

Improving Quality of Life Among Patients Living with Tuberculosis



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Abstract

Background: Texas recorded 1127 cases of active Tuberculosis (TB) in 2017, with a case rate of 4.0 per 100,000 persons (above the national case rate of 2.8 per 100,000).^{1,2} The Texas Center for Infectious Disease (TCID) is a 75-bed inpatient TB specialty hospital that admitted 86 patients in 2018, with an average length of stay of 142 days. In 2018, 62% of these admitted patients came with a history of mental illness and/or substance abuse, which can complicate treatment and compromise treatment success.

A major barrier to elimination of TB in the United States is the pervasive perception that TB is a disease of the past. Although there have been many advances in pharmacological treatment options for TB, the psychosocial impacts of TB are largely ignored. While TCID has a well-established Behavioral Health Department, it has not used any standardized approach to assess functional capacity and disability among TB patients.

Methods: To better understand patient needs, TCID implemented the WHODAS 2.0 as a standardized tool to measure functional status, health, and disability.³ This tool was selected because it covers multiple domains of functioning.³ TCID Behavioral Health staff completed the assessment with 42 total patients, 21 of whom had both initial and follow-up assessments. Patients were re-assessed after an average of 78.4 days. Behavioral Health provides services aimed to improve psychosocial functioning and quality of life, including substance abuse counseling, social work services, psychological counseling, recreational therapy, and peer support groups.

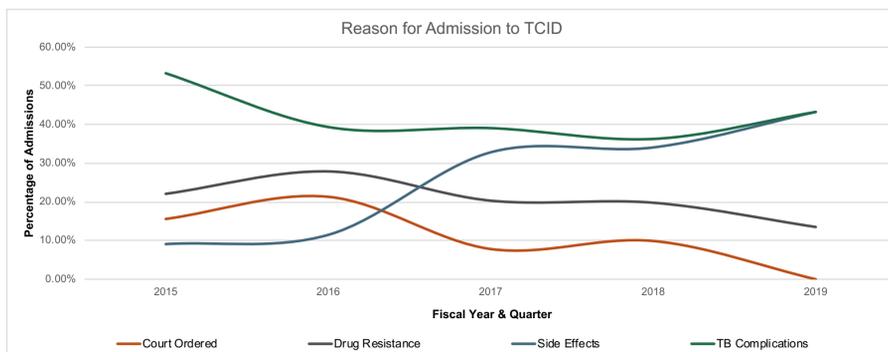
Results: We compared WHODAS 2.0 raw scores over time for participating patients. Of the six domains included in the WHODAS 2.0 assessment, TCID patients had the highest difficulty scores in Participation, with patients reporting an average of “moderate” impact of their health on their participation in society. After treatment at TCID, we saw a score improvement in three domains: Mobility, Life Activities, and Participation. Patients had a median overall raw score improvement of 8.48 points (out of a possible 160 or 180 total points), and a median score decrease (improvement) of 0.139 points per day.

Conclusions: TB is a complex disease that impacts more than a person’s physical health. Implementing a standardized tool to assess and better understand the impacts of the disease on the whole person is essential to the care and treatment of patients with TB. Assessing more patients with the WHODAS 2.0 will improve our understanding of the impact TB has on patients’ psychosocial functioning and experience, and allow us to provide targeted psychosocial and behavioral health services to support progression through treatment and ultimate success.

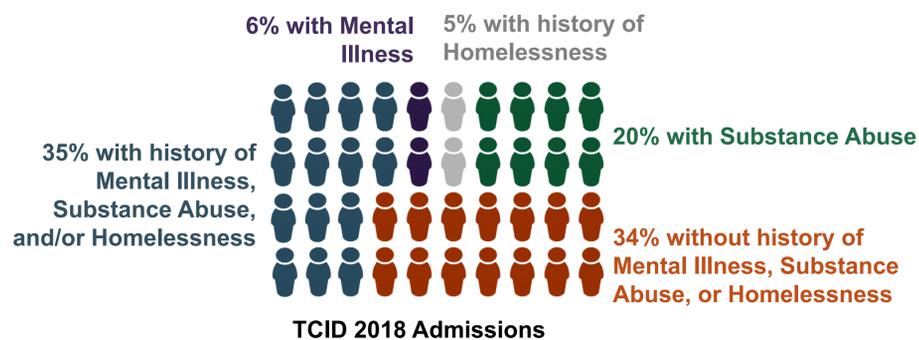
Background: TCID

Texas has a **TB case rate of 4.0 per 100,000**, compared with a national case rate of 2.8 per 100,000.^{1,2} 61.14% of cases in Texas were among foreign-born persons.¹

TCID’s mission is to **medically, behaviorally and socially treat tuberculosis** and Hansen’s disease patients and advance the nation’s prevention and treatment of infectious disease through **person-centered care, collaboration, research, and education.**



TB disproportionately affects people with social and behavioral co-morbidities. In 2018, 62% of TCID’s patients came with **psychological and/or behavioral needs**; these factors can dramatically impact their treatment success.



Methods: WHODAS 2.0

WHODAS 2.0 SIX DOMAINS ³		
Cognition: understanding and communicating	Mobility: moving and getting around	Self-Care: hygiene, dressing, eating, and staying alone
Getting Along: interacting with other people	Life Activities: domestic responsibilities, leisure, work, and school	Participation: joining in community activities

TCID’s implementation of WHODAS 2.0 in 2018:

- 42 patients assessed
- 21 patients assessed on admission and at a follow-up timepoint (scores compared)
- Average of 78.4 days between initial and re-assessment

Behavioral Health Interventions

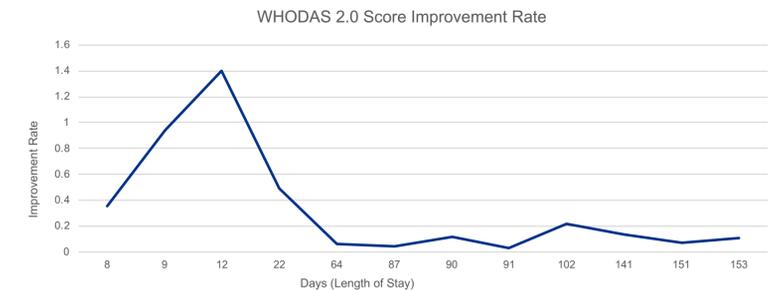
Behavioral Health Services are available to all patients, and each clinician is dedicated to providing exceptional therapeutic services to improve our patients’ overall level of functioning mentally, physically, and spiritually throughout treatment. The Behavioral Health Department at TCID consists of a Clinical Psychologist, two Social Workers, a Substance Abuse Counselor, two Music Therapists, a Recreational Therapist, and a Psychiatrist.

We provide a range of interventions including: mental health assessments, individual counseling, group counseling, crisis intervention, motivational interviewing, treatment planning, discharge planning, substance abuse education, relapse prevention skill building, coping method skill building, meditation, harm reduction therapy, brief solution focused therapy, cognitive behavioral therapy, play therapy, safety planning, off campus recreational activities, and pharmacotherapy.

Our goal is to improve the health, safety, and wellbeing of our patients through positive health tracking strategies that focus on prevention as well as intervention.

Results: Improved Functioning

Raw scores on the WHODAS 2.0 decreased (improved) over time at TCID, with a **median decrease of 8.48 points** (out of 160 or 180). The most dramatic improvements occurred in the first month of treatment.



Initially patients’ self-assessments indicated the worst functioning in the domain of **Participation**, indicating that their participation in social and community activities was impacted by their current condition. Scores were improved in all domains with the greatest improvement in **Mobility**:

Domain	Cognition	Mobility	Self-Care	Getting Along	Life Activities	Participation
Average Improvement	0.467	0.913	0.506	0.400	0.611	0.830

Conclusion

TB is a complex disease that impacts more than a person’s physical health. Understanding the psychosocial needs of patients and the functional impact TB has is essential to successful treatment. Simple Behavioral Health interventions can improve patients’ functioning and promote positive outcomes.

Acknowledgements

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References

1. Texas Department of State Health Services. (2019). *TB Statistics*. Retrieved from <https://www.dshs.texas.gov/idcu/disease/tb/statistics/>
2. Centers for Disease Control and Prevention. (2018). *Burden of TB in the United States*. Retrieved from <https://www.cdc.gov/features/burden-tb-us/index.html>
3. World Health Organization. (2018). *WHO Disability Assessment Schedule 2.0*. Retrieved from <https://www.who.int/classifications/icf/whodasi/en/>