Introduction to B.R.I.T.E.
Brain injury Rehabilitation: Improving the Transition Experience

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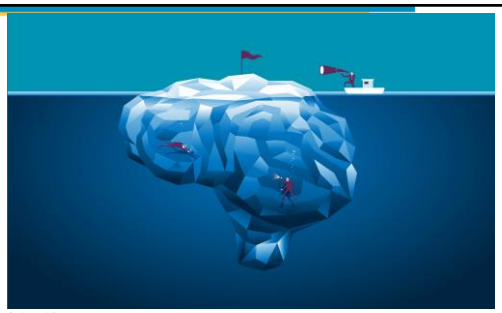
TBI statistics

- Each year, nearly 3.5 million individuals in the US sustain a TBI
- 25% of these injuries are classified as moderate-to-severe
- Nearly half of those who are hospitalized for TBI have long-term disability
  - 5.3 million Americans live with disabilities related to TBI
- Recognized as a chronic condition
  - Commonly results in a complex mix of physical, cognitive, behavioral and psychosocial difficulties
- Cognitive sequelae in particular may limit the ability of survivors to manage their long-term health and rehabilitation needs



BRITE: Background

- TBI outcomes are affected by the type, location and severity of injury but mitigated by
  - Treatment expertise
  - Intensity, duration, timing, setting and scope of re
  - Availability of follow-up services
    - ❖Each mitigating factor is potentially modifiable
- TBI care system in the US is currently very focu event, such that resources are expended on e hospital-based care
- Fragmented and inconsistent long-term care
  - Communication is a barrier

BRITE: Background

- Duration of inpatient rehabilitation had declined dramatically since 1990
- Discharged "quicker and sicker"
- Patients discharged in PTA
  - > 50% are still in PTA for one month after injury

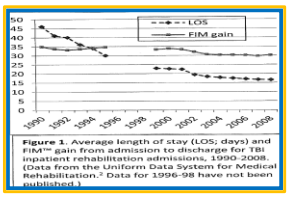


Figure 1. Average length of stay (LOS; days) and FIM℠ gain from admission to discharge for TBI inpatient rehabilitation admissions, 1990-2008. (Data from the Uniform Data System for Medical Rehabilitation.[2] Data for 1996-98 have not been published.)

BRITE: Background

- TBI can have a profound effect on the family
  - ruptured interpersonal relationships
    - high rates of divorce and separation
  - caregiver distress
  - caregiver burden and depression among family members
- Discharge experience can be chaotic
- A recent study reported that more than half of caregivers felt that they were not provided enough information about TBI, and most felt that discharge planning services were inadequate
- Individuals with traumatic injuries who receive inpatient rehab at a CARF-accredited Model System of care, 28% are re-hospitalized within the first year of injury and re-hospitalization rates remain high up to 10 years post-injury (Dams-O'Conner)

BRITE: Background

- A more intensive form of case management is used for complex populations within the VA
  - "avoid duplication, poor timing, or missed care opportunities"
- There has been increasing use of case management to assist in the transition of care between acute and post-acute care for a variety of diagnoses
- Research suggests that the use of case management can result in reduction in 30-day readmission as well as improvement in function, decreased health service use and spending
- However, comparative evidence from well-defined approaches to transition of care after TBI do no exist
  - Is more better???

BRITE: Background

- Consistently heard that individuals with mod-to-severe TBI and their families often fall through the cracks in the system
  - Themes: Not getting what they needed or were unaware of key resources
- Sought input from stakeholders, including patients, family members, clinicians, healthcare administrators, insurers, and advocacy organizations in the community

"When you leave the hospital you're kind of in shock mode. It takes several weeks because as a caregiver you're kind of in a PTSD mode and you're just not sure how to manipulate many of the hurdles" (Family stakeholder)

"I remember getting tons of information when I went from the hospital to home – like instructions with pictures. But I couldn't remember most of the stuff and then I lost it when I moved back to my folks house because I couldn't look after myself." (TBI survivor)

- BRITE was born

BRITE: Brain injury Rehabilitation: Improving the Transition Experience

- Funded by the Patient Centered Outcomes Research Institute
  - "PCORI was established to fund research that can help patients and those who care for them make better-informed decisions about the healthcare choices they face every day"
- The over-arching goal is to impact outcomes by identifying the best discharge planning and transitional-care services model for maximizing functional gains for TBI survivors while minimizing burden on caregivers as patients make the transition from inpatient rehab facilities to the next level of care

BRITE: Study

- $12.7 million pragmatic trial
- 5 Year Study (8/1/17 – 7/31/22)
- Six TBI Model Systems Centers (Lead center Univ. of Wash, Baylor, Indiana, Ohio State, Mt. Sinai, Moss)
- 1:1 randomized controlled trial
- Enrolling individuals with moderate to severe TBI discharging from acute inpatient rehab

BRITE: Study Aims

- Compare the **effectiveness** of Standardized Discharge Care (SDC) vs. Optimized Transition Care (OTC) on improving patient-reported outcomes:
  - **Quality of Life**
  - **Participation**
  - **Caregiver burden**
- Compare the **trajectory of improvement** between SDC and OTC across the first year after inpatient rehab discharge (measurements 3, 6, 9, and 12 months post-discharge)
- Compare differences in **healthcare utilization** between SDC vs. OTC across the first year post-discharge

BRITE: Study

Standardized Discharge Care (SDC)

- The standard of care within IRFs has been defined by the Commission on Accreditation of Rehabilitation Facilities (CARF)
- Includes key elements such as education, training, communication, discharge summaries
- "Discharge packet"

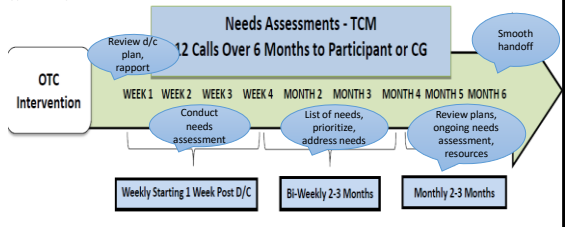
Optimized Transition Care (OTC)

- More intensive, temporally extended and coordinated approach for patients likely to experience significant and prolonged problems after injury
- Delivered by a TBI Care Manager (TCM)

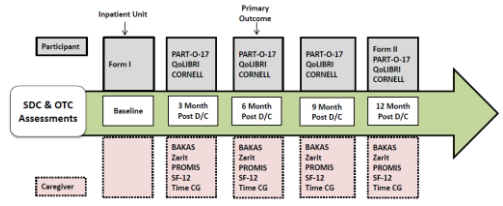
	Discharge from Inpatient Rehabilitation	Post-Discharge
Standardized Discharge Care	Patient and Family Education on diagnosis/needs	Phone call within a few days of discharge to reinforce discharge plan
	Written Discharge Instructions	
	Organize outpatient service/appointments	
	Medication teaching and prescriptions	
	Discharge summary sent to Primary Care Physician	
Optimized Transition Care	Patient and Family Education	Phone call within a few days of discharge
	Written Discharge Instructions	Ongoing telephone contacts until 6-months post-discharge
	Organize outpatient service/appointments	Review discharge plan and provide assistance to ensure follow through
	Medication teaching and prescriptions	Assess unmet needs
	Discharge summary sent to Primary Care Physician	Connect with relevant resources in healthcare network, community, etc.
		Assist with scheduling appointments/arranging transportation
		Provide reminder calls
		Follow up letter/email
		TBI Helpline to receive questions/request

TBI Care Manager (TCM) Contact Schedule

Approximately 12 contacts over the first 6 months



Outcome Assessment Schedule



Participants

- Since enrollment began 2/1/18, 290 patients and 178 caregivers have been randomized

Lessons Learned thus Far

Challenges

- Issues with hand-offs
  - No PCP
  - Loss of insurance
  - Loss of care giver
  - Limited social support
- Long-term support for those who have not made significant progress during the intervention
- Differences in patient and caregiver needs

Successes

- TCMs have developed engagement strategies and techniques to build trust and rapport with patient and caregiver families
- Clinician education
- TCMs across all sites have made over 1000 calls to patients, caregivers and providers during the first six months of the intervention

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Thank you!