Music Therapy at the Children's Hospital of the King's Daughters:
A Music Therapy Program for the Pediatric Hospital in Norfolk, VA

By

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Music Therapy at the Children's Hospitals of the King's Daughters:

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Summary Statement

This proposal is for a full-time music therapist position at the Children's Hospital of the King's Daughters (CHKD) in Norfolk, Virginia. There is a wide range of physical/medical, psychosocial, and cognitive goals that need to be addressed for children in the hospital environment, to treat them most effectively and efficiently. Music therapy can achieve many of these goals in a significantly effective and long-lasting way. It is also a cost-effective way to achieve these goals. By establishing a positive rapport with the patient, family, and medical staff, the music therapist provides treatment aimed at the overall improvement and health of the children and their families. The full-time music therapist will work both individually and in group settings, utilizing a variety of techniques, instruments, and skills to address these goals. The addition of music therapy at this hospital will benefit the patients, families, staff, and overall hospital environment.

Statement of Need

CHKD is a 206-bed pediatric hospital in Norfolk, Virginia, servicing southeastern Virginia and northeastern North Carolina (CHKD, 2019b). Not only is this hospital the only freestanding full-service pediatric hospital in the Commonwealth of Virginia, there are many satellite buildings throughout the area devoted to specialized services. Collectively, the CHKD health system provides a wide range of services including: inpatient and outpatient care, pediatric intensive care, rehabilitation, radiology/imaging, cancer treatment, medical and surgical care, respiratory care, transitional care, pastoral services, hospitality services, pharmacy, and a children's emergency department. CHKD is also a research and teaching hospital. The facility

has fully-equipped playrooms as well as classrooms equipped with computers. Recreational bedside activities are also offered.

A health system that is so invested in the well-being of its children needs a music therapy program, and is well-prepared to support one. The hospital's mission is to deliver "excellence in quality and service" while always looking to improve, and is based on adapting to the "needs of children and advancement of science" (CHKD, 2019a). This is a teaching hospital; students are welcomed and much research is conducted here. The philosophy is "one priority, one mission, one focus: children." The hospital highlights the importance of "teamwork and communication, honesty and integrity, personal responsibility and stewardship of resources" and also "creativity and innovation" (CHKD, 2019a). In order to help each child in the best ways possible, it is crucial to work with the other medical professionals and staff, and collaborate to determine the best route of treatment and care for each patient.

A music therapy program is a vital resource in a pediatric hospital setting. According to the American Music Therapy Association (AMTA; 2006), music therapy is:

> Individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program. It is an established health service similar to occupational therapy and physical therapy and consists of using music therapeutically to address physical, psychological, cognitive and/or social functioning for patients of all ages. Because music therapy is a powerful and non-invasive medium, unique outcomes are possible. (para. 1)

In the medical setting, a music therapist utilizes evidence-based techniques to assess and address the needs of each patient moment to moment, and through the medium of music, is able to accomplish a wide variety of goals, including physiological, psychological, and social

domains. Music therapy may be an avenue to reach those who may not respond to other forms of treatment: "Music is a form of sensory stimulation, which provokes responses due to the familiarity, predictability, and feelings of security associated with it" (AMTA, 2006, para. 2), and because of this, music can affect patients who may have been resistant to other forms of treatment.

Personal Statement

My decision to pursue a music therapy career is the culmination of my strong passions in life: music, children, and psychology. I have always loved children, and had various jobs throughout my adolescence working with them or caring for them. My joy of music was instilled in me from birth by my parents, and formal education began in school with learning to play the flute. I pursued psychology in college, earning my bachelor's degree with a music minor. It was here that I discovered the existence of music therapy by a simple mention of its existence by an acquaintance. After researching the field and the profession, I was decided. It was the perfect combination of my three passions, and thus I pursued my master's degree in music therapy. For more detail on my education and work experiences, please see my resume in Appendix A.

Through my education and in my internship at a children's oncology center, I developed my philosophy of music therapy as being holistic, addressing each individual as a whole being. All aspects of a person are connected and the mind-body connection is of key importance. This is derived in part from the biomedical model of music therapy, as is often used in the medical field. This philosophy operates on the basis that music has the ability to affect the brain, and therefore it can be used therapeutically to promote change and enhance a person's capabilities (Darrow, 2008). Also providing guidance to my practice as a music therapist is the humanistic approach,

which relies on the mind-body-spirit connection, and emphasizes the importance of unconditional positive regard for the client and open communication (Corey, 2012).

As a music therapist, I treat each patient as an individual, empowering them to heal. Healing, as defined by Bruscia (2014), is "wholeness and interconnectedness that[...] includes all harmonious relationships that can occur among and between body, mind, spirit, community, society, culture, and environment" (p. 220). I operate on the belief that there is no one right way to treat everyone, and no person is defined solely by a diagnosis. Everyone has potential, and deserves to be treated with respect. It is both my duty as a music therapist, and my passion, to assist each person to the best of my ability. I firmly believe in the power of music and that it has the power to reach anyone, it is a matter of finding the specific type of music that each person responds to. This helps establish and strengthen a relationship which then allows me to help each patient as holistically, efficiently, and effectively as possible. I aim to help each child return to his or her everyday life following whatever medical concern he/she has experienced, because being able to simply be a kid is so important.

This hospital highlights the importance of "teamwork and communication, honesty and integrity, personal responsibility and stewardship of resources" and also "creativity and innovation" (CHKD, 2019a, para. 2). It is so important to work with other medical professionals and staff to collaborate to determine the best route of treatment and care for each patient. Creativity and innovation are especially important in working with children, and flexibility is also crucial to be able to adapt and change in the moment to best suit the child's needs. I employ the use of humor when appropriate and have found it to be helpful and often central in establishing a relationship with patients and helping them heal.

The importance of documentation is key in noting trends, finding methods or interventions that are successful, as well as learning what is unsuccessful or needs improvement. Documentation also provides the foundation for research, both to improve upon established information and practice and to discover new methods, techniques or information. It is also important to be aware that there are times when music therapy is contraindicated or inappropriate, and I know when and how to refer them to someone able to address their needs when I cannot be of service. I always strive to be the best music therapist, love working with children and their loved ones, and truly believe music therapy is a powerful and important therapy.

Review of Literature

The pediatric hospital, music therapy and pediatric medical music therapy each have a strong background of established and developing research. The following is a glimpse into the foundation of evidence supporting this proposal for a music therapy program at CHKD.

The Pediatric Hospital

The pediatric hospital can be intimidating for a child. It is often a new environment with many possible frightening elements: loud noises, unfamiliar people, and symptoms or procedures that are painful. A child entering this setting can present with a number of diagnoses, ailments and/or needs. When considering the main medical unit of a pediatric hospital as well as the Pediatric Intensive Care Unit (PICU), the reasons for admission include but are not limited to: respiratory, cardiovascular or gastrointestinal complications, major and minor surgeries/operations, burn care, infectious diseases, major trauma, chronic or acute illnesses, hematological/oncological care, organ system failure, and neurological concerns (Hanson-Abromeit & Colwell, 2008).

Hospital care has evolved to focus not only on the medical and physical needs of the patient, but the psychological and social factors as well. This is called the biopsychosocial model, and aims to help each person holistically (Davis, Gfeller, & Thaut, 2008; Purdy, 2017; Sarafino, 2006). The biological construct includes genetic and biochemical factors. Psychological factors include mood, personality, and behavior, and social factors include culture, family, and socioeconomic background. These constructs all contribute to who a person is, and how they affect and are affected by the environment. The biopsychosocial approach is relevant for children in the hospital, and encompasses the myriad details the therapist considers when treating a patient (Purdy, 2017).

Within the hospital, the physiological, or medical, goals of pediatric medical patients may include decreasing pain, stabilizing vital signs, improving respiration, relieving muscle tension, and increasing or maintaining range of motion or functional movement skills for rehabilitation (Hanson-Abromeit & Colwell, 2008). Psychosocial goals include decreasing depression and anxiety, promoting relaxation, encouraging emotion expression, improving self-esteem, and facilitating social communication (Hanson-Abromeit & Colwell, 2008). Cognitive goals in the pediatric hospital setting can include providing sensory stimulation, stimulating active cognition, reinforcing academic skills, and preventing developmental delay (AMTA, 2006; Hanson-Abromeit & Colwell, 2008; Davis et al., 2008). It is important that each child is treated holistically during their hospitalization. Doing so may contribute to a shortened length of hospitalization, and may help to continue healing beyond the hospital stay (Hanson-Abromeit & Colwell, 2008).

The needs of each child vary and are specific to the individual. Not only must their medical needs be addressed, but the additional emotional effects of being hospitalized must be addressed

as well (Sarafino, 2006). According to Edwards and Kennelly (2011), there are four constructs that encompass the care of children in the pediatric hospital: theories of stress, coping and adjustment; transactional models of stress; developmental theories; and family centered care (p. 151). These constructs all "overlap and intertwine significantly," thus, all must be considered (p. 152). Each construct is important, because the adverse effects can impact them far beyond their hospitalization, regardless of the length of stay (Sarafino, 2006).

There are many ways to address the large variety and individually specific needs of each child admitted to the hospital. One such method is music therapy. Due to its ability to address multiple needs or goals simultaneously, it is a preferred method of treatment in this setting.

Music Therapy

Music therapy emerged as an organized profession in the 1940s and 1950s, with musicians visiting World War I veterans in hospitals (AMTA, 2019a). Since then, it has developed into an evidence-based therapy. Because of its versatility and aesthetic qualities, it is used with diverse clinical populations and areas of need, and can be adapted to address a wide variety of clinical goals (AMTA, 2019b).

According to the AMTA, "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" (AMTA, 2006, para. 1). In academic education, music therapists complete training in various practicum settings followed by an extensive internship. After these requirements are complete, qualified individuals are eligible to take an examination to become board-certified (Certification Board for Music Therapists, 2011). This rigorous program helps ensure they are well-prepared to meet the needs of widely diverse clinical populations.

Music therapy in pediatric medical care. In the hospital setting, music therapy has been used to ease pain, decrease anxiety, and encourage emotional expression (Colwell et al., 2013; Kirby, Obi, & Sahler, 2014). In the pediatric hospital, music can be effective because it is appealing and typically non-intimidating to children, in contrast to the various machinery and noises that are part of the typical hospital environment. Music has the ability to reach the hospitalized child, who is likely to be nervous or scared. Furthermore, music therapy can involve families and other hospital staff in the treatment process, and is used to address many needs of the hospitalized patient (Hanson-Abromeit & Colwell, 2008). The music therapist can quickly build a relationship of trust through music and assess and address the needs of the child efficiently and effectively (Klassen et al., 2008; Edwards & Kennelly, 2011).

The board-certified music therapist can address the wide range of needs and goals for pediatric patients mentioned above through a range of instrumental and vocal methods, utilizing both live and recorded music. Unlike passive music listening, music therapy considers each patient individually, assesses their needs, and can change moment to moment to best fit the patient during treatment (Kirby, Obi, & Sahler, 2014; Millet & Gooding, 2017). The unique medium of music combined with the quality of the therapeutic relationship and the individual assessment and treatment are what make music therapy effective (Coughtrey et al., 2018; Hanson-Abromeit & Colwell, 2008; Matsota et al., 2013). Music therapy follows current practice by treating each patient holistically and addresses each component of the biopsychosocial model, often simultaneously. The following sections will explore key goal areas that are addressed through music therapy in this setting and illustrate why it is an effective choice for treatment of patients, as well as the additional benefits it affords the hospital, including decreasing patients'

length of stay, decreased need for pharmacology, and an improved positive reputation for the hospital.

Music therapy to address physiological needs. The physiological needs of the patient are widely varied, but include: pain, vital signs, respiration, muscle tension, and range of motion or functional movement skills. One primary concern for patients is pain. Pain is not simply a physiological experience. There are three components of a person's perception of pain: pain sensitivity, coping, and cognitions (Whitehead-Pleaux, Baryza, & Sheridan, 2006). In addition to the physiological experience, a person's fear and anxiety and their thoughts about the experience contribute to their perception of pain (Sarafino, 2006; Davis, Gfeller, & Thaut, 2008).

There are several theories that describe how music therapy can be an effective treatment for pain. One is the Gate Control Theory of Pain (Melzack & Wall, 1965). This theory holds that the body can only process limited incoming stimuli at once. Thus if the body is provided with something other than a painful stimulus to focus upon, such as personalized aesthetically pleasing and soothing music, fewer neural receptors are able to transmit the pain perception, and the patient's perception of pain will consequently decrease (Davis, Gfeller, & Thaut, 2008; Whitehead-Pleaux et al., 2007). Music therapy can address this through both active and receptive methods, such as engaging a patient in music-making or utilizing preferred music-listening (Calcaterra et al., 2014; Colwell et al., 2013; Klassen et al., 2008; Matsota et al., 2013). By employing this theory, the music therapist can divert the attention away from a child's pain to the music, thereby decreasing the perception of pain. Music therapy has the additional benefits of being a non-pharmacological intervention, leading to reduced medication needs for the patient, decreased possibility of side effects from this, and increased cost-benefits for the hospital (Walworth, 2005; Kirby, Obi, & Sahler, 2014).

During surgery, music therapy can be used in place of or supplemental to anesthetics and analgesics (Loewy, Hallan, Friedman, & Martinez, 2006). The music therapist helps decrease a patient's anxiety pre-surgery, which improves the impact of the anesthetics and analgesics. Improving the effects of these drugs decreases the amount or number of doses necessary (Klassen et al., 2008; Matsota et al., 2013; Patil et al., 2014; Walworth, 2005). This is applicable post-surgery as well. Utilizing the Gate Control Theory of Pain, music therapy can decrease the patient's pain, and thus the amount of medication needed during recovery (Davis et al., 2008; Levan, 2016; Matsota et al., 2013). The music therapist can provide procedural support with music, creating a more positive experience before, during and after surgery by assessing the patient, planning, and treating, moment to moment (Ghetti, 2012; Levan, 2016; Loewy et al., 2006). By reducing a patient's anxiety, music therapy can decrease the necessity of pharmacology throughout the process of surgery and recovery.

Through music therapy, rehabilitative goals can also be addressed. This includes maintaining or increasing a patient's range of motion following an injury or serious illness, which is crucial to recovery. This can be accomplished with music therapy alone or in combination with physical and/or occupational therapy (Bukowska et al., 2016; Edwards & Kennelly, 2011; Raghavan et al., 2016). The music provides an auditory cue during strenuous and tiring exercises, stimulates movement, and assists motor planning for recovering stroke patients (Davis et al., 2008; Raghavan et al., 2016). This method of rhythmic entrainment can be applied when working with children towards rehabilitative goals. Music therapy can also make these activities seem less strenuous (Raghavan et al., 2016). Patients with Parkinson's and other diseases or illnesses causing gait irregularity can steady their gait with music therapy (Bukowska, 2016). Patients suffering from traumatic brain injury can improve their cognition

(Gardiner & Horwitz, 2015). All of these potential benefits of music therapy can be applied when working with children with related clinical needs.

Improving respiration for patients suffering from illnesses such as chronic obstructive pulmonary disease (COPD) or asthma can be addressed through music therapy. By singing or playing a wind instrument, breathing can be improved (Canga et al., 2015; Davis, Gfeller & Thaut, 2008). Asthmatic children experience improvements in oxygen saturation, heart rate, and respiratory rate with music therapy as well as patients requiring mechanical ventilation assistance (Austin, 2010; Roslita, Nurhaeni, & Wanda, 2017). Music can also be used as a motivator in conjunction with exercise, or music-assisted relaxation to improve breath management and support, reduce blood pressure, and encourage physical exercise (Davis et al., 2008, Roslita et al., 2013).

Music therapy to address psychosocial needs. In order to treat the patient holistically, the psychosocial effects of hospitalization must be addressed. Psychosocial needs include: depression and anxiety, relaxation, emotion expression, self-esteem, and social communication. A child's experience at the hospital can be traumatic, and may cause anxiety and depression. Using interventions such as song writing and composition, active music making, or music in combination with relaxation, imagery or drawing, music therapy can decrease a patient's anxiety and depression (Binson et al., 2013; Karakul & Bolışık, 2018, Robb et al., 2014).

Millet and Gooding (2017) found that both active music engagement and receptive music listening reduced both caregiver and patients' pre-operative anxiety. Active music engagement can be especially beneficial for children with cancer, who tend to spend a lot of time in the hospital. Robb et al. (2008) found that hospitalized children experienced an increase in coping behaviors and displayed a positive facial affect after music therapy sessions. Based on Robb's

contextual support model of music therapy, music can be used to counter the stressful environment of the hospital for children by affecting the child's engagement with the environment and by buffering the effects of stress by reducing psychological distress (Robb et al., 2008, p. 700). Whitehead-Pleaux et al. (2007) found that "music therapy reduced pain and anxiety, and that engagement in music therapy enhanced relaxation. In addition, music therapy positively affected patients' mood, compliance, and the relaxation level" (p. 217).

Positive coping behaviors can help a child through a painful procedure, and ease recovery; these are developed or improved with music therapy (Loewy et al., 2006). These behaviors, defined by Robb et al. (2008) and expanded upon by Colwell et al. (2013) include positive facial affect, active participation in the intervention (music), verbal initiation, eye contact, verbal interaction and participation. Active music making facilitated by a music therapist resulted in significantly higher responses in these categories when compared with passive music listening and music composition (Colwell et al., 2013).

Music therapy can also help a hospitalized child with emotional expression. Using active music engagement techniques, the music can be adapted to best fit the situation and allow the patients to express themselves (Austin, 2010, Robb et al., 2014). The hospitalized child experiences a loss of independence and control. Choices provided in music therapy, such as instrumentation, song selection, or dynamics, can provide opportunities to exert some control over the environment (Edwards & Kennelly, 2011). Additionally, Hendon and Bohon (2008) found that music therapy elicited a more positive mood in patients than did play therapy.

In the hospital setting, music therapy can provide opportunities for structured social interaction. A hospitalized child misses out on daily social interactions with friends and family. While participating in group music therapy, children have the opportunity to socialize with peers,

and experience an improvement in mood (Hendon & Bohon, 2007). Group music therapy sessions provide opportunities for positive socialization, normalization, and emotional expression are encouraged simultaneously (Nesbitt & Tabatt-Haussmann, 2008). For example, music used for its prosodic elements such as pitch, volume, and timbre, can encourage social interactions in neurorehabilitation for patients suffering speech difficulties after a Traumatic Brain Injury (TBI) (Bower & Shoemark, 2009). In a study by Gardiner and Horwitz (2015), patients with a TBI participated in a combined neurologic music therapy and psychotherapy group, and showed improvements in both cognitive areas and their enjoyment of the psychotherapy portion. This made them more likely to attend and participate in groups. Relationships between patient and staff can also be improved through music therapy, leading to better individualized care of the patient and humanization of the patient (Austin, 2010; Edwards & Kennelly, 2011).

The relationship between the hospitalized child and family is also addressed through music therapy. Being away from home and family can be difficult. Parents may feel added stress and worry associated with their child's hospitalization. This can lead to strain on the relationship, which music therapy can help ameliorate. Coughtrey et al. (2018) found that when family was included in therapy, there was a greater decrease in negative symptoms after treatment. Additionally, Millet and Gooding (2017) found that both active and passive music therapy were effective in reducing parents' preoperative anxiety, which had a positive influence on the child.

Music therapy to address cognitive needs. Music therapy can be used to address cognitive goals in the hospital setting as well. A hospitalized child needs to understand why he or she is in the hospital so that it is not misunderstood to be the child's "fault" or perceived as punishment or unfair (Robb, 2003). Music therapy can act as an information agent, and teach the

patient about this in a developmentally appropriate way, using the therapist-patient rapport as a basis for trust and compliance (Sarafino, 2006). By introducing different sources of unfamiliar aspects of the hospital, for example, the new environment of the child's room, the various machines with new noises, and ever-changing staff who enter the room by creating a song the child (and family) can learn, some fears and anxiety can be alleviated. Social stories, originally created by Gray (1993) to address social concerns for children with Autism Spectrum Disorder, can be adapted for children in the pediatric hospital. The stories "have been used successfully to introduce changes and new routines at home and at school, to explain the reasons for others' behaviors, or to teach new academic and social skills" (p. 3). Furthermore, these social stories have been set to music and show effectiveness in behavior adjustments and teaching new concepts (Schwartzberg & Silverman, 2013; Whitehead, 2007; Brownell, 2002).

Furthermore, music therapy can be an information provider. For example, a song can be created to teach a child about his or her upcoming surgery, and the people who will be entering the room (doctors, nurses) to help alleviate anxiety (Whipple, 2003). Whipple's Surgery Buddies music therapy program is one such program designed to educate and alleviate concerns of children surrounding upcoming surgeries with proven efficacy. The program incorporates many different music therapy techniques, including singing, instrument selection/playing, song writing, musical games, and discussion of coping skills relating to the children's feelings surrounding their upcoming surgery. The program is further adjusted to meet each patient's needs individually.

The hospital environment is not the typical experience for a child. Music therapy can help to normalize it, because musical activity *is* most often a normative experience. Through Robb's (2003) Contextual Support Model of Music Therapy, children will be better equipped to cope

with the stressful hospital environment. This is accomplished through structured music therapy sessions that allow for mastery (of the musical environment), providing a sense of autonomy (through instrument and song selection/qualities), and allowing for feelings of relatedness, rapport, and support. These experiences in music therapy may transfer to other domains in the child's life.

Conclusion

It is important to ensure a child in the hospital is given the greatest opportunity for optimum health. Additionally, while the physiological health is being attended to, it is also important to address cognitive and psychosocial needs. According to Tondatti and Correa (2012),

> childhood experiences, whether positive or negative, are registered in the children's memory, ...which is no different in the hospital environment, where children will probably experience greater difficulties than in their daily routine, due to the constraints they are exposed to. This brings about terrifying ideas, anxiety, decreased self-confidence, self-esteem, thus hampering the acceptance of hospital treatment and recovery. (p. 364)

A negative experience in the hospital can have lifelong effects. Music therapy can help to not only address the physical ailments of a child's hospitalization, but it can also address the cognitive and psychosocial needs of each patient individually. Because of its aesthetically pleasing nature, as well as its wide-ranging versatility of possible applications within the hospital setting, music therapy would be an asset to CHKD.

Detailed Description of the Program

At the Children's Hospital of the King's Daughters (CHKD), there are a wide variety of reasons for a child's admittance. The hospital has a unit for each of the following: general care,

hematology/oncology, monitored bed, Pediatric Intensive Care Unit (PICU), rehabilitation, short procedure, and transitional care. The needs of each patient will vary based upon their diagnosis and their individual personalities, and each patient is likely to have multiple needs. As such, each patient needs to be assessed individually, and speed of assessment is a necessity. Needs (goals) can include but are not limited to the following:

- Physiological: pain management and reduction through non-pharmacological methods, stabilization of vital signs, increasing/maintaining range of motion (gross and fine motor);
- Cognitive: increase sensory stimulation, active cognition, reinforce academic skills, prevent developmental delay;
- Psychosocial: promote relaxation, decrease depression and anxiety, improve self-expression and self-esteem, provide opportunities for social communication, improve family relations and support, and normalize social interactions (Hanson-Abromeit & Colwell, 2008).

The music therapist is able to assess and address any of these needs effectively to best serve each patient. The music therapist's ability to adapt to varying circumstances will ensure the session addresses present needs. The music therapy program at CHKD will consist of three primary components: groups, individual sessions, and staff education. Because the nature of a hospital and its patients is fast-paced and always changing, the type of group or individual session will most often be decided at the start of the session and not before, and scheduling of all three pillars will remain adaptable.

Group Music Therapy

Inherent in the group setting is the social dynamic. All groups will aim to promote positive social interactions and create a sense of unity and shared identity. The music helps create a safe space, and patients will be supported and encouraged to participate. Patients who are not ambulatory can be assisted to group by music therapist or other staff, and patients on contact precautions who are unable to leave their room can use an iPad to attend the group via video conference, with related group materials provided to the patient before or after group. The group can vary by topic, method, and technique, but will consist of the following options:

Song writing. Song writing groups can be open-ended and improvisational in nature or compositional, two of Bruscia's (2016) methods in music therapy. These can be designed with varying levels of structure. The group is asked to choose a topic and members are given turns to contribute words or phrases to the lyrics. They are given suggestions on lyrics and music by the therapist, who helps bring the lyrics, music and rhythm together into a final song that participants can listen to or sing. Fill-in-the-blank song creation is a possible alternative to this procedure.

Active music-making. This group can also be open-ended and is improvisational in nature (Bruscia, 2016). The music is created by one patient initiating a tempo and beat, and adding in further instrumentation and/or singing to the music by other group members. Suggestions of instrument use or melodic additions provided by the music therapist provide guidance when needed. If more structure is needed, the music therapist can assign specific instruments and/or musical parts to patients. Group drumming is another possible group in which a variety of drums are provided and a similar improvisational music-making procedure is implemented. Patients practice and hone their coping skills as well as develop or enhance the feelings of group identity and strengthen social relationships.

Lyric analysis. These groups can create discussion once the music therapist chooses a song with a particular message. Patients are handed the lyrics and encouraged to read along, underlining significant words or phrases. The group is invited to openly discuss the song, its themes, and any other thoughts or feelings that may come up. As an alternative, a group needing more structure can have the therapist initiate and direct the discussion. These topics can include: feelings of loneliness and isolation, positive memories, preparing for a medical procedure, feeling nervous, striving to achieve goals, and more.

Song sharing. A topic or theme is introduced by the music therapist and group members are asked to think of a song they enjoy that fits the topic. The group listens to the song and discussion similar to the lyric analysis ensues, with the music therapist providing guidance or talking points when necessary. The inclusion of group members' song choices gives them feelings of inclusion and validation, as well as a sense of group identity, thereby detracting from feelings of isolation.

Group singing. The group is asked to provide song or genre selections that they enjoy or are familiar with. They are then encouraged to sing along to the songs as they listen to either pre-recorded music or the music therapist's performance of the song on guitar or piano. The group members experience a sense of shared identity and/or interests by singing together, as well as an improvement in mood (Whitehead-Pleaux et al., 2007).

Individual Music Therapy

Patients may participate in individual music therapy sessions for a variety of reasons, including personal preferences, medical limitations, and psychological needs. Individual sessions will be scheduled with patients once they are referred to the music therapist by other hospital professionals, including medical and social service staff. For a sample referral form, see

Appendix B. The music therapist will consult with staff as needed before meeting the patient. In the first meeting with a patient, the music therapist will perform an assessment summarizing the diagnosis, basic information, presentation, what occurred during the session, and the patient's response. See Appendix C for a sample assessment form. Chart notes will be recorded after each meeting with a patient describing the event that took place, the action taken by the therapist, and the response of the client. For a sample chart note, see Appendix D. Finally, a termination note will be completed at the time of the patient's discharge or when therapy ends. For a sample termination note, see Appendix E.

As in group sessions, there are a multitude of music therapy experiences that can be provided. Below, suggested techniques to be facilitated in individual sessions are described.

Music-making/song writing. Through music making and song writing, the patient is given a sense of control and provided with a medium for emotional expression, which is crucial to the healing process (Robb, 2003; Robb et al., 2008). Depression can be alleviated through music therapy by providing opportunities of emotional expression in a creative medium, utilizing these techniques (Canga, Azoulay, Raskin, & Loewy, 2015; Coughtrey et al., 2018). If a patient is unable to use certain instruments due to being in a monitored bed unit, modified instruments are provided to allow him/her to feel successful despite the immobility and other difficulties imposed by the necessary machines (Austin, 2010). As in the group setting, the amount of structure is adapted based on the needs of the patient. In an individual session, however, there is more time and privacy to divulge into deeper feelings or thoughts if the patient needs it. Music-making and song writing details are determined by the patient, with support and guidance from the music therapist throughout the process.

Music and relaxation. A session for relaxation involves playing pre-recorded music or live music provided by the therapist, and may include verbal guidance through relaxation techniques, such as progressive muscle relaxation, imagery, or deep breathing. This method largely utilizes the iso-principle. The iso-principle involves meeting a person where they are, and moderating this through music in the desired direction, as well as helping to slow the breathing (please refer to Appendices F and G for sample session plan and script). This can be used for a patient in the general medical unit or short procedure unit needing to reduce anxiety while being prepped for surgery (Kirby, Obi, & Sahler, 2014; Klassen et al., 2008; Millett & Gooding, 2017; Walworth, 2005). These can also be used post-operatively as well to ease the client out of anesthesia and into a calm wakeful state. A patient in the hematology/oncology unit needing procedural support while receiving a venipuncture can benefit from this as well (Coughtrey et al, 2018; Kirby, Obi, & Sahler, 2014; Klassen et al., 2008; Nesbitt & Tabatt-Haussmann, 2008; Walworth, 2005).

Preferred music listening. With an iPad, the music therapist will give the patient opportunities to select music for listening, thereby providing feelings of control and autonomy. The session remains open-ended and can lead to discussion about song meaning and how it relates to the patient. The music therapist can also guide this session by choosing songs, or providing options for songs with a desired theme.

Staff Education

The music therapist will aim to hold one in-service quarterly for staff to provide education and information about music therapy. A different area of music therapy will be chosen for each in-service. Not only will this allow for a more positive view of music therapy among staff, it will give them insight into its benefits and greater awareness/comfort in recommending

patients for music therapy. Furthermore, it will allow the staff to interact in a more informal setting and further collaboration outside of rounds and patient areas. This ultimately leads to better relationships and communication among staff, which promotes better care for the patients at CHKD. For a sample fact sheet about music therapy that can be given to staff and families in the hospital, refer to Appendix H.

Many of these sessions are beneficial and adaptable to multiple units of the hospital. The examples provided demonstrate the wide variety of abilities a music therapist possesses to address the needs of all patients in a pediatric hospital, no matter what their diagnoses may be. Because of the versatility of music therapy, and its ability to assist patients in every unit, the music therapist can be a consistent figure to a patient who might be moved between units based upon their changing health and needs. A child needs a structured environment, which may be difficult in a hospital setting; music therapy can provide this. The addition of a single staff member is a minor change in terms of budget, but can have a widespread effect on the patients, family members, and staff of the hospital.

As the program grows, volunteer musicians can be invited to provide music entertainment in waiting rooms or bedside performances if desired by the patient (Hanson-Abromeit & Colwell, 2008; Iyendo, 2016**)**. Music for entertainment, either in public spaces or patient rooms by request, is not to be confused with music therapy. While it may be a positive addition to the hospital environment, the experience does not include the licensed music therapist to assess, plan and treat in the moment. Therefore it cannot provide the many benefits of music therapy. With the attendance of the therapist to conferences and the positive reception of services to promote the program, it can be anticipated that the program's success will further improve its reputation and will have music therapy interns desiring an opportunity at this facility. Once the

program has been established for one year, the therapist can accept two interns which helps the hospital continue to promote its positive reputation as a teaching hospital and promoting education and creating opportunities for others to learn. In several years when the program is forecasted to grow further, the addition of other music therapists or a different creative arts therapist is an option for further promoting the well-being of the patients at this hospital.

Financial Justification

For this proposed program, the following funds will be needed. The proposed salary for the music therapist is $55,000 annually, based on national and state averages for a full time music therapist position (Music therapist salary…, n.d.). The budget costs are detailed in the Table 1 below, and can also be located in Appendix I.

Table 1. Proposed Budget for Music Therapy Program

Budget for Music Therapy Program	Cost
Payroll related expenses	
Music Therapist Salary (68.6%)	$55,000
Total Benefits (31.4%)	$17,270
Required Benefits (Social Security, Medicare, unemployment insurance, workers compensation) (7.3% of wages)	$4,015
Life, health, and disability Insurance (8.7% of wages)	$4,785
Paid leave (vacation, holidays, sick leave, & personal) (7.2% of wages)	$3,960
Avg. employer contribution to retirement/savings (5.4% of wages)	$2,970
Supplemental Pay (2.8% of wages)	$1,540
Subtotal	$72,270
Supplies	
Instruments: 1 weighted keyboard, 2 guitars, and accessories- tuners, extra strings, guitar straps, picks, capos	$1,500
Percussion instruments: ocean drums, rain sticks, tambourines, claves, shakers, djembes, buffalo drums, rhythm sticks, lollipop drums	$500
Other instruments: resonator bells, ukulele, plastic recorders, kazoos	$300
Technology: 1 laptop, 5 iPads, 5 iPods, 2 portable speakers, music, music recording software	$3,000
Cart for instrument and equipment transportation throughout hospital	$150
Instrument repair/maintenance	$1,000
Other	
Conference Fees and Travel Expenses	$2,000
Total	$80,720

Notes:
-Wages based on average national and state salary in Virginia (https://www.careerexplorer.com/careers/music-therapist/salary/virginia/)
-Benefits determined based on numbers from Bureau of Labor Statistics (https://www.bls.gov/news.release/pdf/ecec.pdf)
-All instrument prices determined from online store (https://www.amazon.com/)

Also included will be health benefits and time off for full time employees, accordingly (What is my employee…, n.d.). The schedule for the position will be a full-time music therapist, eight hours per day, Monday through Friday. Specific scheduling can be determined based on the hospital's schedule, but will include time allotted daily for attending meetings/rounds, individual and group sessions with patients, documentation, and planning. It may also include time for research and performing in-house presentations to educate staff and other professionals on music therapy. See Table 2 below for proposed weekly schedule, which can also be found in Appendix J for reference.

Table 2. Proposed Weekly Schedule for Music Therapist

Proposed Weekly Schedule for Music Therapy					
	Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
8 - 9 am	Rounds/Staff Meetings	Rounds/Staff Meetings	Rounds/Staff Meetings	Rounds/Staff Meetings	Rounds/Staff Meetings
9 - 10 am	Individual Visits	Individual Visits	Individual Visits	Individual Visits	Individual Visits
10 - 11 am					
11 am – 12 pm	Individual Visits	Group / Documentation	Individual Visits	Group / Documentation	Individual Visits
12 - 1 pm	Lunch	Lunch	Lunch	Lunch	Lunch
1 - 2 pm	Group	Individual Visits	Group	Individual Visits	Group
2 - 3 pm	Research / Other Site Requirements	Research / Other Site Requirements	Research / Other Site Requirements	Research / Other Site Requirements	Research / Other Site Requirements
3 - 4 pm	Documentation	Documentation	Documentation	Documentation	Documentation

In order to establish the music therapy program, equipment and instruments will also be necessary. This includes a laptop with the ability to record music and create media, good quality speakers, funds for music purchasing, recording software, flash drives or CDs for recorded music, a weighted keyboard, at least one guitar (although two are preferable, for patients who have the ability to play, or wish to learn) and percussive instruments. A variety of percussive instruments will be important in order to provide patients with choices. Percussion instruments are preferable because they allow the creation of successful experiences, even when a person has no previous instrument experience. Tablets, specifically iPads, will be extremely useful for allowing children to select their own music to listen to or for creating documents or musical collaborations in smaller spaces, such as a patient's room. It will also allow patients to listen to music when the music therapist is unable to be with a patient. A wheeled cart will hold instruments and equipment and allow the therapist to move throughout the hospital.

Additionally this budget ideally accounts for travel costs for the therapist to attend one national and one regional music therapy conference each year. This is important for the therapist and the hospital because it promotes networking with other music therapists and other facilities that offer music therapy, which can promote program improvement with the sharing of ideas. Attending conferences and workshops ensures that the therapist remains up to date on the most current practices in music therapy. Health benefits for a full time employee are requested, as well as sick leave and vacation time. This budget can be adjusted to purchasing minimal instruments with the mindset of expanding instrumental variety as the program grows, but ideally, instruments listed will be purchased within the first year of the program. After the initial year, the cost per year will decrease by about $5,450, which is the cost of initial supplies. Thereafter, minimal funds are requested for instrument and equipment maintenance. The benefits far outweigh the costs. Adding one employee to the staff at CHKD adds a multi-faceted team member who can work with a variety of patients, family members, and staff to improve the conditions of the patients and the hospital environment.

Larger Agency/Facility Context

The goals of the music therapy program are to treat each child individually and holistically, to provide them with the best possible care and to allow each child to return to their daily activities as quickly as possible. A collaborative approach with other staff and professionals is key to achieving this, and thus fostering an environment of respect and communication between staff is crucial. The program aims to always be changing and developing based on current research. Additionally, as the program grows it will hopefully be able to expand the

knowledge and respect of the field, bringing CHKDs name with it. The program can both educate and provide space for practice of aspiring music therapists and increase the appeal of this place of employment for music therapists and other medical professionals.

This program would be an asset to CHKD, which promotes goals very much aligned with these. Adding music therapy to the hospital's impressive list of services and therapies will be a positive addition to the hospital image as the field continues to grow. In the medical field, as music therapy research is performed, the CHKD name will circulate, and expand its mission to "evolve and enhance serves in response to the needs of children and the advancement of science" (CHKD, 2019a).

Within the hospital, music therapy can be used collaboratively with a multitude of staff. One such collaboration is with the physical or occupational therapist (AMTA, 2015; Hall, 2018; Raghavan et al., 2016). With open communication, these therapists can work together to co-treat, or meet individually with the patient, working to achieve the same goals (Ghetti, 2011; Hall et al., 2018). In a children's hospital, music therapists often work closely with the Child Life Services department (AMTA, 2015; Ghetti, 2011; Hall et al., 2018; Raghavan et al., 2016). The two can co-treat, or collaborate to determine the most appropriate clinical treatment for each patient. Additionally, the music therapist can be present during painful medical procedures to help ease the fear and anxiety for the child. This kind of procedural support may help the medical staff implement their duties more effectively and efficiently. Communication between all staff can be improved with the addition of this music therapy program. Allowing not only the children to enjoy music, but the staff as well, provides new topics for discussion or finding shared interests, allowing staff to relate to one another, to families, and to children. Discovering a

child's interest in music can provide a means for nurses or doctors to relate to a child, beyond the presence of the music therapist (Edwards & Kennelly, 2011).

Outcomes and Assessment

The goal of this program is to improve the hospital experience for all children and their families, the hospital staff and environment. The program will promote music therapy as an effective treatment necessary to the pediatric hospital, as well as promote its positive reputation. To achieve this, assessment and evaluation will be carefully documented. It will be the duty of the music therapist to keep all documentation up-to-date, orderly and as detailed as possible, respecting each patient's privacy and rights. Documentation is key to recognizing trends, and can lead to research proposals, grants, and published works. Progress and possible improvements will be determined by noting trends in the documentation, looking for which goal areas, music therapy techniques, and units of the hospital experience the most and least positive effects. Areas needing improvement will be noted, and then researching possible changes to adapt the program accordingly. Surveys will also be constructed and distributed to primary caregivers to gather a general opinion of how music therapy is being received by the patients and their families. Nurses, doctors and other medical staff will be also be asked to complete a survey to assess their attitudes and perceptions of the music therapy services. For the survey, please refer to Appendix K.

The possibilities for benefits to the hospital are vast. With the development of new methods and techniques in music therapy being researched and published by the music therapist at this hospital, CHKDs name will be positively circulated in the medical field, improving its already positive reputation. The positive experiences in music therapy during a family's hospital visit may result in positive reviews of the hospital, including those administered to patients by

health care companies such as Press Ganey (About the Press Ganey survey, n.d.). Measures on these surveys, including pain management, communication with doctors and nurses, and overall hospital satisfaction can improve. This added therapy is a motivator to potential patients choosing which hospital to use for whatever services they require, and for other medical professionals recommending this hospital. As mentioned above, there are also financial benefits to reduced need for analgesics and anesthetics, and decreasing the length of stay (Kirby, Obi, & Sahler, 2014; Matsota et al., 2013; Walworth, 2005). Music therapy can help to foster interdisciplinary collaboration, which improves relationships among staff. Furthermore, relationships between staff at the hospital can benefit from the improved communication and discovery of shared musical interests, which will positively affect the hospital environment as well. For an annotated bibliography describing significant research supporting this proposal, please see Appendix L.

Conclusion

A music therapy program will be an effective, appealing, and efficient addition to an already well-established children's hospital such as CHKD. The field of music therapy continues to expand with a solid foundation of research that supports its inclusion in the pediatric medical setting. The addition of a music therapy program at CHKD will augment the hospital's growth and success in its mission of delivering excellence in quality and service.

The job description of the music therapist at this facility has been outlined, and the benefits it would bring to the hospital have been highlighted, including improving the hospital environment for patients, families, and staff, cost effectiveness, and increasing the positive publicity of the hospital. Music therapy can assess and address a wide variety of goals faced by the many unique individuals who enter the pediatric hospital. Music has this unique ability

because of its aesthetically pleasing, motivating, and engaging qualities, which are all important for a hospitalized child and would be a great addition to CHKD.

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Appendix A – Resume

Rebecca Bowie

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EDUCATION

Masters of Science in Music Therapy Coursework Completed: May 2015
State University of New York at New Paltz Degree conferral upon completion of thesis: in progress
Bachelor of Arts in Psychology Graduation Date: Dec 2011
University at Buffalo, State University of New York (SUNY), Buffalo, New York.

EXPERIENCE

Music Therapist September 2016 – Present
Parham Doctors' Hospital Richmond, VA

- Plan and facilitate three music therapy groups per day for two to twelve patients with a variety of diagnoses on the Behavioral Health unit. Assess and adjust in the moment to best fit the group dynamic.
- Perform individual assessments and provide individual therapy sessions as needed.
- Work closely with all health care providers to provide the most efficient, effective and high quality care.

Music Together Teacher November 2014 – May 2016 / June 2016 – Present
Music Together Brooklyn, NY / Hampton Roads, VA

- Teach a highly focused, fast paced music and movement curriculum to children ages newborn to five years old and their caregivers.
- Lead family classes in enjoyable and musically enriched activities to teach basic music competence, appreciation, as well as enhance fine and gross motor skills, verbal and reading skills.
- Create and implement weekly lessons that are developmentally appropriate, playful, and address all learning styles in music.

Internship August 2014 – May 2015
Cancer Center for Kids, Winthrop Hospital Mineola, NY

- Provided music therapy to children throughout their treatment in both individual and group settings.
- Developed ability to assess, plan and treat patients in the moment in a fast-paced hospital environment.
- Maintained records of individuals' progress and adapted treatment plans accordingly.
- Assisted in creating and executing the Center's annual fundraiser and group performance, providing the children with a sense of unity and empowerment.

Music Therapy Department Graduate Assistant August 2013 – June 2014
State University of New York at New Paltz New Paltz, NY

- Organized and facilitated workshops with professionals in the field
- Wrote and compiled materials necessary for the graduate program re-approval by the American Music Therapy Association
- Communicated and collaborated with faculty, staff, students and other professionals.

Fieldwork May 2014 – August 2014
Elant Nursing Home and Rehabilitation Center Wappingers Falls, NY

- Collaborated with supervisor to lead music therapy groups.
- Provided therapeutic services in an individual setting, assessed client needs and abilities to provide appropriate instruments and music therapy techniques.

CERTIFICATIONS

Certified Music Together® Teacher Training June 2013
Music Therapist, Board Certified (MT-BC) June 2015

ACADEMIC MEMBERSHIPS

Phi Beta Kappa, *The Nation's Oldest Academic Honor Society* May 2011 - Present
Psi Chi, *International Honor Society in Psychology* November 2009 - Present
The National Society of Collegiate Scholars April 2009 – Present

Appendix B – Referral Form (adapted from Hanson-Abromeit & Colwell, 2008)

Music Therapy Referral

Patient Information

Name: _____

Age: _____

Diagnosis: _____

Referral Source:

Name: _____ Office #/Phone #: _____

Department: _____ Referral Date: _____

Reasons for Referral (check all that apply):

□ Pain management/coping techniques (specify _____)

□ Anxiety and/or depression management (specify _____)

□ Procedural support (specify _____)

□ Patient on mechanical ventilator

□ Socio-Emotional needs (specify _____)

□ Non-compliance with treatment

□ Patient in long-term isolation or intensive care

□ Cognitive stimuli needed

□ Support needed: emotional / social / family (circle all that apply)

□ End of life care

Other: _____

Additional Comments:

_____

Appendix C – Sample Assessment/Plan (adapted from Hanson-Abromeit & Colwell, 2008)

Music Therapy Assessment

Patient Information

Name: _____ Diagnosis: _____

Age: _____ Date: _____

Data (basic patient information, patient/family interview, medical staff consult, describe session):

_____

_____

Action (what music therapy methods and techniques were used, what the music therapist did):

_____

_____

Response (patient's behaviors, verbal contributions/abilities, strengths and needs):

_____

_____

Plan (goals/objectives, techniques to be used, what they will address for the patient):

_____

_____

Goal 1: _____

Objective 1a: _____

Objective 1b: _____

Appendix D – Sample Chart Note (Adapted from Hanson-Abromeit & Colwell, 2008)

Music Therapy Chart Note

Patient Information

Name: _____ Diagnosis: _____

Age: _____ Date: _____

Data (basic patient information, how the patient presented on that day, the environment the session took place in, what happened in the session, goals addressed):

_____
_____
_____

Goal 1: _____

Objective 1a: _____

Objective 1b: _____

Action (what music therapy methods and techniques were used, what the music therapist did, how long was the interaction):

_____
_____
_____

Response (patient's behaviors, outcomes relating to goals/objectives, reevaluated goals/objectives, future plans):

_____
_____
_____

Appendix E – Sample Termination Report

Music Therapy Termination Report

Patient Information

Name: _____ Diagnosis: _____

Age: _____ Date: _____

Reason for Therapy Termination: _____

Summary of Patient's Progress Through Therapy (goals/objectives, whether they were met, behaviors and affect, attitudes/thoughts of music therapy)

_____
_____
_____

Recommendations for future treatment (if any):

_____
_____

Additional Comments:

_____
_____
_____

Appendix F – Sample Session Plan for Relaxation and Pain Management

Patient Identifiers: Patient is a 15-year-old female who has been hospitalized in the general pediatric unit due to a spinal condition, about to undergo surgery. She has lower back pain and is very nervous about her surgery. Currently she experiences pain in her lower back, and has a lot of anxiety relating to her upcoming surgery.

Presenting Problems:

1. Lower back pain
2. High levels of anxiety about surgery

Goal:

1. Decrease patient's focus and awareness on lower back pain.
2. Decrease patient's anxiety.

Objectives:

a) Patient will provide at least 3 examples of preferred music for MT to use, both in this initial session and post-surgery.
b) Patient will engage in MT's live music to the best of her ability (ie: singing, playing an instrument, making eye contact with MT) to decrease her pain.
c) Patient will engage in conversation with MT about her surgery, and listen as MT describes the assistance of music during time at the hospital.

Assessment:

1. Pain and anxiety will be measured by a Likert scale at the beginning and end of the session.
2. Signs of relaxation or distress (ie: facial expression, body tension, eye contact, respiratory rate) will be observed and noted by the MT.
3. Patient's vital signs at the beginning and end of the session.

MT technique:

1. Live, patient-preferred music
2. Improvisation

Procedure:

1. MT will meet with the patient describe the procedure, how music therapy can help ease her pain and relax her, and answer any questions patient has.
2. MT will ask patient to discuss her anxieties relating to the surgery.
3. MT will ask patient to provide at least three songs that she enjoys and would like to hear.
4. MT will play these songs and instruct client on relaxation techniques.
5. MT will slowly fade out the music to conclude the session and allow patient to rest.

Music used:

1. Patient-preferred music.
2. Improvisational music framed by patient's choices.
3. Use of guitar and percussive instruments (ocean drum, xylophone, shakers) as MT deems appropriate.

Chart Note:

(Describe session: what happened, what actions the music therapist took, what responses the patient contributed, plans for future sessions)

Following this session, MT will advise patient to use her chosen songs at home post-hospital stay to relax, utilizing the breathing and muscle relaxation techniques she has used with MT.

Appendix G – Sample Relaxation Script

Patient Identifiers: Applicable to any school-age child needing relaxation.

Possible Presenting Problems: Anxiety, agitation, fear, inability to sleep

Goal: Relaxation, soothing patient to sleep, using music and imagery for relaxation technique.

Music qualities: simple melodies, simple rhythms, no complex instrumentation, nature sounds, no extreme volume or key changes

Music Therapist meets with patient and discusses what patient considers a "happy place" he/she would like to go to, to be used in the music and imagery for relaxation task.

Script:

Allow yourself to get comfortable in your bed. Feel the support of the bed beneath you, firmly planted on the ground. Feel the cushion of the bed beneath you, take a deep breath in… and let it out… Place one hand on your tummy, and another over your heart. Take another breath in…. and out… feel how your body rises and drops with each breath you take. Focus on that, and if you want, you can close your eyes. Keep breathing in… and out…

Now picture that bright and sunny day at the park we talked about. The bright sun shining in your eyes and making you squint. Remember how the sun made your body feel warm all over. Feel the wind make you hair blow all about, and the leaves dance by you on the sidewalk. You hear your friends' laughter and run to meet them on the swings. You hop on the swing and have a contest to see who can pump their legs the most and go the highest. It's a close battle but you win and you all leap off your swings and land in the grass. You lay there holding hands and looking up at the sky. The big white puffy clouds spot the pretty blue sky. Again the wind blows your hair all about, and you breathe in the smell of the grass and the woodchips on the playground. You all just lay together and keep staring at the sky, breathing deeply, and you relax, feeling happy to be with your friends having fun. Take another deep breath, in… and out… and your start to drift off to sleep…

The music is going to end now… remember you are in the hospital room with me, your music therapist. Take another breath and feel your body rise and drop… wiggle your fingers and your toes, feel your body in your bed… take another breath in… and out… and when you feel ready, open your eyes.

After conclusion of relaxation, if patient has not fallen asleep, music therapist will talk about how that experience was for the patient, and instruct him/her on how he/she can relax in a similar way without the presence of the music therapist, as a coping mechanism.

Appendix H – Music Therapy Fact Sheet

Music Therapy Fact Sheet

What is music therapy?

According to AMTA, "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. It is an established health service similar to occupational therapy and physical therapy and consists of using music therapeutically to address physical, psychological, cognitive and/or social functioning for patients of all ages" (AMTA, 2006)

How can music therapy help in the pediatric hospital?

There are a wide range of goals music therapy can achieve. Music therapy can help reduce anxiety and stress, help patients manage their pain and decrease the pharmacological need, and allow for emotional expression, discussion, and an improvement of mood. Because of music's ability to bypass the need for language, it can be used to relate to patients or family members of any age. Everyone has had some life experience involving music.

What can I expect in a music therapy session?

A music therapy session can be extremely varied based on the patient and the setting. It may include playing instruments, writing and/or singing songs, listening to music, or lyric analysis, to name a few! Music therapy can occur individually, or in groups. When meeting a patient for the first time, the music therapist will do an assessment to find both areas of strength and for improvement. The music therapist approaches each meeting with a patient as a new experience, and remains flexible throughout the sessions to meet the patient's needs or concerns.

Does one have to know how to play an instrument to go to music therapy?

Absolutely not! You do not need to have had any music instruction to benefit from music therapy! Music therapists are able to adapt to the patient's level of knowledge and ability in music, from having no instrument experience to skilled musicians. Regardless of formal training, music is something we have all encountered, and can be a way to relate to one another, and music therapy operates from this idea.

Who is qualified to practice music therapy?

A music therapist is someone who has completed training at an approved college or university, an internship, and sat for the national exam which is administered by the Certification Board for Music Therapists (CBMT). Once the exam has been completed successfully, the necessary credential of Music Therapist-Board Certified (MT-BC) is earned.

How does the music therapist fit into the treatment team?

The music therapist is a member of the interdisciplinary team, working together with the other medical professionals to determine course of treatment and goals to be addressed. The music therapist attends meetings with doctors, nurses, PT/OT, and child life specialists throughout the day to remain updated on patients' statuses and needs, and conducts sessions accordingly.

Sources:
American Music Therapy Association. (2006). *Music therapy and medicine*. Retrieved from http://www.musictherapy.org/assets/1/7/MT_Medicine_2006.pdf
Certification Board for Music Therapists. (2011). *About certification*. Retrieved from https://www.cbmt.org/about-certification/

Appendix I – Budget Proposal

Budget for Music Therapy Program		Cost
Payroll related expenses		
	Music Therapist Salary (68.6%)	$55,000
	Total Benefits (31.4%)	$17,270
	Required Benefits (Social Security, Medicare, unemployment insurance, workers compensation) (7.3% of wages)	$4,015
	Life, health, and disability Insurance (8.7% of wages)	$4,785
	Paid leave (vacation, holidays, sick leave, & personal) (7.2% of wages)	$3,960
	Avg. employer contribution to retirement/savings (5.4% of wages)	$2,970
	Supplemental Pay (2.8% of wages)	$1,540
	Subtotal	$72,270
Supplies		
	Instruments: 1 weighted keyboard, 2 guitars, and accessories- tuners, extra strings, guitar straps, picks, capos	$1,500
	Percussion instruments: ocean drums, rain sticks, tambourines, claves, shakers, djembes, buffalo drums, rhythm sticks, lollipop drums	$500
	Other instruments: resonator bells, ukulele, plastic recorders, kazoos	$300
	Technology: 1 laptop, 5 iPads, 5 iPods, 2 portable speakers, music, music recording software	$3,000
	Cart for instrument and equipment transportation throughout hospital	$150
	Instrument repair/maintenance	$1,000
Other		
	Conference Fees and Travel Expenses	$2,000
	Total	$80,720

Appendix J – Proposed Weekly Schedule

Proposed Weekly Schedule for Music Therapy					
	Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
8 - 9 am	Rounds/Staff Meetings	Rounds/Staff Meetings	Rounds/Staff Meetings	Rounds/Staff Meetings	Rounds/Staff Meetings
9 - 10 am	Individual	Individual	Individual	Individual	Individual
10 - 11 am	Visits	Visits	Visits	Visits	Visits
11 am – 12 pm	Individual Visits	Group / Documentation	Individual Visits	Group / Documentation	Individual Visits
12 - 1 pm	Lunch	Lunch	Lunch	Lunch	Lunch
1 - 2 pm	Group	Individual Visits	Group	Individual Visits	Group
2 - 3 pm	Research / Other Site Requirements	Research / Other Site Requirements	Research / Other Site Requirements	Research / Other Site Requirements	Research / Other Site Requirements
3 - 4 pm	Documentation	Documentation	Documentation	Documentation	Documentation

Appendix K – Staff Survey

1. Do you have any idea on the effects of music on health? _____

If so, what are they? _____

_____

_____

2. Have you witnessed music therapy take place in this hospital? _____

If yes, please describe at least one observation.

_____

_____

3. What do you perceive the benefits to be? _____

_____

_____

4. Have any issues arisen from the music therapy or therapist that you want addressed? If yes, please explain.

_____

_____

5. What areas or units of the hospital do you think need the greatest attention from the music therapist?

_____

_____

6. Do you have any other comments or questions? (If you would like a response, please provide contact name and email).

_____

_____

Appendix L – Annotated Bibliography

Austin, D. (2010). The psychophysiological effects of music therapy in intensive care units. *Paediatric Nursing, 22*(3), 14-20.

This literature review examined the benefits of music therapy for patients on mechanical ventilators, both children and adults. The author conducted her search using electronic databases, hand searches, internet searches, and contacting experts in the field. Findings revealed only two studies with data on pediatric patients. Results of all studies are discussed, as well as benefits of music therapy for pediatrics in general. The author concludes there is not enough research available to develop national guidelines for music therapy in the PICU, and stresses the importance of future research on pediatric specific research in this area.

Bower, J., & Shoemark H. (2009). Music therapy to promote interpersonal interactions in early paediatric neurorehabilitation. *Australian Journal of Music Therapy, 20*, 59–75.

A clinical case study details a pediatric patient with an acquired TBI who had the ability to talk, but didn't have successful social interactions. Through music therapy specifically focusing on the prosodic elements, the patient was able to practice interactive social skills with a non-verbal approach, and increase his capability in social interactions.

Canga, B., Azoulay, R., Raskin, J., & Loewy, J. (2015). AIR: Advances in respiration - Music therapy in the treatment of chronic pulmonary disease. *Respiratory Medicine, 109*(12), 1532–1539. https://doi-org.libdatabase.newpaltz.edu/10.1016/j.rmed.2015.10.001

This randomized control study investigates the effects of a multi-modal psycho-music therapy intervention for patients with Chronic Obstructive Pulmonary Disease and other lung diseases, adjunct to pulmonary rehabilitation. Effects on respiratory symptoms,

psychological well-being, and quality of life are compared to the effects of pulmonary rehabilitation alone. Based on statistically significant effects found favoring the music therapy condition, the authors conclude that music therapy in combination with pulmonary rehabilitation may be an effective way to treat these pulmonary diseases.

Colwell, C. M., Edwards, R., Hernandez, E., & Brees, K. (2013). Impact of music therapy interventions (listening, composition, Orff-based) on the physiological and psychosocial behaviors of hospitalized children: A feasibility study. *Journal of Pediatric Nursing, 28*(3), 249-257. doi:10.1016/j.pedn.2012.08.008

This study compared the effects of three music therapy methods on physiological and psychosocial behaviors on hospitalized children. The three methods were music listening, music composition, and Orff-based active engagement. There were 32 subjects ranging between 6 – 17 years old. Music therapists and pediatric nurses collaborated on design and facilitation of this study. They found no clinically significant changes in physiological signs except pain. Pain and anxiety levels both decreased significantly across the three conditions, and after video review, slightly higher incidence of on-task behavior was observed in the Orff-based condition.

Gardiner, J. C., & Horwitz, J. L. (2015). Neurologic Music Therapy and group psychotherapy for treatment of traumatic brain injury: Evaluation of a cognitive rehabilitation group. *Music Therapy Perspectives, 33*(2), 193–201. https://doi-org.libdatabase.newpaltz.edu/10.1093/mtp/miu045

This research study examines the effectiveness of a combined treatment approach: Neurologic Music Therapy and group psychotherapy when used to improve mental functioning of veterans after a TBI. Findings revealed overall increases in visual

attention, verbal learning, complex verbal and visual memory, planning and mental flexibility.

Millett, C. R., & Gooding, L. F. (2017). Comparing active and passive distraction-based music therapy interventions on preoperative anxiety in pediatric patients and their caregivers. *Journal of Music Therapy, 54*(4), 460–478. https://doi.org/10.1093/jmt/thx014

This randomized study examined whether active or passive music therapy utilizing a distraction technique was more effective at decreasing patient and/or caregiver preoperative anxiety. While the study did not find a difference between the two, there was a significant reduction of anxiety pre- to post-test in both groups, underlining the effectiveness of music therapy in reducing preoperative anxiety for both patients and their caregivers.

Nesbitt, L. L., & Tabatt-Haussmann, K. (2008). The role of the creative arts therapies in the treatment of pediatric hematology and oncology patients. *Primary Psychiatry, 15*(7), 56–62.

This article introduces the creative arts- specifically music and art therapy- and presents evidence for their effectiveness for oncology/hematology patients. The authors present a collaborative approach, in which art therapy and music therapy work together in a group setting at an oncology center in New York. Benefits of the combination are discussed, and recommendations are provided for its future use by other therapists.

Robb, S. L., Clair, A. A., Watanabe, M., Monahan, P. O., Azzouz, F., Stouffer, J. W., & Hannan, A. (2008). Randomized controlled trial of the active music engagement (AME) intervention on children with cancer. *Psycho-Oncology, 17*(7), 699-708. doi:10.1002/pon.1301

A multi-site randomized controlled trial examines the efficacy of active music engagement (AME) on three observable coping behaviors: positive facial affect, active engagement, and initiation. AME was studies in comparison to music listening and audio storybooks. After rating the video recordings of sessions and analyzing the date, the authors found that AME participants had a significantly higher frequency occurrence of coping behaviors.

Walworth, D. (2005). Procedural-support music therapy in the healthcare setting: A cost–effectiveness analysis. *Journal of Pediatric Nursing, 20,* 276–284. https://doi.org/10.1016/j.pedn.2005.02.016

This comparative analysis investigated how cost-effective music therapy is as procedural support in pediatric settings. The article highlights the risks and negative effects of sedating pediatric patients, as well as the importance of patient-preferred music. To determine cost-effectiveness, the study evaluated all music therapy assisted-echocardiogram computerized tomography scans, and other noninvasive and invasive procedures at one hospital for one year, a total of 166 scans. In each procedure, the success rate for not needing sedation was over 80%, with 100% success in the ECG category. The author concluded that music therapy saves "money, time, and staff/equipment resources for pediatric areas."

Whipple, J. (2003). Surgery buddies: A music therapy program for pediatric surgical patients. *Music Therapy Perspectives, 21*(2), 77. https://doi.org/10.1093/mtp/21.2.77

This article is a program description of Surgery Buddies, designed originally to decrease behavioral stress for patients under eight years old receiving intravenous starts/restarts, venipunctures, injections, and heel sticks. The article documents its effectiveness and

further development into a program that provides anxiety reduction for pediatric surgery patients and their caregivers. Guideline for the program are detailed, and case examples of its success are reported and detailed.