

## INTRODUCTION

Approximately 75% of service members with mild TBI experience central auditory processing deficits (distinct from hearing loss) due to blasts, neurotrauma, and hazardous noise.<sup>1,2,3</sup>

Comorbid PTSD mediates 41% of blast-induced self-reported hearing difficulty,<sup>4</sup> creating a cycle where these processing disruptions further exacerbate psychological distress.<sup>1,2,3</sup>

Creative arts therapies such as music therapy are increasingly integrated into interdisciplinary treatment within the military and veteran healthcare systems.<sup>5,6,7,8,9</sup>

## AUDITORY COGNITION LAB

Auditory Cognition Lab (ACL) is a clinical intervention developed by Music Therapists (MTs) and Speech-Language Pathologists (SLPs) and facilitated as a co-treatment. It targets the foundations of speech, language, audition, and cognition combined with musical elements.<sup>10</sup>

**Bridging Research & Practice:**

Using the KTA framework<sup>11</sup> to adapt the ACL program for clinical use.

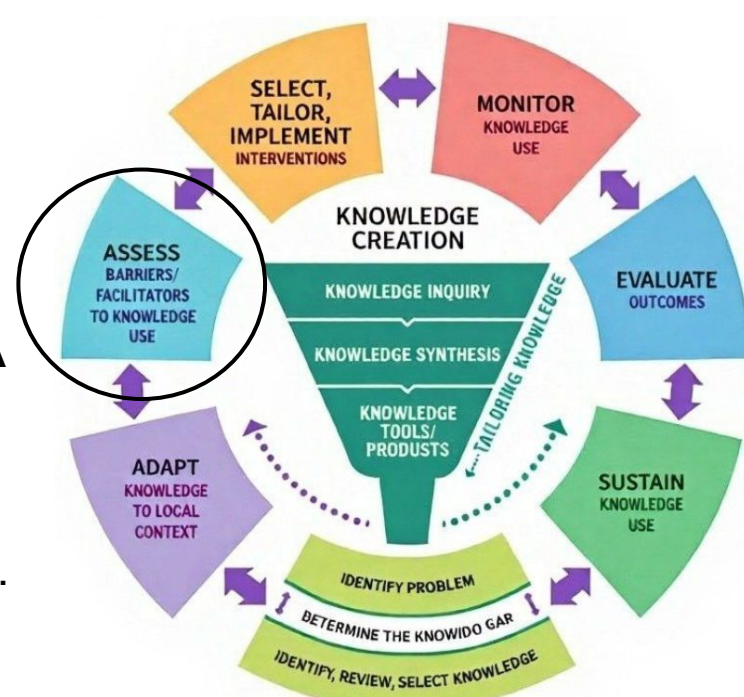


Figure 1. Knowledge-to-Action (KTA) Framework

## METHODS

**Participants:** 12 clinicians (6 SLPs, 6 MTs) with current or past experience treating TBI in military and/or veteran health systems.

**Design:** Three virtual focus groups: 1) SLP-only, 2) MT-only, and 3) combined SLP-MT.

**Analysis:** Thematic analysis of focus group transcripts.

## RESULTS

Table 1. Barriers to Treating Auditory Processing Disorder

- Diagnostic & Referral Gaps
- Time & Scheduling Constraints
- Care Coordination Gaps
- Lack of Training & Tools

*“I don’t feel like I have a wide variety of treatment protocols or evaluation tools.”*

*“Even the resources that I’ve tried to find. It’s all about Pediatrics.”*

Table 2. Barriers to Co-treatment

- Productivity Pressure & Time/Scheduling Constraints
- Billing and Reimbursement Issues (for community care providers)
- Interdisciplinary Knowledge Gaps & Protocol Rigidity

*“[The state] does not recognize music therapists. They’re not able to be licensed and so we cannot bill for them.”*

*“Other disciplines are not very flexible with their treatment protocols. On top of that, they feel very out of place when it comes to music in general because they don’t understand it.”*

Table 3. Facilitators of Co-treatment

- Shared-Credit Billing Strategy
- Built-in Co-Treatment Schedules
- Interdisciplinary Team Culture
- Shared Language

*“It’s a good learning opportunity for both the speech and the music. They just go so well together.”*

## CONCLUSION

**Addressing Barriers:** The ACL program provides ready-to-use materials, which can reduce the time required for interdisciplinary team members to engage in session planning. This increases the feasibility of co-treatment in systems that have high clinical productivity demands, creates a shared clinical language, and fosters interprofessional collaboration.

**Elevating Patient-Centered TBI Care:** ACL is designed to improve collaborative care and provide a new treatment option for service members and veterans receiving care in TBI clinics (e.g., concussion and polytrauma clinics).

## FUTURE DIRECTIONS

**Refinement:** Utilize clinician feedback from the focus groups to optimize and manualize ACL.

**Feasibility Testing:** Pilot the refined ACL program at one VA and one DHA facility.

**Civilian Sector Replication:** Expand ACL into civilian-sector neurorehabilitation.

## ACKNOWLEDGEMENTS

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## REFERENCES

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