventions to facilitate access to Post-TBI Care

Background

Pediatric TBI and Mental Health Needs

Children with TBI have high incidence of mental health conditions

- 1/3 of children with mild complicated TBI have MH needs (33% 6 m / 38% 12m)
- Half of children with moderate-severe TBI have MH needs (46% 6m / 56% 12 m)

MH conditions may precede the TBI or be a consequence of the TBI

- Children with MH conditions are more likely to have a TBI
- TBI can disrupt frontal-subcortical and limbic circuits involved in emotional regulation
- TBI can impair emotional processing & executive function
- Patients with TBI can experience persistent internalizing symptoms
- TBI symptoms (i.e. sleep disturbances) affect mental health, and overall quality of life (Qol).

Unmet Rehabilitation Needs Among Children Hospitalized for a TBI

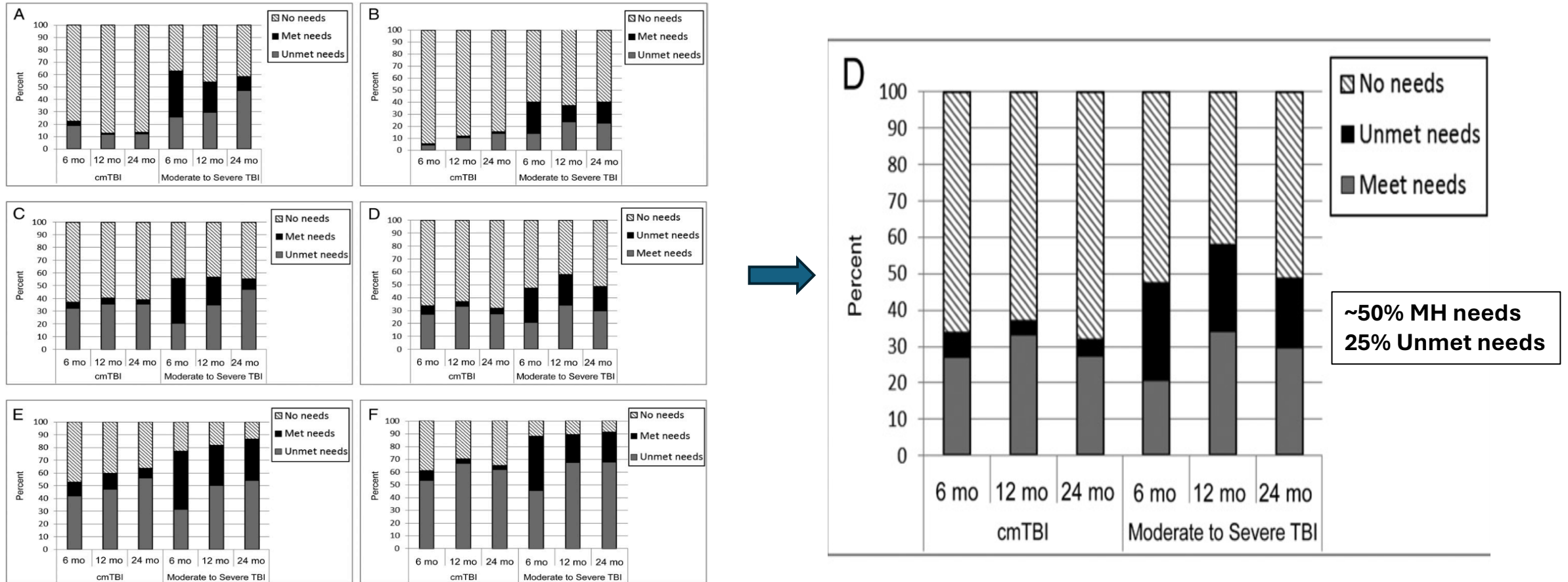


FIGURE 1 Service needs after TBI hospitalization at 6, 12, and 24 months after injury. At 6 months, cmTBI $n = 95$, and moderate to severe TBI $n = 37$. At 12 months, cmTBI $n = 90$, and moderate to severe TBI $n = 39$. At 24 months, cmTBI $n = 69$, and moderate to severe TBI $n = 3$. A, PT. B, OT. C, ST. D, Mental health services. E, Educational services. F, Physiatry.

Mental Health Needs

Receipt of Outpatient Rehabilitation after TBI Hospitalization the Role of Insurance

- Seminal study access to post-TBI outpatient care

Children on Medicaid were 2 X more likely to report unmet needs at 12 months compared to commercial insurance OR: 2.27 (1.15–4.47)

- Cohort Study: 9361 children hospitalized for a TBI & Medicaid insured
62% Moderate-severe TBIs
- Only 29% received outpatient rehabilitation 1st year post TBI
- Only 12% received outpatient rehabilitation 2nd-3rd years post TBI

Pediatrics.2006; 117 (4)

Pediatrics.2016;137(6):e20153500

Gaps In Post-TBI Pediatric Mental Health Care By Race & Ethnicity (Medicaid Population)

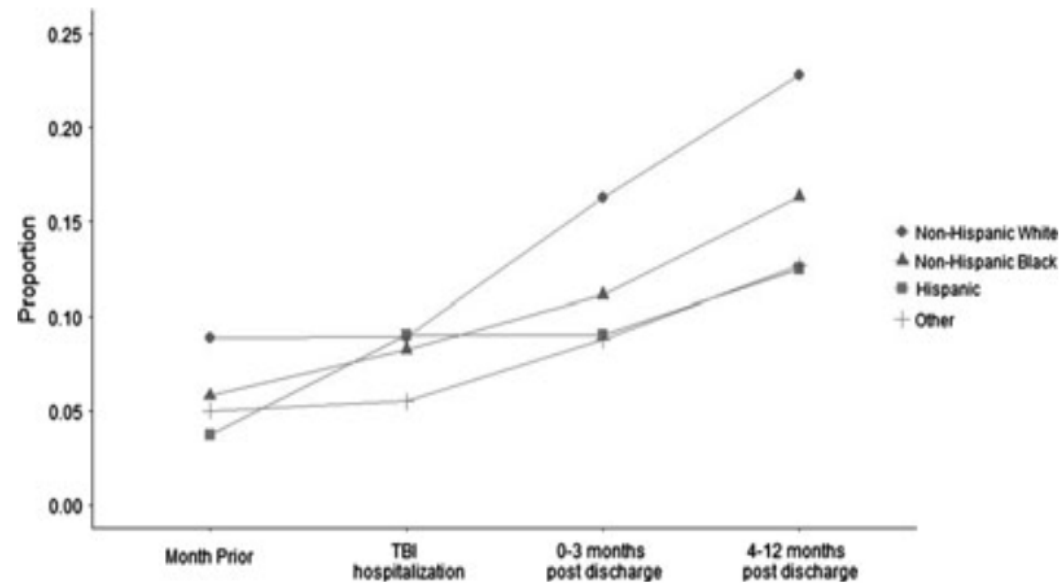


Figure 1. Proportion of children who received mental health services.

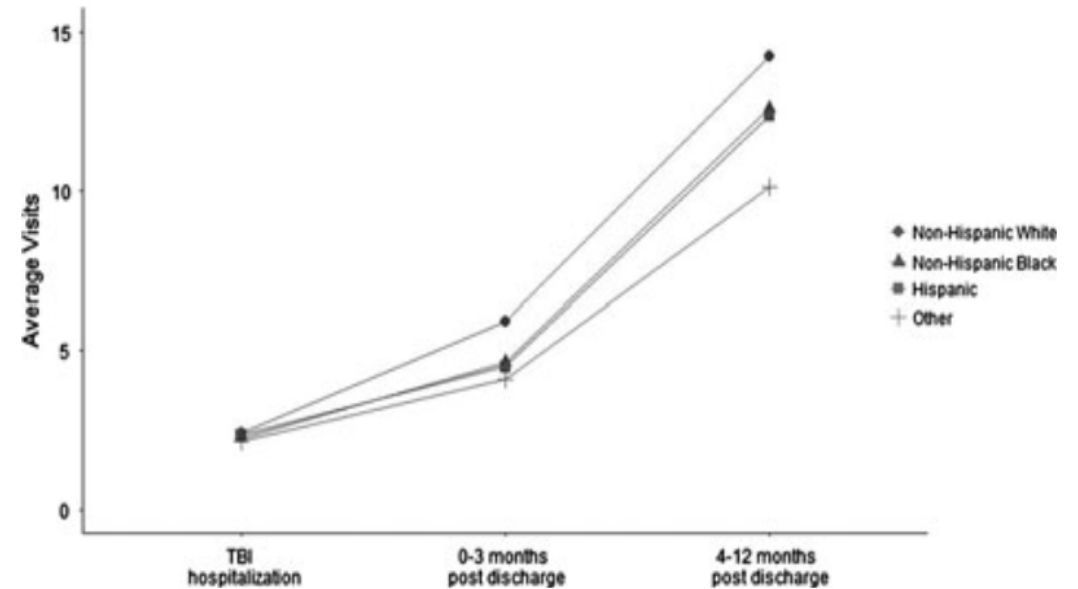
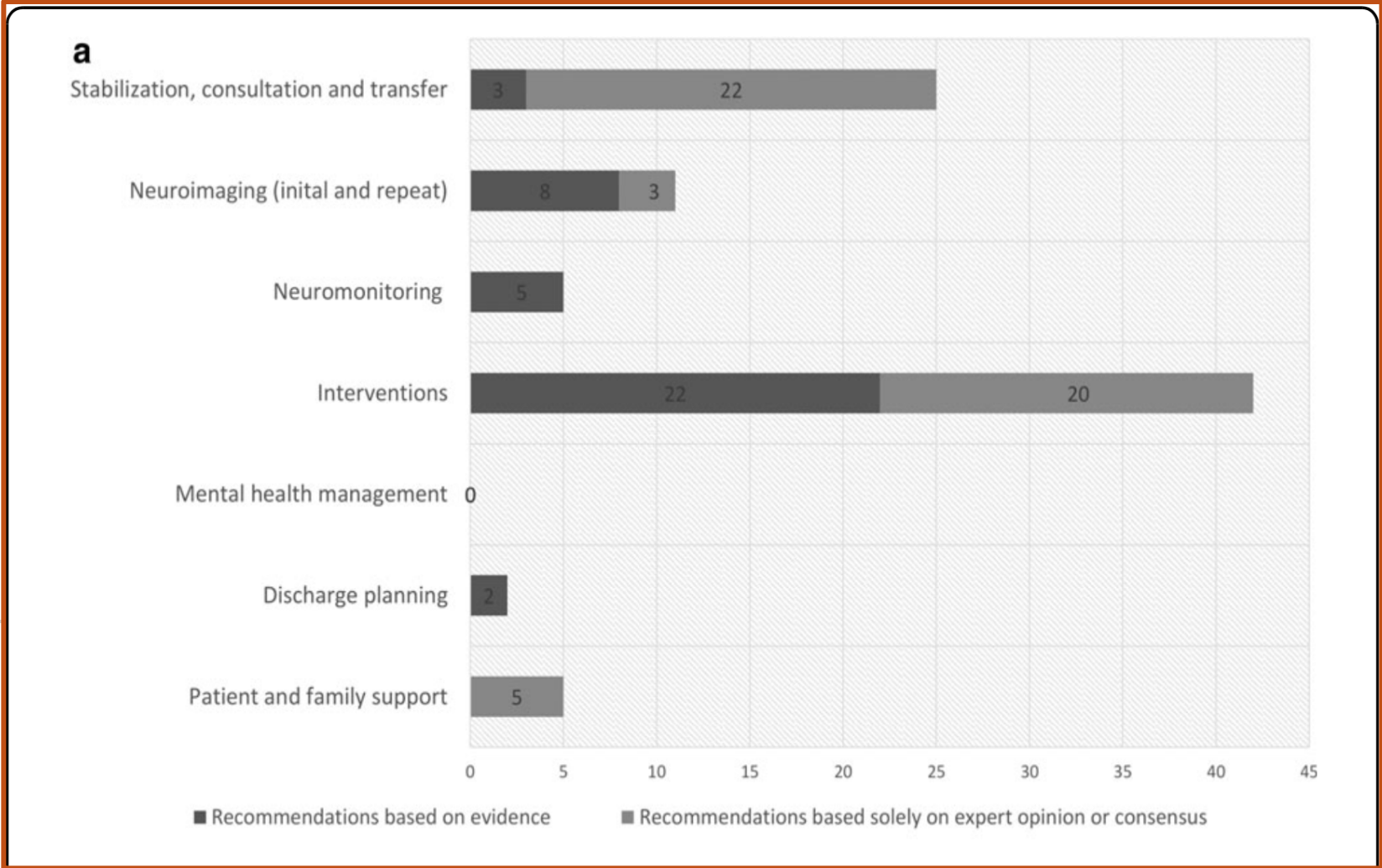


Figure 2. Average visits among those who received mental health services.

GAPS IN PEDIATRIC CLINICAL GUIDELINES

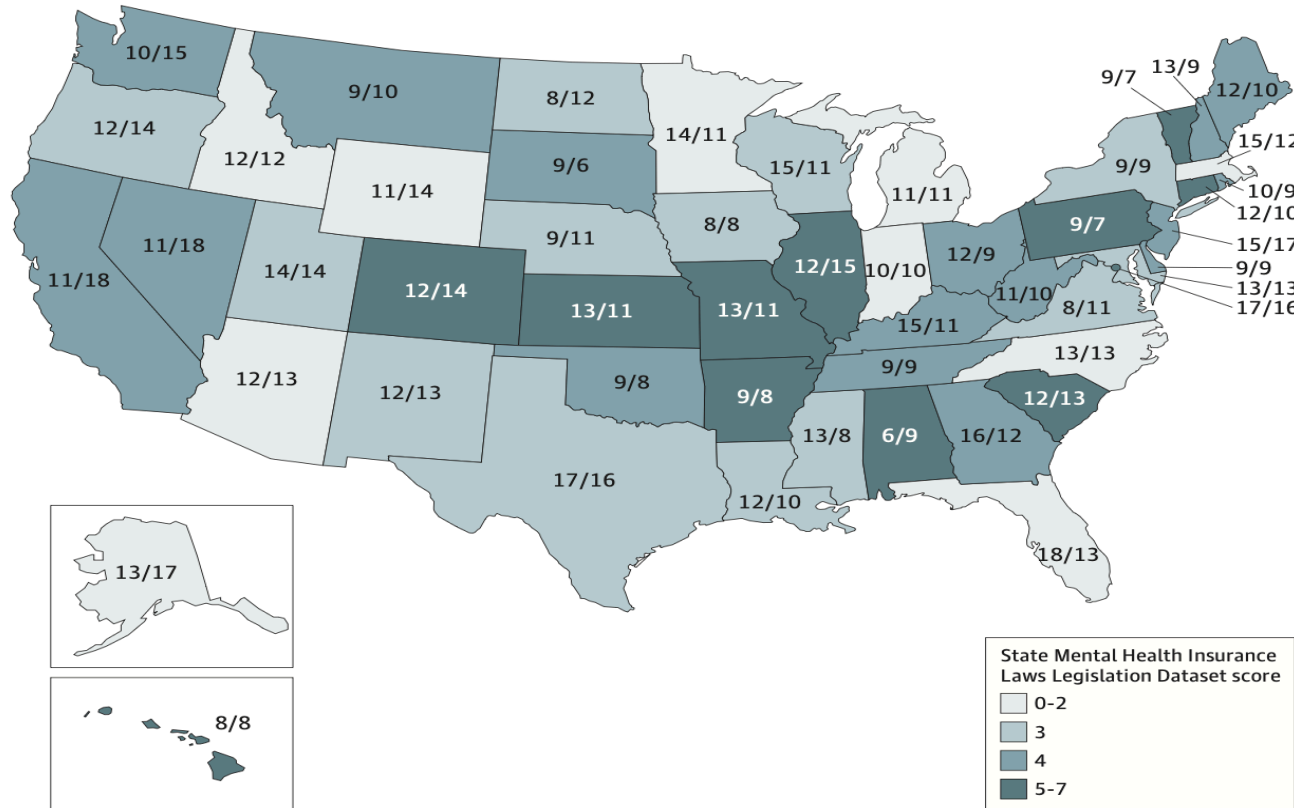
Mental health needs are not addressed in clinical guidelines.



Health Policies and Access to Care

Pediatric Mental Health Insurance Laws

Figure. State Mental Health Insurance Laws and Perceived Access and Coverage



Insurance policy laws that promote:

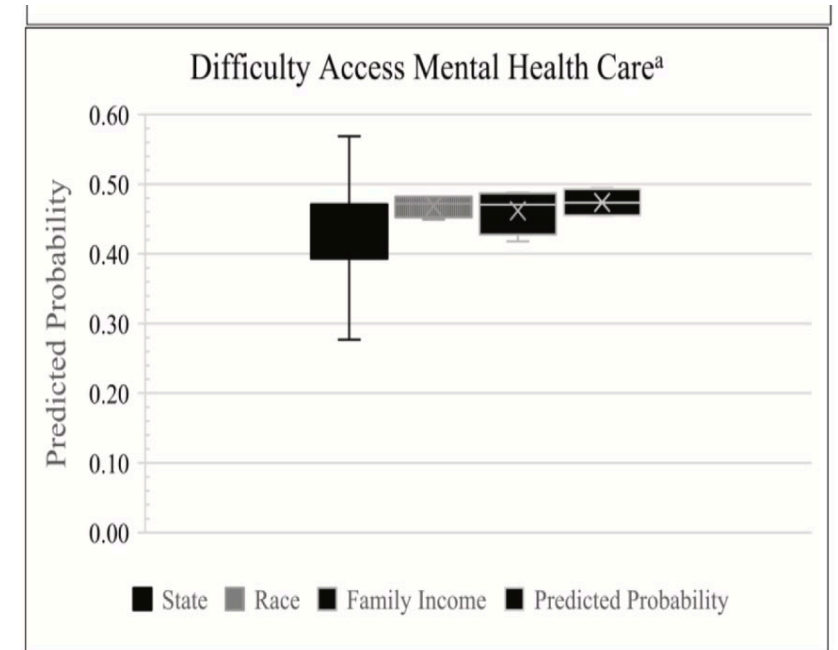
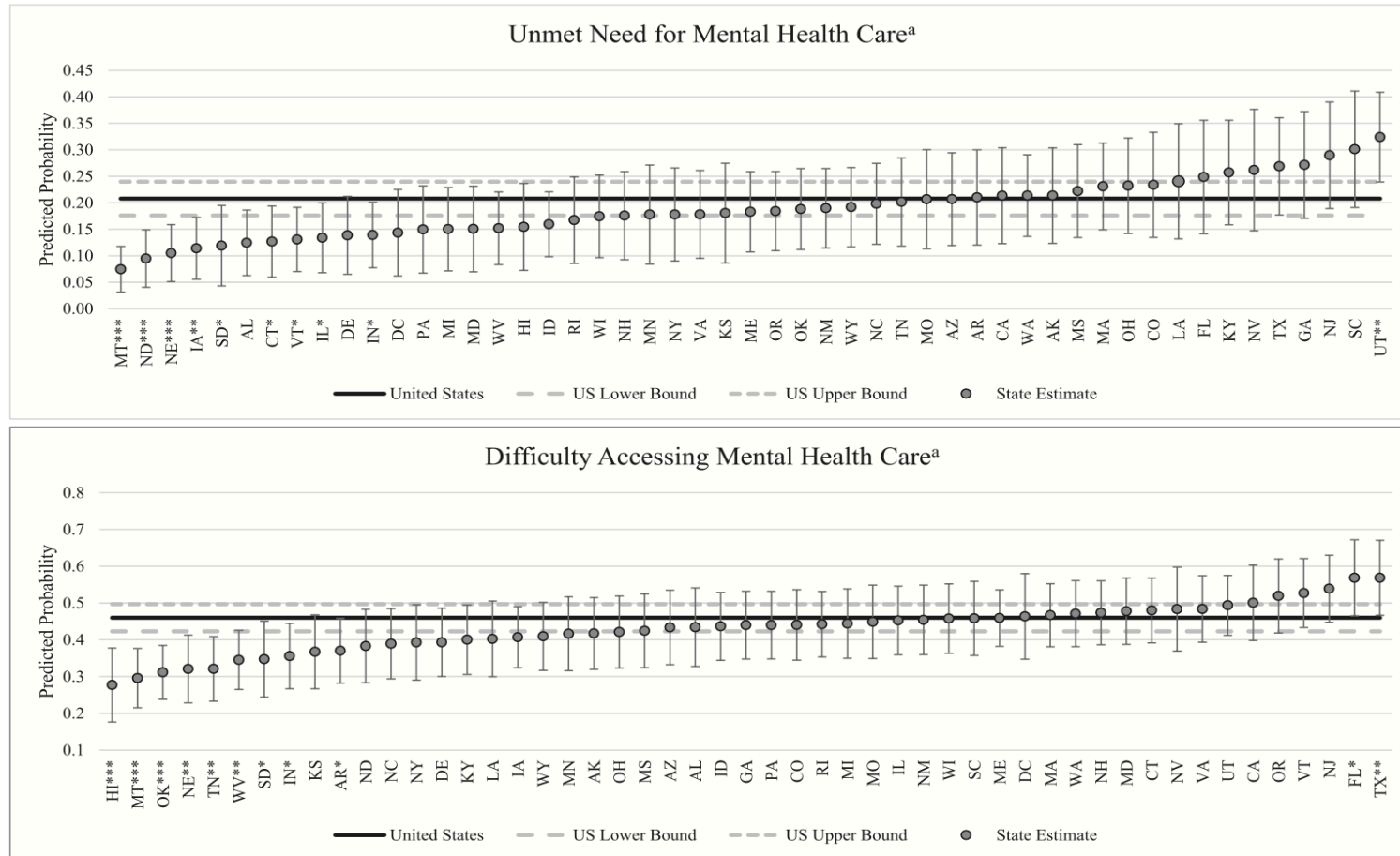
- Parity between medical and MH care
- Have clear definitions of MH conditions & coverage
- Mandates & enforcement compliance

Are associated
Better access to MH care & MH insurance coverage

The percentage of caregivers who perceived poor access to mental and behavioral health care and inadequate mental and behavioral health insurance coverage are reflected by numbers within each state. The color of the state represents the State Mental Health Insurance Laws Dataset score (0-7).

MH Access to care

Geographic Vs. Socioeconomic differences

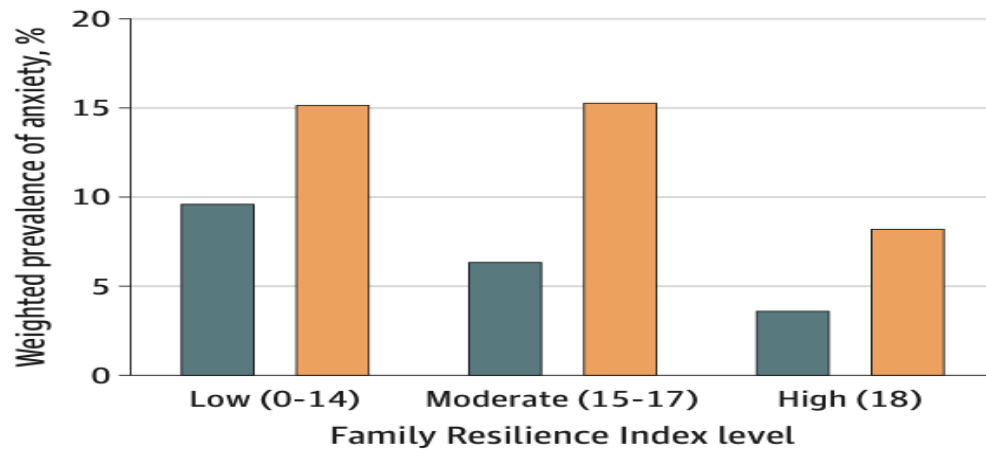


Pediatric TBI Mental Health Needs Family Resilience

Family resilience buffers stressors & improves psychosocial adjustment in children with TBI

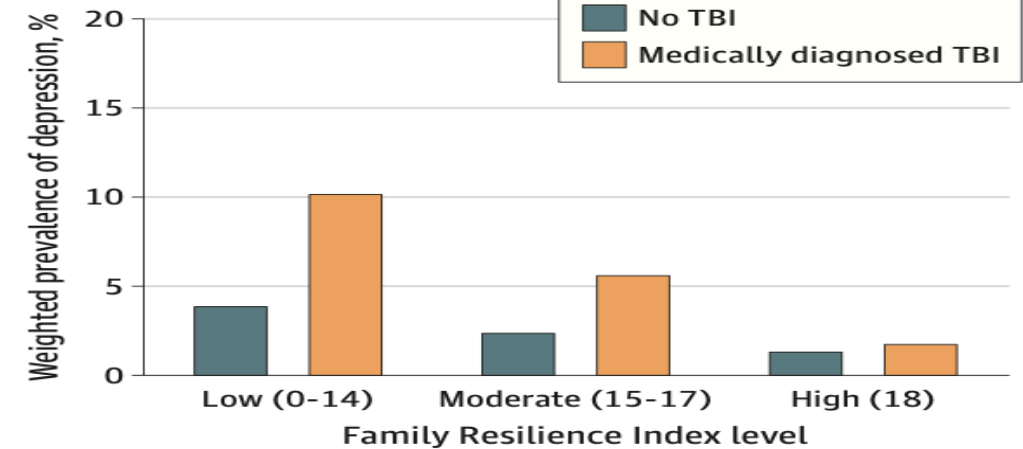
Figure 2. Bar Graphs of Weighted Prevalence of Mental and Physical Health Conditions

A Caregiver-reported current status of medically diagnosed anxiety



No.	Low (0-14)		Moderate (15-17)		High (18)	
Total	11 507	501	9717	405	9218	231
Anxiety	1108	76	617	62	334	19

B Caregiver-reported current status of medically diagnosed depression



No.	Low (0-14)		Moderate (15-17)		High (18)	
Total	11 536	501	9711	409	9219	230
Depression	447	51	230	23	123	4



Other Protective Family Factors For children with Chronic Medical Conditions

Recognition of needs, and ability to access care associated with better treatment adherence and outcomes

- Parent's education
- Problem solving skills
- Health literacy

External facilitators to support parents

- Education about disease (TBI), symptoms & treatments
- Self-efficacy
- Care coordination

Brain Injury Education & Navigation (1stBIEN) for Parents of children with TBI

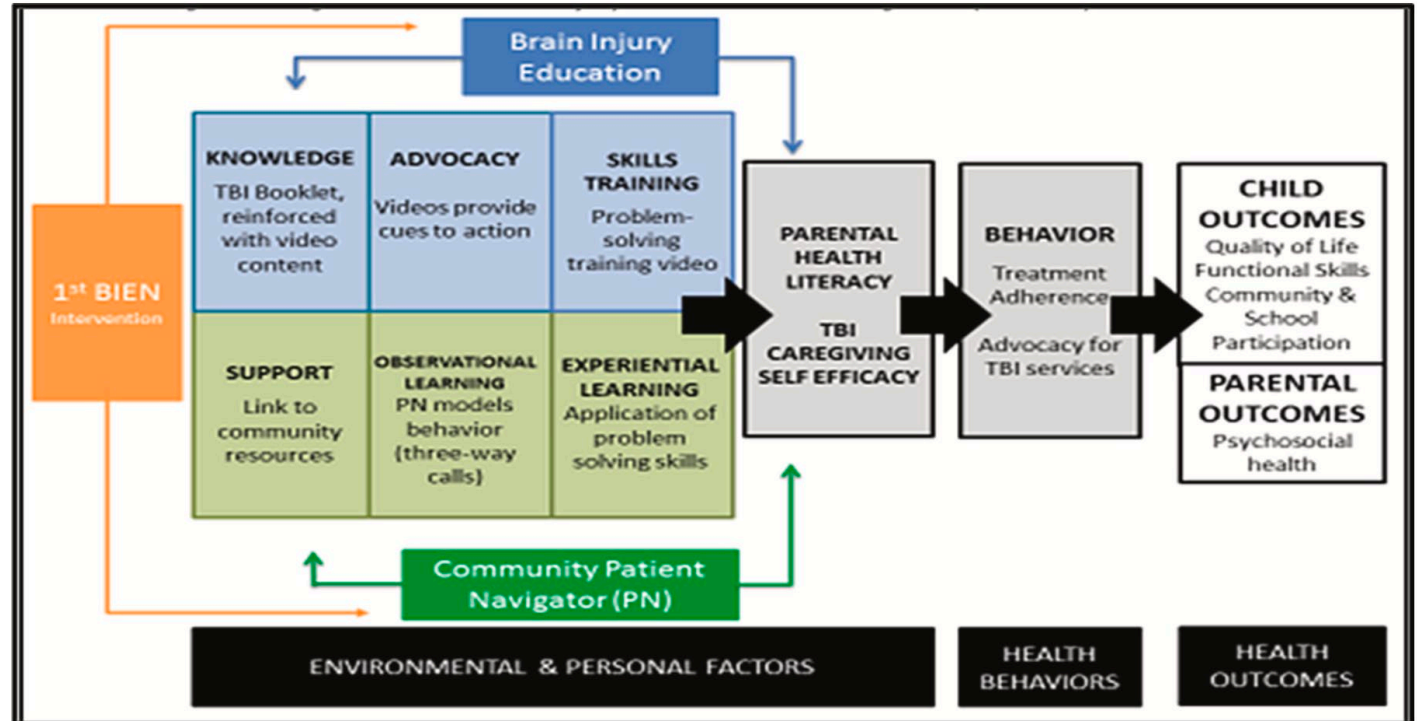


Fig. 1. Logic Model 1st Brain Injury and Navigation (1stBIEN) intervention.

1stBIEN improves access to post-TBI outpatient care – Pilot

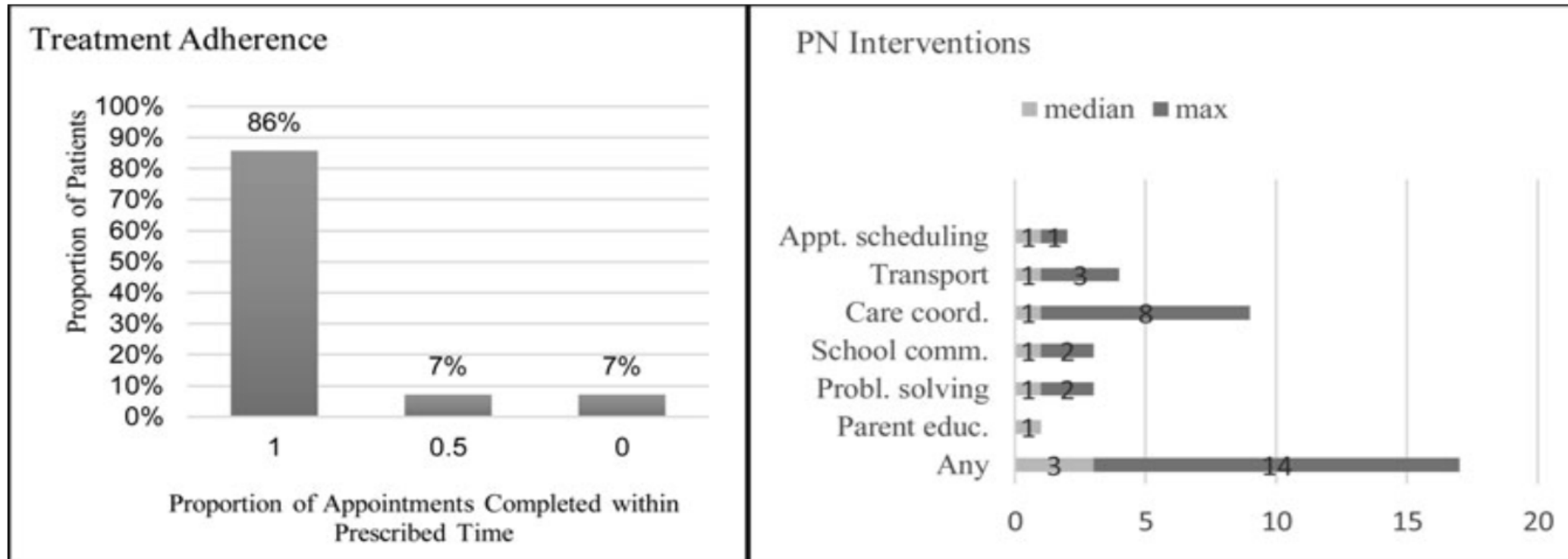


Figure 1. Treatment adherence and patient navigation interventions. PN indicates patient navigator.

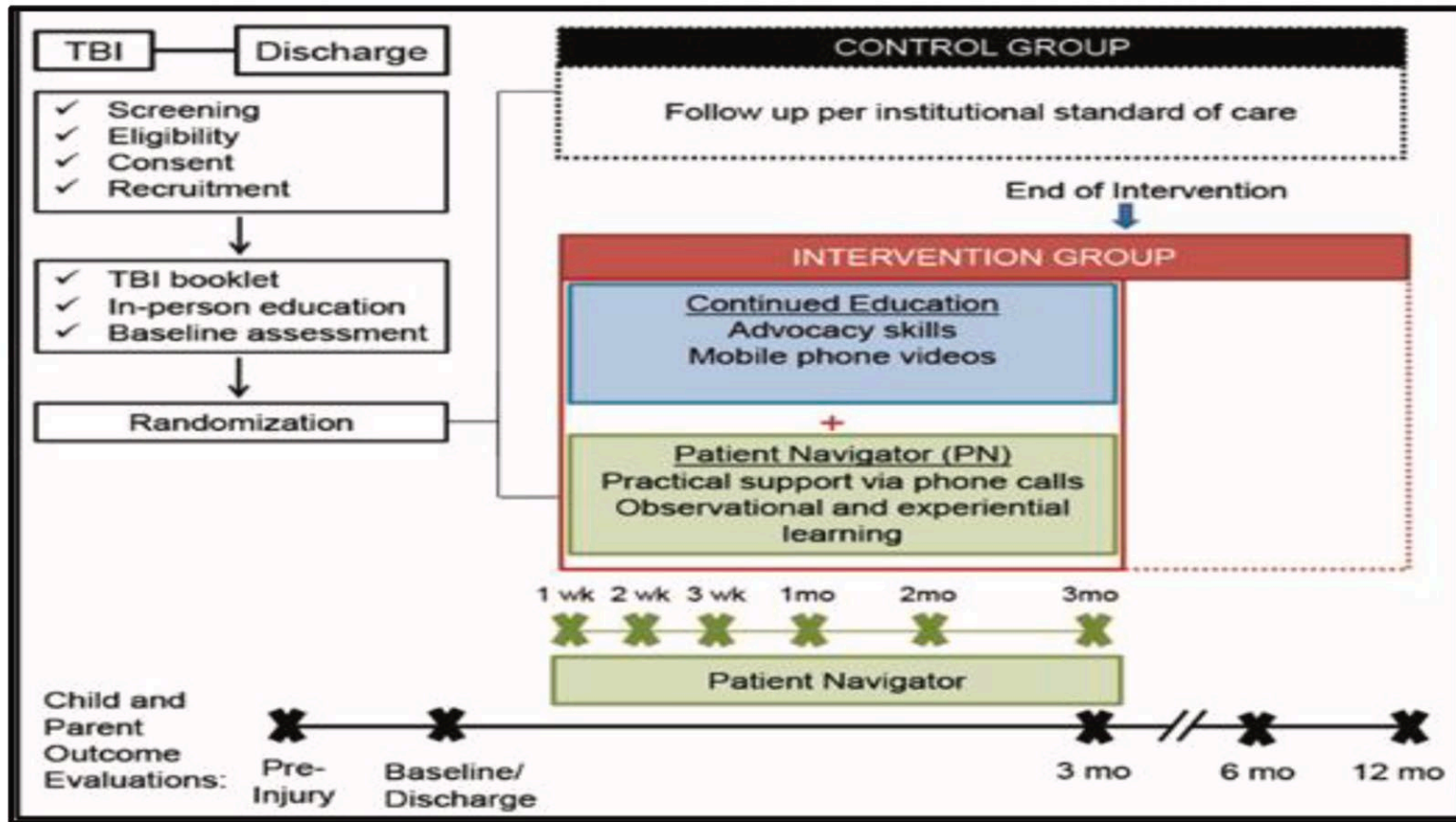


Fig. 2. timeline for study participants.

Multicenter RCT

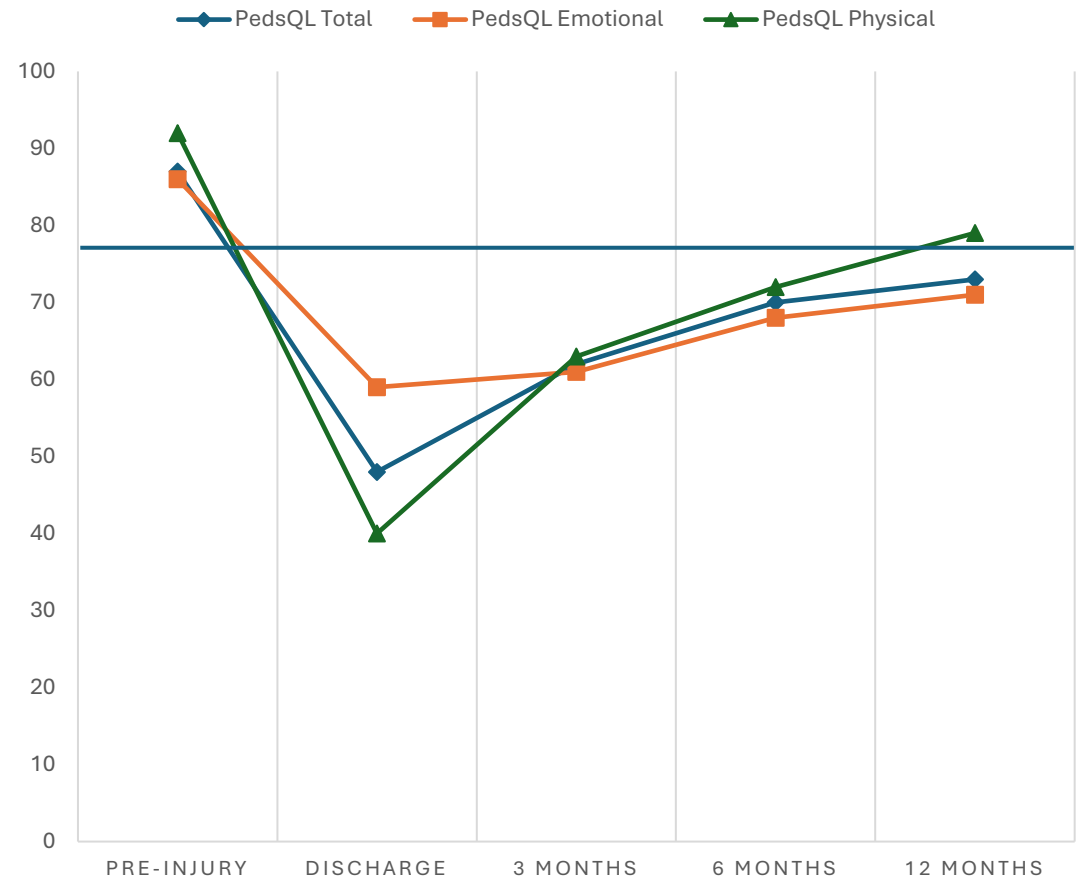
Contemporary Clinical Trials 135 (2023) 107362

Baseline Data

Table 1. Patient and Caregiver Characteristics by Study Arm

Variable	Overall N=104 ¹	Study Arm	
		Control N=52	Intervention N=52
Study Site			
Washington	39 (38%)	18 (35%)	21 (40%)
Oregon	8 (7.7%)	5 (9.6%)	3 (5.8%)
Texas	35 (34%)	17 (33%)	18 (35%)
Colorado	22 (21%)	12 (23%)	10 (19%)
CHILD CHARACTERISTICS			
age	13.74 (4.09)	13.78 (3.94)	13.70 (4.26)
Gender			
Female	37 (36%)	18 (35%)	19 (37%)
Male/ Transgender Male	67 (64%)	34 (65%)	33 (63%)
Language of Care			
English	76 (73%)	36 (69%)	40 (77%)
Spanish	28 (27%)	16 (31%)	12 (23%)
Ethnicity			
Hispanic or Latino	104 (100%)	52 (100%)	52 (100%)
Child's Insurance			
Private	13 (12%)	6 (11%)	7(13%)
Public	67 (64%)	33 (63%)	34 (65%)
None	24 (24%)	13 (26%)	11(22%)
INJURY CHARACRTERISTICS			
gcs_score			
Mild	47 (45%)	24 (46%)	23 (44%)
Moderate	19 (18%)	9 (17%)	10 (19%)
Severe	38 (37%)	19 (37%)	19 (37%)
Mechanism of Injury			
Motor Vehicle Collision	41 (39%)	20 (38%)	21 (40%)
Pedestrian hit by vehicle	6 (6%)	2 (4%)	4 (8%)
Cycling	14 (13%)	8 (15%)	6 (11%)
Fall	13 (12%)	8 (15%)	5 (10%)
ATV/Motor Bike/E-bikes	17 (16%)	7 (13%)	10 (19%)
Other	4 (4%)	3 (6%)	1 (2%)
	9 (9%)	4 (8%)	5 (10%)
icu_admit	77 (74%)	39 (75%)	38 (73%)
inpt_rehab	42 (40%)	22 (42%)	20 (38%)
CAREGIVER CHARACTERISTICS			
Caregiver Gender			
Female	86 (83%)	44 (85%)	42 (81%)
Male	15 (14%)	6 (11%)	9 (17%)
Unknown	3 (3%)	2 (4%)	1 (2%)
Caregiver Language			
English	45 (43%)	22 (42%)	23 (44%)
Spanish	59 (57%)	30 (58%)	29 (57%)
Caregiver Education			
Only elementary/primary school or less	18 (17%)	9 (17%)	9 (17%)
Some middle or high school	24 (23%)	13 (25%)	11 (21%)
High school graduate or GED	25 (24%)	11 (21%)	12 (27%)
Some college/ college graduate or higher	32 (31%)	17(33%)	16 (29%)
Unknown/Prefer not to answer	5 (5%)	2 (4%)	3 (6%)

QUALITY OF LIFE



Take Home Message & Recommendations

- Children and adolescents with TBIs experience a high burden of unmet mental health needs - especially among low-income children, children uninsured or Medicaid insured and from diverse racial and ethnic backgrounds.
- Reasons include gaps in clinical protocols, lack of coordination between hospital and community services, pediatric mental health services deserts, inadequate school services and health policies that do not prioritize pediatric mental health.

Recommendations:

1. To update pediatric TBI clinical guidelines to improve mental health diagnosis and management.
2. To optimize transitions of care by incentivizing pediatric TBI medical homes to support parents and caregivers, facilitate access to care and provide expert continuity of care.
3. To educate about the high risk of mental health conditions among children and adolescents with TBI to optimize diagnosis and treatment (clinicians), advocacy and support (parents & educators).
4. To promote health policies (insurance, state & federal level) that give parity to mental health services and that prioritize the sustained development of the pediatric mental health workforce.

THANK YOU

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