

# Music Therapy, Communication & Movement

Aaron Wallace, Community Partner

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Cecilia Wright, MT intern, UK HealthCare

# Introductions

- ▶ Aaron Wallace
  - ▶ Community partner
  - ▶ Graduate of Madison Southern High School
  - ▶ History of MVA in 2011
- ▶ Carolyn Wallace
  - ▶ Community Partner
  - ▶ Parent of Aaron Wallace
  - ▶ “Body Ready” Fall Prevention Practitioner
- ▶ Corie Sexton
  - ▶ Speech-Language Pathologist, UK Outpatient Communication Disorders Enterprise Clinic
  - ▶ SLP for Aaron since 2014
- ▶ Jennifer Peyton
  - ▶ Music Therapy Internship Director, UKHC
  - ▶ Collaborates with UK Outpatient Communication Disorders Enterprise Clinic
- ▶ Cecilia Wright
  - ▶ Music Therapy Intern, UKHC

# Severe Traumatic Brain Injury, April 2011

- ▶ Survival Unlikely
- ▶ UK Trauma Care – Meds & Surgery
- ▶ Nothing more we can do
- ▶ ICU, Acute Long Term Care: 4 mo.
- ▶ Ventilator weaning not expected
- ▶ Minimal Consciousness
- ▶ No quick medical/surgical fix
- ▶ No progress expected after 1 year
- ▶ Lack of purposeful movement
- ▶ Guarded Prognosis
- ▶ Neuroplasticity
  - ▶ Stimulation
  - ▶ Response
  - ▶ Reinforcement
- ▶ We don't know, yet why not try?
- ▶ Positive Energy is Essential
- ▶ Need a Supportive Team
- ▶ It's a Long Process
  - ▶ Caregiver Self Care
- ▶ Search for Helpful Strategies

# Conventional Treatments (Insurance pays)

- ▶ Initial Hospital Care & Rehab Stay
- ▶ M.D. & Specialists - In/Outpatient
- ▶ Therapies (requiring approval)
  - ▶ Speech and Language Pathology
  - ▶ Physical Therapy
  - ▶ Occupational Therapy
  - ▶ Vision Therapy
- ▶ Equipment (requiring approval)
- ▶ Transportation to appointments

- ▶ Personal care in a facility

OR

- ▶ At home supports through a KY Medicaid Waiver
  - ▶ Some supplies
  - ▶ Some caregiver assistance
  - ▶ Some home renovations

# Alternative – Complementary Therapies

- ▶ Prayer
- ▶ Positive Energy
- ▶ Nutritional Supplements
- ▶ CranioSacral Work
- ▶ Massage Therapy
- ▶ Acupuncture
- ▶ MNRI
- ▶ Music
- ▶ Humor
- ▶ Music Therapy
- ▶ Therapeutic Horsemanship
- ▶ Vision Therapy
- ▶ Social Interaction
- ▶ Warm Water Pool Activity
- ▶ Movement Experiences
- ▶ Chiropractic (gentle)
- ▶ Reiki – Jin Shin Jyutsu
- ▶ Pet Therapy



# Home for Christmas 2011



# At Home

2-2-12 and 5-19-13



# Outpatient Therapy 2012-2013



# Rough Day Seizures Setback

6-15-2013



# Music Therapy in the Hospital

6-20-2013



# What is music therapy?

- ▶ Use of live, patient-preferred music by a board certified music therapist to accomplish non-musical goals; such as the physiological, cognitive, emotional, social, and spiritual needs of individuals of all ages.
- ▶ MT in rehabilitation settings focuses on functional communication, motor skills, motivation, and quality of life.
- ▶ Music therapy is not entertainment.
- ▶ Music skills are not required to benefit from MT

# Objectives

- ▶ Identify interventions used in collaboration between music therapy and speech therapy
- ▶ Utilize music therapy to improve motivation and skill development for neurologically involved clients/patients
- ▶ Analyze the effectiveness of music therapy in accomplishing treatment goals and enhancing communication

# Why collaborate?

## 5 similarities between music and language:

- ▶ Music and language are universal and specific to humans.
- ▶ Both have pitch, timbre, rhythm, and durational features.
- ▶ Spontaneous speech and spontaneous singing typically develop within infants at approximately the same time.
- ▶ Music and language have auditory, vocal, and visual uses (both use written systems) and are built on structure and rules.
- ▶ Distinct forms of music and language exist and vary across cultures.

(Smith, 2011)

# Speech with Music Therapy



# What does collaboration do for individuals with ABI?

- ▶ Both music and language convey meaning
- ▶ Brain processes melodic and temporal structures in absence of attention
- ▶ Both target motor processing/sequencing mechanisms
- ▶ Music allows ways to build rapport/relationships; build therapy structure and routine
- ▶ Provides alternative methods of reinforcement
- ▶ Increased imitation of nonverbal gestures

(Farmer, 2013; Barman, Chatterjee, & Bhide, 2016)

# A typical session

AARON'S TASK / GOAL	SPEECH THERAPY GOALS	MUSIC THERAPY INTERVENTIONS	GENERALIZED OT AND PT GOALS
<p>Greet others with:</p> <ul style="list-style-type: none"> <li>Vocal output and/or SGD (Speech Generating Device)</li> <li>Gestures (wave, fist bump, eye contact, smile)</li> </ul>	<p>Monitor/Teach:</p> <ul style="list-style-type: none"> <li>Appropriate eye contact with communicator</li> <li>Initiation of SGD use (greeting others, sharing jokes, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Model desired behavior: eye contact, wave, fist bump, say "hi"</li> <li>Encourage and provide reinforcement for desired behavior</li> </ul>	<ul style="list-style-type: none"> <li>Use of left/right UE to complete functional task</li> <li>Holding head up with minimal assistance</li> </ul>
<p>Communicate desired activities (listen to Spotify, listen to live music, play along, sing, instrument or genre selection)</p>	<ul style="list-style-type: none"> <li>Choice making</li> <li>Identification of locations/buttons</li> <li>Accurate transitions between SGD screens</li> <li>Sentence formulation, commenting, requesting (via SGD)</li> </ul>	<ul style="list-style-type: none"> <li>Provide choice making opportunities</li> <li>Provide reinforcement of desired activity</li> <li>Contingent music for targeted behaviors</li> </ul>	<ul style="list-style-type: none"> <li>Head control</li> <li>Trunk support</li> <li>Participation in activity for extended time</li> <li>UE movements</li> </ul>

# A typical session

AARON'S TASK / GOAL	SPEECH THERAPY GOALS	MUSIC THERAPY INTERVENTIONS	GENERALIZED OT AND PT GOALS
Participate in "Warm-Up" song	<ul style="list-style-type: none"><li>• Vocal Output (prolongation, breathing, etc.)</li><li>• Shaping vowels for speech production</li></ul>	<ul style="list-style-type: none"><li>• Created original song to facilitate ST goals</li><li>• Contingent music</li></ul>	<ul style="list-style-type: none"><li>• Head control</li><li>• Trunk support</li></ul>
Play the drums (and other instruments)	<ul style="list-style-type: none"><li>• Increase accuracy for direct selection use with SGD</li></ul>	<p>Move drums to various areas to increase</p> <ul style="list-style-type: none"><li>• Range of motion</li><li>• Accuracy</li><li>• Fine and gross motor movement</li></ul>	<ul style="list-style-type: none"><li>• Head control</li><li>• Trunk support</li><li>• Increase volitional UE movements</li></ul>
Play the keyboard	<ul style="list-style-type: none"><li>• Letter identification</li><li>• Simple spelling</li></ul>	<ul style="list-style-type: none"><li>• Label keys with letters</li><li>• Demonstrate rhythm to play, cue playing</li><li>• Provide reinforcement</li></ul>	<ul style="list-style-type: none"><li>• Increase volitional UE movements</li><li>• Engage in simple task while sitting for extended time</li></ul>

# Up & Up 7-28-2014



# References

- ▶ Barman, A., Chatterjee, A., & Bhide, R. (2016). Cognitive Impairment and Rehabilitation Strategies After Traumatic Brain Injury. *Indian Journal of Psychological Medicine*, 38(3), 172-181.
- ▶ Farmer KJ. (2003). *The effect of music vs. nonmusic paired with gestures on spontaneous verbal and nonverbal communication skills of children with autism between the ages 1-5 (Master's thesis)*. Tallahassee, FL: Florida State University (School of Music), 2003.
- ▶ Smith, R.S. (2011, October, 4). Speech-Language Therapy and Music Therapy Collaboration: The Dos, the Don'ts, and the "Why-Nots?" [The ASHA Leader Blog]. Retrieved

# Thank you!

Feel free to contact us with any questions, comments, or concerns:

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