MUSIC THERAPY IN THE NICU

- Jennifer Bilecki MSN, ARNP, RNC-NIC
- Laura Cornelius MM, MT-BC, NICU-MT, NMT
VISION

To Provide Excellent Clinical Care in A Child Friendly Family-Centered Environment to all those Seeking Medical Services for their Children at Salah Foundation Children’s Hospital at Broward Health Medical Center
Our Commitment

• For the past 75 years, Broward Health Medical Center has served the children of our community through progressive clinical services

• Salah Foundation Children’s Hospital was established to emphasize our initiatives for children and their families
Neonatal Intensive Care Unit (NICU)

- A Level III neonatal unit equipped with state-of-the-art technology offering the highest level of care for neonatal diagnosis, surgery and rehabilitation

- Board-certified neonatologists, nursing specialists and other pediatric specialists such as lactation experts ensure comprehensive, multidisciplinary, individualized care for critically ill newborns

- Designated as a Level III Regional Perinatal Intensive Care Center (RPICC) for excellence in standard of care and one of only 11 RPICC sites in the state of Florida, where high quality medical care is provided to improve the immediate and long-term outcome of pregnancy and of infants born at risk
Neonatal Intensive Care Unit (NICU)

Current Neonatal Level II

Current Neonatal Level III
Child Life Services

Pet, Art and Music Therapy
Objectives:

• Understand Music Therapy (MT) and its benefits
• Define who is considered a qualified individual to practice NICU Music Therapy
• Describe and demonstrate how music therapy is used specifically in the NICU
• Aware of music therapy after discharge
What Is Music Therapy?

• “Music Therapy is the clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program.”

• -American Music Therapy Association
NICU-MT (Music Therapy) Certification

National Institute for Infant and Child Medical Music Therapy

- Lecture Component
- Hands-On Training
- Reading and Exam
NICU-MT Training

• How to handle infant
• How to swaddle infant
• How to monitor vital signs
• How to facilitate interaction with parents and infant
• How to document effectively
General Benefits Of Music Therapy:

• Increase patients' positive mood and counteract depression
• Physical rehabilitation
• Relaxation/Induce sleep
• Address fear and anxiety
• Procedural support and distraction
• Stabilizing vital signs
• Breathing techniques
Benefits Of Music Therapy in the NICU

• Increase infant self-regulatory behaviors
• Promote non-nutritive sucking
• Increase tolerance to NICU
• Mask ambient noise by providing auditory respite
• Increase weight gain, decrease heart rate and respiration rate, increase oxygen saturation, reduce signs of distress
Additional Benefits to Music Therapy in NICU

- Regulate respirations following extubation
- Increase opportunities for auditory processing, neurological growth, and development
- Increase opportunity for language input
Benefits For Families

- Parent/Infant bonding
- Positive parent interaction with infant
- Empowers parents and decreases anxiety
- Improves feeding which decreases mother’s anxiety
- Earlier discharge
Benefits For Hospitals

- Reduce hospital length of stay by an average of 6 days
- Female infant’s length of stay is reduced by an average of 12 days
- Male infant’s length of stay is reduced by an average of 2 days
- Music Therapy (MT) services are reimbursable
- Opportunity to conduct research and bring recognition to hospital

Standley & Walworth, 2010
Can Music In The NICU Be Overstimulating?

If used inappropriately, yes!

- Continuous CD
- Overhead music – CD or radio
- Mobiles and toys intended for full-term infants
- Musicians who do not have proper training in the effects of music and NICU sound regulations
- If the infant is in “survival” mode and not ready to receive music therapy treatment
Forms Of Music

Not Appropriate:

• Classical music or complex music
• Retail mobiles and musical toys
• Music above 65db
• Continuous background music overhead

Appropriate:

• Lullabies that are sung slowly, quietly, and steadily
• Simple lullabies with voice only or voice and a few instruments
• Music below 65db
NICU-MT Interventions

• Pacifier Activated Lullaby (PAL)
• Multimodal Stimulation
• Infant Stimulation
• Music Listening
• Parent Counseling
Positive Signs Of Stimulation

- Opening eyes
- Eye contact
- Smiling
- Vocalizations
- Head orientation
- Snuggling
Positive Signs Of Stimulation Video
Signs Of Overstimulation

- Crying
- Halt hand
- Splaying fingers
- Grimace/red face
- Arched back
- Tongue protrusion
- Hiccups
Pacifier Activated Lullaby

- Patented and FDA cleared to reinforce non-nutritive sucking
- Increase sucking endurance & duration of sucking bursts
- Increase feeding rate when nippling
- Decrease respiratory distress during feeds
- Reduce pain perception through non-nutritive sucking release of endorphins
Which Infants Are Appropriate For Services?

Pacifier Activated Lullaby (PAL®)

- Infants of 34 weeks PMA
- Infants being weaned from NG/OG tubes
- Infants demonstrating apnea, early fatigue and frantic, short sucking bursts followed by fatigue - use PAL to lengthen sucking pattern
- For infants after painful procedures to teach non-nutritive sucking for pain relief
- NOT infants who are vented or using CPAP
- NOT infants who have BPD or respiratory distress
- NOT infants who have severe abnormalities that affect ability to suck/swallow/breath or an oral cavity abnormality
Patient Example from Initial Implementation period

• Patient was born at 28 weeks

• Began music therapy, PAL sessions 7/16/14, at 34 weeks

• Patient was weaned off of oxygen and improvement weight gain by 8/1/14
Patient Example: O2 Saturation w/PAL

Graph
Patient One: O2 Saturation

Patient One's Oxygen Saturation with PAL

Percentage of Oxygen Saturation

Date


- Initial O2
- Mid O2
- Final O2
Which Patients are Appropriate for MT Multimodal Stimulation?

Live music paired with Multimodal Stimulation

- Infant PMA >32 weeks
- Infants with poor interaction with parents
- Infants on O2 to increase O2 saturation rates
- Infants tested positive for drugs
- NOT infants undergoing surgical procedures (wait 1 week)
- NOT most infants on contact isolation
Multimodal Stimulation

- Increase tolerance to stimulation by gradually introducing auditory, tactile & vestibular stimulation
- Teach parents a method of goal-oriented interaction while avoiding overstimulation
- Increase pacification and enhance mother/father-infant bond
- Decrease length of stay
Multimodal Stimulation Progression

Progression

- Scalp (L)
- Back (C)
- Throat (L)
- Arms (L or C)
- Abdomen (L)
- Linear Alba (L)
- Legs (L or C)
- Cheeks (L)
- Forehead (L)
Parent Counseling

- Educate about over-stimulation
- Teach appropriate ways to interact with infant
- Promote bonding and goal-oriented interactions
- Teach child development skills and timelines
Ideas For Collaboration
Child Life And Music Therapy Collaboration

- Child Life Specialist provides touch progression and Music Therapist provides live music
- Documentation throughout therapy session (PAL or Multimodal Stimulation)
- Building rapport with families and enhancing their satisfaction with continuity of care
- Sibling Support and Involvement
- Bereavement Support
Challenges To Program

• NICU staff unfamiliar with Music Therapy and it’s benefits
• Protective NICU Environment
• Volunteers versus Therapists/Specialists
• Use of Research to Overcome Challenges
• Need for multiple Music Therapists
ADDITIONAL SUPPORT AND SERVICES
Music Therapy After Discharge

- Parent-Child Music Groups
- Early Childhood Music Groups
- Group music therapy
- Individual music therapy
- Parent education and support
Music Therapy After Discharge

- Private practices, such as local options, Wholesome Harmonies or Cadenza Center; provide services in the community once patients are discharged from the hospital.

- Sessions may be designed for individuals, or groups.

- Music therapist work toward specific goals that might be expressed by doctors, teachers or other
Benefits To Having Music Therapy After Discharge

- Helps infants reach important developmental milestones
- Addresses physical, social, emotional, cognitive, and communication goals
- Encourages positive interactions between parent(s) and infant
Resources

• Music Therapy with Premature Infants: Research and Developmental Interventions, Second Ed, Jayne M. Standley, PhD, MT-BC, and Darcy Walworth, PhD, MT-BC, 2010, American Music Therapy Association

• Music, Medicine & Miracles, Amy Robertson, MM, MT-BC, NICU MT, 2009, Florida Hospital Healthcare & Leadership Monograph Series, Vol III

• National Institute for Infant and Child Medical Music Therapy (music.fsu.edu/areas-of-study/music-therapy/certifications/nicu-mt)
Resources

• PowersDevice Technologies - Producer of PAL (powersdt.com)

• Wholesome Harmonies Private Practice – whmusictheraphy.com

• Cadenza Center – cadenzacenter.com
Thank you!