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Music Therapy in Detroit's Neonatal Intensive Care Unit: A Simulated Grant Proposal

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Music Therapy In Detroit's Neonatal Intensive Care Unit: A Simulated Grant Proposal

By

Elizabeth Barone

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Abstract

Infant mortality is the number one killer of children in the city of Detroit (Bouffard, 2014) and prematurity is the largest component, representing more than fifty percent of the current infant deaths in Detroit (Bouffard, 2014; Johnson, 2015, www.henryford.com, 2015). Over the last two decades there has been an overwhelming amount of research in support of music therapy meeting the needs of parents and infants in the Neonatal Intensive Care Unit (Abrams, Dassler, Lee, Loewy, Silverman & Telsey, 2007; Arnon, Shapsa, Forman, Regev, Bauer, Litmanovitz, & Dolfin, 2006; Baker & Mackinlay, 2006; Cevasco, 2008; Creighton, 2011; Edwards, 2011; Loewy, Stewart, Dassler, Telsey, & Homel, 2013; Schwartz, 2007; Schwartz & Ritchie, 2007; Shenfield, Trehub, & Nakata, 2003; Standley, 2001; Standley, Cassidy, Grant, Cevasco, Szuch, Nguyen, Walworth, Procelli, Jarred, & Adams, 2010; Whipple, 2008). The nationally acclaimed and highly revered health organizations (www.henryford.com, 2015) in the city of Detroit have yet to include music therapy as part of their services for care within their NICU. In addressing the socio-economic and clinical issues faced by the mothers, infants, and families most at risk for infant mortality, music therapy services modeled via the principles of Community Music Therapy, will be presented as a supplemental resource for care.

Keywords: Music Therapy, Infant Mortality, Detroit, NICU, Community Music Therapy
MUSIC THERAPY & NEONATAL INTENSIVE CARE UNIT

MUSIC THERAPY
IN DETROIT’S NEONATAL INTENSIVE CARE UNIT: A SIMULATED GRANT PROPOSAL

A MASTER’S THESIS

by

ELIZABETH BARONE
Montclair State University
Montclair, New Jersey
January 2016
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2. Target geographic area
3. Describe specific geographic area(s) mostly impacted by this work
4. Please select the main areas or priorities addressed by the project for which you are seeking funding support. It is possible to select multiple options, but it is not necessary to select more than one.

5. What is the name of your project
6. Provide an overview of your project
   6.1 The Detroit Institute for Music and Medicine
      6.1.1 Program Costs
      6.1.2 Daily Scope of Practice
      6.1.3 Weekly Scope of Practice
      6.1.4 Monthly Scope of Practice
      6.1.4 Yearly Scope of Practice

7. Summarize in one sentence the specific purpose for which you are asking for Kellogg funding
8. Briefly explain the problem or need your project aims to solve
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Music Therapy in Detroit’s Neonatal Intensive Care Unit: A Simulated Grant

Proposal

Introduction

"The solution to adult problems tomorrow depends in large measure upon how our children grow up today."
- Margaret Mead, American Anthropologist

Motown. The Paris of the Midwest. America’s Greatest Comeback City. Arsenal of Democracy. Motor City. Detroit Rock City. The D. These are a few of Detroit’s nicknames over the last century. Known for its cars, heavy industrial power, the crooning voice of Smokey Robinson and Berry Gordy’s massive empire at Hitsville, USA, Detroit has been an ever-evolving city with its own unique characteristics. Unfortunately for Detroiter’s, not all these characteristics are those to be touted.

Second to violence, infant mortality is the number one killer of children in the city of Detroit (Bouffard, 2014). Prematurity, whose side effects include brain hemorrhages, failing organs, and collapsed lungs (Bouffard, 2014), is a major component in infant mortality, making up more than 70% of infant deaths in the Detroit-Metro area (Johnson, 2015). The statistics on infant mortality rates alone are surprising despite the high quality and nationally recognized health systems in the city of Detroit (www.henryford.com, 2015). Therefore, families and communities at high risk in this area require services to meet both clinical and social issues surrounding the infant mortality rate as it rivals that of a third world country (Bouffard, 2014; www.henryford.com, 2015).

The literature suggests music therapy as an additional service can be an essential tool in addressing clinical, social and/or cultural issues influencing the mothers whom are at high risk for infant mortality (Andsell, 2002; Stige, 2002; Stige, Andsell, Elefant, &
Pavlicevic, 2010). Not only can the services help to provide resources for mother’s and families within their communities, it can also offer a therapeutic alliance of mutual respect to an individual’s culture in a sacred space of reciprocal understanding and processing between therapist and patient. In this space the therapeutic relationship can be utilized to identify and foster internal resources to cope and build confidence in the role of being a parent.

Despite the amount of literature in the last two decades supporting music therapy in meeting the needs of parents and infants in the Neonatal Intensive Care Unit (Abrams, Dassler, Lee, Loewy, Silverman & Telsey, 2007; Arnon, Shapsa, Forman, Regev, Bauer, Litmanovitz, & Dolfin, 2006; Baker & Mackinlay, 2006; Cevasco, 2008; Creighton, 2011; Edwards, 2011; Loewy, Stewart, Dassler, Telsey, & Homel, 2013; Schwartz, 2007; Schwartz & Ritchie, 2007; Shenfield, Trehub, & Nakata, 2003; Standley, 2007; Standley, Cassidy, Grant, Cevasco, Szuch, Nguyen, Walworth, Procelli, Jarred, & Adams, 2010; Whipple, 2008), the health organizations in the city of Detroit have yet to adopt music therapy as part of their care services. With prematurity being the highest component in the infant mortality rate, it appears any interventions presented to mothers and families in the NICU is one that should be explored for addressing this pressing issue. Furthermore, the social implications and racial disparities indicated in the infant mortality rate (Bouffard, 2014; Chen, 2011; Grady & Enander, 2009; Johnson, 2015; Shultz & Skorcz, 2012; www.henryford.com, 2015) suggest there is a critical need to address the social and cultural issues influencing the infant mortality rate as well.

With this paper, I wish to present a simulated grant proposal to address the unique characteristics of Detroit shaping its infant mortality rate. This paper will highlight the
research on music therapy and its inherent ability to facilitate crucial bonds between
caregiver and infant as it will additionally highlight Community Music Therapy’s
philosophical basis as a proposed structure for meeting socio-cultural needs of families
most at risk. The adoption of music therapy services will be first introduced within the
Neonatal Intensive Care Unit constructed through Community Music Therapy (CoMT) to
address the multifaceted needs of infants, mothers and families at high risk for infant
mortality living in the Detroit-Metro area, as well as, proposed as an additional resource
for a continued supportive mechanism to be provided outside of the medical facility.

**Literature Review**

**Detroit: A Brief History**

Detroit, The Motor City, was founded in the early 17th century by French fur
traders and over the last three centuries re-molded through the ever changing landscape
of the United States. The most notable economic boom putting Detroit on the map came
in the 20th century when Henry Ford founded his Ford Motor Company along with other
automotive pioneers like Walter Chrysler, Dodge Brothers and Packard (Farley,
Danziger, & Holzer, 2000). With the growth of the auto industry, Detroit became the
symbol of the American Industrial power, playing a key role in the development of the
modern middle class (Farley, Danziger, & Holzer, 2000). During the WWII, the
manufacturing of cars and trucks along with the production of heavy equipment earned
the city the nickname “Arsenal of Democracy” (p.1).

With the post WWII production boom, the city of Detroit was seen as a city where
the blue-collar worker of any ethnic and racial background could prosper and provide for
their family. With the membership of the powerful unions, jobs had higher pay, liberal
benefits, and safer working conditions (Farley, Danziger, & Holzer, 2000), Detroit offered full-time employment with good wages (Sugrue, 2005). As a result, Detroit became the fastest growing boomtown in the United States during The Great Migration, bringing African Americans from the South to seek employment with the automobile industry (Farley, Danziger, & Holzer, 2000; Sugrue, 2005). However, post-World War II brought patterns of class and racial segregation into Detroit resulting in 70 years of divided communities based upon racial and socio-economic standings (Sugrue, 2005).

In recent decades, after the racially fueled riots over decades of tension within the communities, and the fall of the American automobile industry in recent years, many have regarded the city as one of the victims of the “Urban Crisis” (Sugrue, 2005). The patterns of racial tension and segregation have persisted, hardening over time resulting in the increased isolation for the poorer population within their neighborhoods (Farley, Danziger, & Holzer, 2000). Historically when large black communities are subject to higher levels of segregation, racial isolation is inevitable (Massey, 2001). Despite the Fair Housing Act of 1968 that theoretically put an end to discrimination, residential segregation persisted in cities with large African American populations (Massey, 2001). As a result, a growing number of Detroit residents, especially African Americans, have found themselves detached from the economy and are completely outside the labor market (Sugrue, 2005). The racial and economic divides plaguing the Detroit-Metropolitan area is a result of the interplay of four processes: Historical trends, changing labor markets, persistent segregation, pervasive racial animosity, and mistrust (Farley, Danziger, & Holzer, 2000).

**Detroit’s Infant Mortality Rate**
As a result of the social and economic landscape in the city of Detroit, infant mortality rates are amongst the highest in the United States. Surprisingly, despite technological advances, the United States has an alarmingly high infant mortality rate, ranking in at 6.71, making the United States 27th in a global scale of industrialized countries. This places the country behind most European countries, as well as, Japan, Korea, Israel, Australia and New Zealand (MacDorman, Mahangoo, Matthews, & Zeitlin, 2014). Detroit follows the trend of high infant mortality rates set forth by the United States, making infant mortality the number one killer of children in the city of Detroit (Bouffard, 2014). Additionally, premature births are becoming more prevalent in the Detroit-Metro area resulting in a higher rate of premature births than any other metropolitan area in the United States (Bouffard, 2014).

According to Michigan’s Department of Health and Human Services (www.michigan.gov, 2015), the infant mortality rate of the state of Michigan was just above the national average at 7.4%. Although rates on both a state and city level have gone down since the early 1990’s, infant mortality still is a major issue amongst the residents of Michigan. According to research conducted by Grady and Enander (2009) the highest rate of low birth weight at 16.4 % per 100 live births was in the principal metropolitan city of Detroit amongst the cities in Michigan. Those with infant mortality rates ranging between 11.3 and 23.0% per 1,000 live births were also located in the Detroit metropolitan area. The highest infant death rate, 23.1 deaths per 1,000 live births were located in the western portion of the city. Overall, the city of Detroit rivals some third world countries with its infant mortality rate at 13.5 for every 1,000 live births as
noted in the most recent data collected in 2010 (Bouffard, 2014; www.Henryford.com, 2015).

**Socio-Economics & Infant Mortality.** Grady and Enander (2009) also address the disparities between white households and African American households amongst the infant mortality rates presented in the city of Detroit. According to their research, the rate of low birth weight for African American infants were 12.2 per 100 live births while white infants were 5.1 per 100 live births (p. 6). In addition, they found disparities in infant mortality rates within the city of Detroit, having the highest death rates and most notably racially segregated outcomes (Grady & Enander, 2009; Johnson, 2015). From this research, Grady and Enander (2009) propose a further investigation into the mechanisms underlying the socio-economic climate of the environments, as well as the accessibility to health care services.

There has been some debate over racial discrimination inherently present within the health care system (Shultz & Skorcz, 2012) as there is evidence of disparity amongst whites’ and African Americans’ perceptions of care and overall health outcomes (Chen, 2011; Grady & Enander, 2009; Shultz & Skorcz, 2012). As addressed by Shultz and Skorcz (2012) the “...race-based gap is neither isolated to women with low incomes nor exclusive to those who live in deprived areas, and maternal education appears to provide relatively little protection for Blacks when compared to Whites” (p. 2). They go on further to suggest it is the quality of one’s environment “...whether socially, physically or in relation to accessible health care services” that play an important role in maintaining the racial disparities present in infant mortality rates (p. 2).
Despite the efforts set forth by Detroit in their foundations, hospitals, various nurse visitation services and parenting programs, the city still falls short of providing for those in need, which is most frequently Detroit African American women (Bouffard, 2014). According to Bouffard’s (2014) account by the Michigan Department of Community Health, 2,300 Detroit babies died before their first birthday between 2000 and 2011 (¶ 11). Furthermore, Dr. Roberto Romeo of the Perinatal Research Branch of the National Institute of Health, as part of the Detroit Medical Center, states “…African American babies face a greater risk of death in their first four weeks of life, double the rate of Caucasians in Detroit-Metro area” (as cited in Bouffard, 2014, ¶ 30).

Despite the significant racially-based disparities in infant mortality rates present in Detroit within the infant mortality rates, there is still little understanding of why there is such a stark contrast (Grady & Enander, 2009). This indicates a need to examine what factors are influencing the disproportion in the rates. Dr. Matt Davis, Chief Medical Executive for Michigan and Professor of Pediatric and Internal Medicine at the University of Michigan as cited in Bouffard (2014) states “…the reason that making progress on infant deaths is so challenging is that it is a powerful combination of fragile health and vulnerable economic situations and so a successful strategy in public health and health care, to reduce infant mortality, needs to have strong medical approaches and strong social approaches” (¶ 15).

Identifying Risk Factors for Infant Mortality. In order to address the socio-economic disparities presented by infant mortality rates, both on a national scale and in the city of Detroit, risk factors need to be identified in order to address the unique needs to begin in lowering these rates. Chen (2011) distinguishes 7 major factors heavily
influencing the infant mortality rate in the United States. They are the following: (1) per capita income, (2) teenage pregnancy rate, (3) percent of mothers who are smokers, (4) percent of black teen mothers the age of 10-14, (5) percent of newborns who weigh less than 2500 grams, (6) percent of black teen mothers the age of 15-17 and (7) the percent of newborns with gestational stage less than 37 weeks (p. 124).

These elements, although identifying risk factors on a larger national scale, can also be used to identify the factors influencing Detroit. As Bouffard (2014) addresses, experts have blamed Detroit's high infant mortality rate on a multitude of causes, including accessibility to appropriate health care services, access to information, support, and general knowledge of young mothers giving birth. As identified in Chen's (2011) statistics of teenage pregnancy amongst black teenagers, Detroit mother's present 3 out of the 7 risk factors indicated. Bouffard (2014) writes, "...eighty percent of new Detroit mothers are unmarried, compared with 42 percent of all Michigan moms, which may mean they have less support- financial as well as emotional- than women with husbands" (¶ 17). Additionally, Detroit sees more teen moms than any other city in the United States at 18%, thus leading to a probability of teen mothers dropping out of high school before graduating, "...dooming them to a future of low-wage jobs" (Bouffard, 2014, ¶ 17). This results in financial burdens, adding to the social and emotional challenges faced by these families of mothers at high risk.

Furthermore, when mothers are giving birth to premature babies, there are additional health risks involved that can cause further stress and isolation. In looking at the racial disparities, there have been multiple theories suggesting the exposure to stress hormones during sensitive periods of maturation in early life that may alter the growth.
This leaves infants more susceptible to failure to thrive (Lu, Kotelchuck, Hogan, Jones, Wright & Halfon, 2010). This exposure to stress expanding from pregnancy, early life, and even in utero, may place the African American woman at an increased risk for prematurity. After a lifetime of exposure to stress associated with disproportionate socioeconomic resources, high rates of violence in communities, and high exposure to racism, it is theorized that this daily exposure to this source of stress may effect African American women to the point that they are unable to carry full term, increasing their chance of prematurity, late term prematurity, and low birth weight births (Lu, et al., 2010).

Additionally, statistics show an increase in complications specifically seen with babies born four to six weeks early, or more commonly referred as “late preterm”. With these late term births, there is a higher rate of infant mortality due to complications associated with prematurity (Bouffard, 2014; Johnson, 2015; Macdorman, et al., 2014). These babies are normally identified as “late preterm,” distinguishing them from premature babies born at 32 gestational weeks or earlier (Bouffard, 2014). As cited in Bouffard (2014), Dr. Romero states that 70% of “late preterm” babies face special health risks, usually at a higher risk of dying before the age of one (¶ 21). This presents concern that the late preterm babies are more at risk for complications like cerebral palsy, respiratory difficulties and other developmental challenges that will require additional medical care and early interventions. These statistics emphasize the importance of accessible health care for the families, not only before birth but also after as part of the continuity of care as the infant’s ability to thrive depends on the availability of such services.
Resources play a major role in addressing the infant mortality rate. The city’s shortage of primary care physicians has exacerbated the challenges facing the infant mortality rate (Bouffard, 2014). It is generally a challenge for pregnant women to find safe housing, healthy food and transportation (¶ 24), leading to feelings of isolation and marginalization. Saegert, Thompson and Warren (2001) write, “Poor communities cannot solve their problems on their own, no matter how strong and well organized their internal social capital becomes. They require greater financial resources and better public services. Their residents need better education and human capital development.” (p. 4). They further go on to say that although there may be differences within the city communities, they are not irreconcilable. They offer that it is important to not view it as a “power over” others but rather a means to give “power to” act together. This is a power that is “…transformative, creating new forms of cooperation and new solutions” (p. 6) addressing challenges inherently present in communities marginalized through socio-economic restraints and racial segregation as seen in the city of Detroit.

The Importance of Parent-Infant Emotional Communication

Being a new parent can be extremely taxing on a multitude of levels (e.g. economically, socially, physically, emotionally, etc). It is crucial that young mothers and their families are provided the tools necessary so that they may feel empowered through their knowledge to provide the best care for their baby. One of the most important elements of care giving is the bond between parent and infant. Explored by many developmental psychologists, like Mary Ainsworth and John Bowlby, the relationship, or rather, attachment process between an infant and caregiver, is a profound and enduring bond that connects one to the other (Ainsworth, 1973; Bowlby, 1969). In deepening the
understanding of this process, Creighton (2011) identifies this bonding process as "emotional communication" and explores this interaction in further detail to address the varying forms of communication between infant and caregiver throughout the attachment process.

Emotional communication is described as the sharing and amplification of beneficial emotions, soothing distressed emotional states, and taking joy in the child. These early experiences of emotional communication directly contribute to the mother-infant attachment and greatly impacts the infant’s neurological, social, and emotional development (Creighton, 2011). It is through the consistency of this parent-infant interaction that the infant is able to learn to regulate his or her emotions. The same interaction of co-creating an emotional bond between parent and infant is also known as attachment (p. 38).

Attachment is the continuing relationship formed within the first year of life between parent and infant and is reflected throughout the life of the infant in patterns of infant-parent interactions. Based upon the emotional availability, sensitivity, appropriate responsiveness and consistency of response to infant cues, the style or quality of attachment developed can be determined (Creighton, 2011). Parents who are emotionally available and provide sensitive and appropriate responses to their infant’s needs facilitate secure types of attachment, while parents who are not consistent, insensitive and inappropriate with their responses to their infants needs facilitate insecure types of attachment (p. 38). Due to this correlation, attachment and emotional communication can have a significant effect on the overall future development of an infant and therefore should be explored further to provide parents more information to encourage parent-
infant interactions within the first year of the infant’s life, especially infants of families who are at high risk.

**Forms of Emotional Communication.** Beneficial forms of communication involve the parent’s alignment of his and her self to the infant’s current emotional state, which is a process defined as attunement (Creighton, 2011). Once they are aligned, the parent and infant can simultaneously adjust their attention, stimulation and modulation of arousal to each other’s responses, or as it is also defined as synchronous or reciprocal interpersonal interactions (p. 39). When the parent is attuned to their infant, they are able to maintain the child’s arousal within a moderate range, which is easily sustained over long lengths of time, to establish more poignant emotional communication, impacting the infant’s development.

**Emotional Availability.** Emotional availability is a concept most theorists and researchers touch on in describing the parental and child relationship dimensions. It is also essential for examining essential concepts of emotional communication. Theorists have suggested that emotional availability in specific domains of emotional communication can alter the infant’s capabilities to cope with their emotions. These domains have been identified by Creighton (2011) as the following: (1) maternal sensitivity or attunement to the child as well as their responsiveness to cues and signals presented by the infant, (2) supportive maternal presence so the child may explore and practice autonomy, and (3) a reciprocal responsiveness of both parent and child to their varying emotional state (p.40). Additionally, emotional availability is linked to numerous adaptive child outcomes including the development of a secure parent-infant attachment, increased ability of self-regulation for sleep, and buffered cortisol elevations in response
to threats resulting in a higher capability to cope with stressors (Kileen & Teti, 2012). As illustrated by the research conducted by Kileen & Teti (2013) it is imperative to support the parents in their roles as primary caregiver as it directly contributes to the development of their infant.

**Collaborative Communication.** Collaborative communication is one form of emotional communication; an example of this can be seen when a baby cries to communicate hunger. An appropriate response of the parent is to feed their child. When this need of hunger is satisfied the infant then associates the parent with satisfaction, comfort, and trust (Creighton, 2011). As a result of this interaction the child is able to exert mastery over his or her world and accepting the normalcy of needs and having these needs met. When the needs are not met, the baby associates need dissatisfaction and mistrust, consequently impacting the development of personal identity, possibly resulting in low self-concepts, low self-esteem and a sense of hopelessness (Creighton, 2011). It is essential for the parent to be attuned to her or his infant’s emotional states, for the collaborative communication creates a shared interpersonal experiences resulting in a shared “closeness” contributing directly to attachment and child development.

**Kinesthetic Bonding.** Another form of emotional communication is kinesthetic bonding which is mainly defined through the shared, mutually pleasurable motion-generated experiences (Creighton, 2011). The bond starts in pregnancy when mother and baby sense each other in their movements and consequently make appropriate adjustments to accommodate one another. After birth the kinesthetic bonding is based upon the attunement of the mother to their infant’s movements using space, timing and effort to match her movements to her baby, while her infant synchronizes to the mother’s
movements in an interaction that becomes mutual (Creighton, 2011). Through the synchronizing of movements the parent can appropriately convey attunement, strengthening attachment and enhancing bonding between parent and infant.

**Bonding, Prematurity, and Detroit’s Infant Mortality Rate**

With the growing rate of premature births and infant mortality in the Detroit-Metro area (Bouffard, 2014) there have been programs established through the Henry Ford Health system along with regional healthcare providers to address the high number of premature and low birth weight (LBW) and, most importantly, the infant mortality rate (Bouffard, 2014; Johnson, 2015). The Detroit Infant Mortality Reduction Task Force, also known as the Women-Inspired Neighborhood (WIN) Network and Sew Up The Safety Net (SUSN), partners with community organizations and health departments to provide supportive services to address clinical and social factors associated with the heightened infant mortality rate (Bouffard, 2014; Johnson, 2015). This program attends to both clinical factors associated with why these infants are premature but also identifies environmental factors (e.g. smoking, drinking, drugs, etc.) and social issues influencing the mother and familial unit (Johnson, 2015).

According to Johnson (2015) the HHS Secretary’s Advisory Committee on infant mortality released in January 2013, infant mortality rate for infants born before 32 weeks gestational age are 70 times greater than those born after (¶ 11). Additionally, the Centers for Disease Control and Prevention have estimated that the number of premature births account for two-thirds of all infant deaths up to the age of one (Johnson, 2015). The need for secure bonding and attachment for these children are critical within this first year for the sake of their development (Creighton, 2011) and continued ability to thrive.
Understanding the importance of the mother-baby bond and the factors indicating how this bond enhances the infant’s mental, physical, emotional and social development is crucial within the first year and can be an important factor in the infant’s ability to thrive.

Programs, like the WIN Network and Sew Up the Safety Net, founded in 2008, implemented by health care providers to address the significant infant mortality rate, have connected women to other women and services to directly address risk factors for infant mortality. This includes, “...low birth weight, malnutrition during pregnancy, smoking and drinking alcohol” (Johnson, 2015, ¶ 7). The WIN Network addresses the importance of support systems and offering resources for mothers as they learn the importance of bonding with their baby, preparing for becoming a mother and empowering their voice as a women within the community (www.Winnetworkdetroit.org, 2015). Although programs like the WIN Network have been adopted by the city of Detroit, the infant mortality rate still remains significantly high. Additional interventions and services must be proposed in conjunction to such networks in place, in order to address the need of the city. Services open to provide health care resources, individualized care and offer supportive therapeutic relationships to address the complex emotional, social and economic issues. These services include music therapy.

**Music Therapy & Infant Mortality**

With the notable increase in premature infants in the Detroit-Metro area (Bouffard, 2014) and the identified risk factors of infant mortality including infants of low birth weight (LBW) and infants born before 37 weeks gestational age (Chen, 2011), it can be suggested that there are correlating factors to prematurity, as well as, low birth weight babies and the heightened infant mortality rate in Detroit. Both premature infants
and LBW would be traditionally admitted into a Neonatal Intensive Care Unit for further observation and additional care. The literature on music therapy in the NICU setting indicates that many of these risk factors presented by Chen (2011) and Bouffard (2014) can be addressed through a multitude of therapies and techniques developed over the last two decades within hospital settings (Abrams, et al., 2007; Arnon, et al., 2006; Baker & Mackinlay, 2006; Cevasco, 2008; Creighton, 2011; Edwards, 2011; Loewy, et al., 2013; Schwartz, 2007; Schwartz & Ritchie, 2007; Shenfield, Trehub, & Nakata, 2003; Standley, 2007, Whipple, 2008).

**Music Therapy & The NICU.** The inherent nature of the emotional communication between caregiver and infant lends itself naturally to music therapy practices within the Neonatal Intensive Care Unit. The various forms of emotional communication and the results of physiologic and neurologic development of the infant, music therapy can serve as a crucial tool in providing caregivers the sense of control and empowerment to engage with their infant using the multiple elements of emotional communication during the time of hospitalization. Music naturally consists of emotional qualities that relay emotional availability (Baker & Mackinlay, 2006; Cevasco, 2008; Creighton, 2011) as well as kinesthetic qualities, and lends itself effectively to establishing a beneficial bond. Most importantly, the live music interventions used in this setting validates, attunes with, and entrains to the infant’s needs in the moment. This offers a sense of collaborative communication crucial for the infant’s development physically as they continue in their development of sense of self in the environment (Creighton, 2011).
Pacifier Activated Lullaby. Due to an increase in low and very low birth weight infants over the last two decades (Schwartz & Ritchie, 2007), most notably within the Detroit-Metro area (Bouffard, 2014), there is a need of additional care. Prematurity brings a susceptibility to the environment resulting in aversive effects related to stress levels present in the NICU. These adverse effects are usually reflected in heart rate variations, increased oxygen consumption, and decreased blood oxygen levels, as well as blood pressure fluctuations and increased levels of agitation (Schwartz, 2007). This has led to the development of tools, like the Pacifier Activated Lullaby (PAL) (Standley 2007; Standley, et al., 2010), to be adopted within hospital settings as a means for the premature infants to enhance and support their abilities to self-regulate while developing oral motor functions crucial in their development.

PAL offers contingent music delivered via the pacifier fitted with an adaptor housing a computer chip to activate a CD player outside of the isolette. Literature shows PAL researchers were able to observe the development of the non-nutritive suck patterns, one of the first rhythmic behaviors the infant engages in post conception, to see the effectiveness of it’s assistance with their transition from gavage to nipple/bottle-feeding (Standley, 2007; Standley, et al., 2010; Whipple, 2008). In a number of studies, there were indications of the PAL protocol showing high potential in facilitating nipple feeding, - crucial finding for many premature because of their inability to feed orally (Standley, et al., 2010; Whipple, 2008).

For mothers in the Detroit-Metro area at high risk for giving birth to a premature infant or an infant weighing less then 2500 grams (LBW), it is essential for the infant’s oral motor functions to develop in the NICU. Without the development of the sucking
patterns, the child will not be able to feed, resulting in lower weight, prolonged hospitalization, higher probability of developmental issues and a heightened probability of their failure to thrive (Standley, et al., 2010). Additionally, it has been recognized that non-nutritive sucking, theorized in contributing to neurologic development and regulated rhythms has been correlated to significantly reduce the babies stress and physiological responses to painful procedures (Standley, et al., 2010). The literature on music reinforcement has seen success in shortening the gavage feedings for babies introduced to at 34 weeks (when neurologically ready to nipple feed) and thus assisting in the development of the premature and/or LBW infants in the NICU (Standley, et al., 2010).

Although the PAL being used across the United States in Neonatal Intensive Care Units, the facilitation of bonding and connectedness is, in the opinion of this author, is lost in the use of this tool. Due to the unique, individualized needs of families in the Detroit-Metro area the facilitation of bonding, supporting the infant’s self-regulation (e.g. heart rate, oxygen saturation levels, respiratory rates), empowerment in the role of parenting, addressing stressors, and/or socio-cultural issues can be better met through the use of live music interventions. The use of live music supports the emotional communication between mother and child, meeting emotional and physical needs on a moment-to-moment basis. This supports the ability for the infant to foster a beneficial attachment to the mother (Creighton, 2011). Additionally, the infant is provided the opportunity to develop neurologically, emotionally, and psychologically as well as, facilitate beneficial bonds between infant and family unit critical for the infant’s ability to thrive (Creighton, 2011; Edwards, 2011).
**Rhythm, Breath & Lullaby: Live Music Interventions.** Within the NICU environment exists a multitude of sounds, lights and noxious noises, thereby a constant risk of the infant’s growth and rest is being compromised (Cevasco, 2008; Loewy, et al., 2013). Using recorded music in this environment, like the PAL tool, also brings up concerns on the potential possibilities of increasing overstimulation. Loewy, et al. (2013) addresses these concerns in a multi-site study, in which they found specific sounds simulating the womb were beneficial in the infant’s self-regulation. The objective of the study was to observe the effectiveness of live music techniques through the use of rhythm, breath and parent-preferred lullabies on the physiologic functions (e.g. activity levels heart rate, respiratory rate, and oxygen saturation) and the developmental function (e.g. sleep, feeding behavior and weight gain) (Loewy, et al., 2013).

The organic rhythmic structures presented by the mother’s heartbeat, breath-patterns and vocal vibrations were the primary musical structures provided to support the preterm infant’s abilities in self organizational development (Loewy, et al., 2013). In exploring the effects of live music interventions, Loewy, et al. (2013) used specific instruments to simulate sounds of the womb. Therapeutic interventions provided included the instrumentation of gato box, a rectangular box used to simulate the rhythm of a heart beat; an ocean disc, a round instrument filled with small metal balls played to simulate the sounds of the womb; and the “song of kin” or parent-preferred lullabies, to convey personal, emotional information, like familial history and culture.

The conclusions drawn from the study were that the intentional use of live music and song of kin applied by a music therapist can positively influence heart and respiratory rates of premature infants. They also saw an improvement in the pre-term infant’s
feeding behaviors, sucking patterns, and capacity to sustain quiet alertness for prolonged periods with the support of these live music interventions (Loewy, et al., 2013). As a result of this study, it is suggested that the use of live music interventions with the purpose of entraining the infant’s vitals may facilitate the crucial dynamic of emotional communication to aid in the infant’s development and offer opportunities to foster a beneficial attachment between parent and child (Creighton, 2010).

Young mothers who present high risk factors, as suggested by Chen (2011) and Bouffard (2014), may find live music interventions as presented by the research conducted by Loewy, et al. (2013) to be useful in cultivating their abilities as a mother; either through confidence building, anxiety reduction, or as an agent of guidance to facilitate the bond between their children and themselves. The researchers additionally found live music interventions assisted in enhancing bonding between caregiver and infant as well as decreasing anxiety associated with the care, especially one in an intensive care unit (Loewy, et al., 2013). Again, this study suggests that music therapy may be a crucial element provided to access culture and emotional communication domains between parent and infant.

Additionally, Arnon, et al. (2006) set out to specifically observe the effects of live music interventions within the NICU at the Meir Medical Center in Kfar-Saba. The randomized study consisted of 31 stable, pre-term infants, selected to receive live music, recorded music and no music therapy over the course of 3 consecutive days. As a result of the live music therapy interventions offered by music therapists, there was a significant effect on heart rate and additionally saw prolonged states of deep sleep approximately 30
minutes after the interventions were provided as opposed to the recorded music or no
music (Arnon, et al., 2006).

Additionally, Arnon, et al. (2006) discovered that staff and families in the NICU preferred the live music over recorded music. One of the respondents offered the following about the live music, “...more reassuring and calming to both babies and adults...nurses were more relaxed and positive...interactions with infants and parents were improved” (p. 135). Essentially, the researchers proposed that live music may have intrinsic sound properties absent from recorded music that are beneficial for staff, caregivers, and pre-term infants. Further research would be needed to explore these sound properties addressed by the researchers and compare the aesthetic quality of both live and recorded music interventions within a NICU environment.

Perhaps the intrinsic sound properties suggested by Arnon, et al. (2006) can also be found in the musical exchanges like singing nursery songs or lullabies. Lullabies convey emotional content in a mutually satisfying, meaningful experience (Edwards, 2011). In a lullaby study conducted by Baker and Mackinlay (2006) the researchers found first time mothers who engaged in a lullaby education program with their baby had a deeper comprehension of their babies’ responses while also enhancing their confidence as a mother. This study followed 21 mothers through a six-week period of a lullaby program conducted at least four times a week. As a result of this study, the research found live music interventions, like a mother singing a lullaby to her baby, can result in feelings of a deepened bond and attachment, as well as decreasing anxieties felt as a caregiver to a pre-term infant (Baker & Mackinlay, 2006).
In examining the effectiveness of maternal singing on the arousal levels of healthy non-distressed infants, Shenfield, Trehub, & Nakata (2003) found music to stabilize heart rate, oxygen saturation levels, and reduce the need for sedation. Through saliva analysis researchers found significant effects on the infant’s cortisol levels (an indicator for stress levels) after being exposed to maternal singing (Shenfield, Trehub, & Nakata, 2003). As a result of the study, it can be suggested that maternal singing modulated to the needs of the infant can be a useful tool in promotion of a sense of homeostasis. The potential of the mother lowering the infant’s cortisol levels is significant with infants with low birth weight and/or preterm because their stress levels are often heightened (Shenfield, Trehub, & Nakata, 2003) and potentially life-threatening (Standley, 2007).

**Community Music Therapy: Resource-Oriented Approach**

Community Music Therapy (CoMT), originating from the counter-culture of the 1960’s and 70’s, has been founded on the ideology of advocacy and empowerment of those alienated or excluded from their society, giving them a voice to express whatever issues they face (Andsell, 2002). It is through a musical participation of collaborative music activity (‘musicing’), inspired by the individuals own suggestion, interests, and ideas, that offer a means to address issues of social difficulty (Andsell, 2002). It is a resource-oriented approach, where the focus is on mobilizing resources, both tangible and intangible to the individual (Stige, Andsell, Elefant, & Pavlicevic, 2010). These resources may refer to the individual’s strengths or it may be in reference to material goods relational and social influences that may be allocated by the members of a community (Stige, Andsell, Elefant, & Pavlicevic, 2010).
Andsell (2002) quotes Atkinson’s (2000) in his analysis of the current CoMT approach. He provides four defining factors of the CoMT approach as the following: 1. Community Music is a participatory activity, 2. Community Music is an activity focusing on group’s participants belonging to a “community” together, 3. Community Music also seeks to reinforce the “community” and aspires to bring people together, and 4. Community Music has spin-offs into additional areas of creativity to access other opportunities (e.g. seeking to address social issues, disadvantages experiences, social exclusion, etc.) (43). Essentially, Community Music Therapy is a theoretical approach that considers real world challenges faced by patients and in turn begs the question to the music therapist, “...what is the relationship between music therapy, community, and society (and what do we want to do with it?) (Stige, 2002, ¶4).

**Social Music Therapy & Community Music Therapy.** Pioneered by Christoph Schwabe, the concept of Social Music Therapy is very similar to Community Music Therapy as it opens the discussion and opportunity for exploration of the natural human condition for the individual to be social (Stige, 2002). It highlights the inherent desire to connect and interact, as the human existence is, on a basic, primitive level, a social existence. We desire to feel a sense of belonging so we develop communities and societies (Stige, 2002) and place a significant value on our supportive networks of people within these communities.

Stige (2002) writes that Schwabe (1998) argues as a music therapist it is imperative to not restrict oneself in clinics and conventional health institutions but rather take the services to the streets and experiment with working in new ways through non-clinical contexts. This is done more metaphorically, not just addressing the needs of the
client's through isolated contexts, but rather address the client's needs through the individualized constructs of the client's world. In working with the client with this in mind, the music therapy transcends the boundaries of a clinical relationship and it becomes a practice "...not only oriented towards the individual, but also towards appraisal of and change of environmental and socio-economic structures" (Stige, 2014, p. 49). This belief of music therapy operating in a clinic or in "everyday settings" has also been adopted by the movement of CoMT in it's primary belief to embrace music therapy as a community and have music therapy for community development (Stige, Andsell, Elefant, & Pavlicevic, 2010).

**Community Music Therapy & Social Capital Theory.** Stige (2014) offers Ruud's (1979) suggestion in defining music therapy as the idea of music therapy practice being a resource as a means of increasing possibilities for action. The individual's limitations for these possibilities have roots in the social and cultural conditions present in this person's world. This definition recognizes the complexities presented in the relationship "...between society, person, health and disease" (Stige, 2014, p.49). In the practice of music therapy, the benefit of using music as a tool in this context is that it an inherent social activity with a transformative nature to reconstruct perspectives on relationships. Musical features may be transferred or referred to extra-musical matters due to its role as a resource for social order and self-regulation (DeNora, 2005). Music therapy shifts from being an isolated context of working with an individual to something incorporating all aspects of the individual's life, working within the community constructs and using music as a means to transform constructs on identity and community (DeNora, 2005). Through the establishment of a "...symmetrical, dialogic relationship
between therapist and client…” (p.57), the event of active musicing through the therapeutic relationship provides an ability to redistribute authority (DeNora, 2005) and a means to empower the client.

In examination of the social capital theory there is a large emphasis on the economic value, as in their values can be calculated and compared (Procter, 2011). Social Capital is more difficult to define as it is a way of analyzing the resources that exist between people in their every day lives; concepts like sense of community, values, and trust (Procter, 2011). It is suggested by the social capital theory that people may achieve a sense of social capital as a byproduct of something else. Procter (2011) addresses this as not just an account of an individual but rather characteristics of institutional social groups; families, schools, and churches, offering communal benefits and as a resource to address social disparities.

Procter (2011) further explores the importance of social capital from a medical model and includes the possibilities of political transformations through music’s role in a therapeutic relationship based in a music therapy practice. He suggests that the act of making music with others offers experiences of “…loose social networks within which people have the opportunity to experience trust and reciprocity” (p. 246). This collaborative music making experience engenders social capital, forming beneficial bonds and strengthens a sense of community.

Social capital is also linked to the health and wellbeing of the communities in which it exists. A major goal in music therapy is the enabling of people to improve their quality of life, which is seen in terms of their health, education, sense of security, and general wellbeing within society (Procter, 2011). In fact, social capital can be
categorized as the complex ecological web that is considered social support. One’s social network and general support has been seen to greatly improve, both physically and mentally, one’s sense of well-being (Procter, 2011). In making the link between social capital and music therapy, social capital can manifest as something intangible to something that can be fostered, strengthened and observed (Procter, 2011).

**Role of Music Therapist in Community Music Therapy.** The role of the music therapist within the theoretical confounds of CoMT is unique in that it redefines the role of therapist. DeNora (2005) quotes Simon Procter in his description of the role of therapist as “…someone with particular skills and training who is employed to deploy there in whatever way is most appropriate for the particular people I am working with (p.59). Procter’s Community Music stance is a client-centered approach in it’s focus, but incorporates a ‘whatever works’ methodology (p.59) grounded in the local, social structures of the client. Within this approach, the emphasis is to provide fewer directives and allow the music to equalize the roles of “therapist” and “client”. This blurs the lines of distinctions between the roles and allows the active musicking to exist in the world of the client. As a result this promotes a feeling of empowerment to be maintained individually by the client and subsequently sustained in the relationships to the client’s communal structures outside therapeutic walls.

This methodology of the therapist practicing in the philosophy of CoMT overlaps ethnographic practice in its aim to have full comprehension of the client’s identity within the community and how they make sense of their world (DeNora, 2005). Through seeking an understanding of the local knowledge and engaging in participatory musical therapeutic relationships, music is deployed both for entertainment and transformative
ends. This offers the client rich opportunities of understanding their own skills, values, and point of view, while also establishing resources to aid in their improvement through a consultative dialogue with the therapist (DeNora, 2005).

Community Music Therapy at Work. The crucial elements of Community Music Therapy are negotiation, dialogue, support, and empowerment. These are fostered through musical relationships through music therapy practice to influence the individual’s relationships and interactions outside of the sessions. CoMT explores the intricate dynamic between the processes of music therapy sessions and the socio-cultural dimensions influencing how the individual manages their sense of self and general well-being. Performance, or the act of musicking, provides a sense of validation and empowerment of the individual transforming their concept of self (Ruud, 2013). Through the collaborative music making experience, the skills of negotiation, dialoguing, foster a sense of empowerment through both autonomous relationships and communal dynamics. These resources cultivated within the therapeutic sessions transform how that individual interacts with others outside of the therapeutic context. It is through CoMT that identities can be transformed, strengthened, and empowered through the collaborative musicking experience (Andsell, 2002; Andsell, 2010; Elefant, 2010; Pavlicevic, 2010; Procter, 2011; Ruud, 2013; Stige, 2002; Stige, 2010)

"Musical Minds" and Community Music Therapy. Gary Andsell (2010), in his observance of an adult group receiving music in the East End of London, found through the musical group experiences an evolution of communal involvement between all members. This resulted in multiple opportunities for the group to cultivate a sense of social capital through the emphasis of a social model that emphasized user involvement,
support, and empowerment (Andsell, 2010). This group referred to themselves as *Musical Minds* and was led by a music therapist Sarah. Although a certified music therapist, Sarah did not call herself a therapist in this context as a way of optimally facilitating the group through equalizing her role. *Musical Minds* consisted of 8 adults and would meet once a week for two hours and share music together with opportunities to solos and collaborate collectively within a group music activity.

The aim of *Musical Minds* was to prepare and organize regular performances as a means of ‘musical fellowship’ (p.34) on a weekly basis. As a result of their weekly meetings, the group of individuals who might have been pushed to the peripherals of society due to persistent mental difficulties was able to create a sense of community, connection, and sense of belonging with each other through musical experiences. Andsell (2010) quotes Sarah as she illustrates the importance of the group by stating these individuals have been living on the “edge of society with their own styles, talents and standards” (p.35), and with *Musical Minds*, have a place to come together to create their own supportive, creative community through music while navigating their sense of self in relation to a communal sense of belonging.

Andsell (2010) further explores the importance of this community and how it was cultivated through the interest of playing music together and sharing music together. The physical act of musicing together and working as a musical community helps to shape identities and transform how the members of this group view their self in a larger, communal context. Through music, the group members learned skills that incorporated how to navigate relationships, addressed communal and autonomous needs, and
developed and/or transformed their sense of self through a creative forum supported by others going through similar experiences.

Additionally, the group members of *Musical Minds* were able to communicate and negotiate both verbally and nonverbally. Within a musical context the group members can express their desires, reconcile conflict, address tension between autonomy and belonging, all through the facilitation of a group musicing experience. Andsell (2010) quotes social philosopher Martin Buber in his account on differentiation between the definition of collective and community. In terms of being a part of the collective, he states it to be more of a bundling effect that is not binding. However, a “…growing community…is the being no longer side by side but with one another in this sense of community is moving towards one goal and transforming the me to we” (p.53). The group *Musical Minds* is able to find this sense of community through a group music experience that offers a nurturing environment for verbal and nonverbal expression of self, creativity, and sense of belonging.

**Group Work: A Medium For Help.** In reflection of her work conducted with a large, diverse group of children with and without special needs, Cochavit Elephant (2010) discusses Community Music Therapy philosophy and its purpose in the inclusion process of children with special needs within a community previously segregated in its population. Her work was conducted in an educational system in a town called Raanana in Israel. Elephant (2010) conducted a study with the aim of making a social change in perception through the process of inclusion of children with special needs to be later translated into the community at large. As she wrote, “…the experience brought a new found understanding of strength of group in the purpose of making a social change”
meaning, that for success in terms of inclusion, or in pursuit of any social change, the emphasis should be on constructing a strong group identity (p.75).

As described by Elefant (2010), “…there are many political, social and economic difficulties when including a marginalized population in a local community (p.77). In her inclusion project, Elefant (2010) explores music therapy group work as a means to promote nonverbal communication. She identifies the importance of group work in music therapy as it helps to cultivate the child’s means of processing, inter-relating, collaborating while also providing the child the opportunity to explore their sense of self and their understanding of their affect on a group. In observing children with special needs in a CoMT context, Elefant (2010) remarks that there are little differences in the negotiations within the group dynamic. The children were able to express and navigate different inter- and intra-related emotional processes through a non-verbal, musical expression.

Furthermore, Elefant (2010) recounts both Hibbens (1991) and Aftret (2005) in their research, contributing their findings to her analysis by illustrating the similarities drawn in identifying the key elements of growth for children with special needs in a group music therapy experience. These researchers not only found that group music therapy experiences aided individual progress socially, emotionally and cognitively, but also contributes to the group collectively, providing a sense of cohesion and belonging. Using this research previously conducted along with her analysis of the group work facilitated, Elefant (2010) concludes that a major element of group work in CoMT is that the group becomes a medium for help.
Although a borrowed term from social psychologists as it offers the potential of the group in making social changes in the community, (Elefant, 2010) describes this group process stemming from a mutual purpose and growing from the connectedness as they gather, search for solutions, and mediate conflicts. They additionally engage in personal responsibility, involvement, and accountability as a member of the group. It becomes resource-oriented, where the group members help to identify each member’s resources while they offer continued support in their development, aiding in strengthening these tools through a sense of cohesion and belonging (Elefant, 2010).

For the inclusion project, the group provided individually and collectively, the sense of help. The children with special needs were able to find a forum to express themselves and convey strength in this expression while the children without special needs were exposed to a population they knew little about and were provided a perspective of this population founded in their musical strengths rather than their functional weaknesses (Elefant, 2010). Through musicing together, the group was able to bond and open channels for intergroup communication.

Elefant (2010) further acknowledges, “...In Community Music Therapy dialogue, negotiation, mutuality, and empowerment are considered the key elements”(p.81) and through these concepts, a group as a medium for help can help to make changes in the individuals perceptions. This can be done both individually as well as communally. Through empowerment, these changes in perceptions of self and otherwise that occur within the group can contribute to developing of a new sense of group identity (Elefant, 2010). These changing attitudes hold the potential for community change and development outside therapeutic walls.
**Optimal Moments in Collaborative Musicing.** Mercedes Pavlicevic (2010) after three years of data collection and through numerous experiences with a children’s choir (either in individual, group, semi-structured and/or open-ended sessions), found the collaborative musicing events themselves were the ones that conveyed music’s most powerful work. The music making events became a social-musical event and expanded previous traditional concepts of “therapeutic” and “relational” perceptions within music therapy (Pavlicevic, 2010). In her work, Pavlicevic, (2010) witnessed moments working with the young girls choir that were effortless and synchronic. Collaborative musicing experiences transpired between the young girls of the choir as they nonverbally negotiated the time and space collectively. From these experiences emerged the concept of an ‘optimal moment’ as defined by Pavlicevic (2010)

Pavlicevic (2010) specifically recalls a spontaneous, improvisational recreation of the song *Kan 'n Man Dan Nie*, and the choir coming together effortlessly, navigating, and collaborating in the song’s cultural imperatives through a unified musical experience of time, place and person. From this experience, the question of how the group negotiated the process was brought up for analysis. Pavlicevic (2010) investigated the importance of the roles within the collaborative music experience to explain “how” these optimal experiences occur. By analyzing the role of “participant” in this context she found the act of collaborative musicing an equalizing experience where “leadership” roles are passed amongst the members participating in the shared experience. The collaborative musicing experience is one where all those actively involved become part of an entire organism of music (Pavlicevic, 2010).
It is through these experiences the task becomes something that is no longer considered just musical, but rather social. In the social dimension of the collaborative experience, all members who are participating “...entrain neurologically, musically, spatially, socially so that the ensemble can shift towards (and also release) from being as one (p.107). More importantly, this experience is not unique to a group setting, but is one that exists in various settings of duos, trios, and even individually. As long as there is someone actively involved in a collaborative musicing experience, the opportunity allows for both the concept of taking charge (e.g. leadership, autonomy) and taking care of the collective (e.g. belonging, community) to occur simultaneously (Pavlicevic, 2010).

Furthermore, in examining a collaborative music experience and its potential for optimal moments in performance, Procter (2011) describes a group experience using Robert Putman’s concept of social capital featuring essential concepts of social organization such as trust and the desire to improve the efficacy of the group through the coordination of actions. Procter (2011) recalls each member embracing their performance as they sang; both together in unison as and through his or her own as designated solo.

After the event, Procter (2011) wrote of the excitement amongst the group members and the ambiance generated from the performance experience:

Normally reticent members discuss the performance animatedly: not just about how they sang, but also about how the audience reacted and how that felt. It’s very different from the atmosphere at our weekly session/rehearsal. As a group, we have achieved something utterly relevant to the aims of psychiatric rehabilitation. (p. 251).
Due to music’s ability to act as both an emotional and social resource (Ruud, 2013) the vignette provided by Procter (2011) is a perfect example of how CoMT is developed for group members to optimally work towards similar goals and generate rich opportunities for the production of social capital through optimal experiences in performance. In this vignette, it was the norm of facilitating risk taking, (e.g. standing up in front of an audience, singing a solo, etc) that resulted in increased trust between the group members, aiding in the group’s cohesiveness, and facilitating bonds that would not have existed without music’s presence.

Procter (2011) goes further to analyze the importance of musicing and the role music making has in generating social capital through an active, reciprocal process that oscillates between risk-taking and trust. With social capital comes empowerment through the use of music’s transformative mechanism. Musicing is crucial for this because it never leaves anyone alone to be thrown into the mix without guidance or support; the music is always present, actively supporting the participants in the music making experience (Procter, 2011).

Music Making and Mutual Care. In Sandane, a western rural Norwegian town, Brynijulf Stige (2010) observed what was called a Senior Choir, consisting of pensioners ranging from their 70’s to some in their 90’s. In his reflection Stige (2010) found motivation to be one of the most intriguing elements for the individuals participating in the choir. They all participated in the choir, “in spite of” their transportation problems and/or various health concerns, in order to come together and practice collaboratively for two hours on a weekly basis (Stige, 2010). Although each member has their own unique story in why they participate in this choir, the act of being within a group, the sense of
belonging, was what provided a sense of motivation supported through the musicing experience.

Stige (2010) quotes researcher Andersen et al. (2007) in identifying participation in activities with high motivation and its correlation to music making and collaborative music experiences in playing an essential role in the promotion of alternative holistic methods that assist with prevention and health promotion. Stige (2010) found many participants stated their initial motivation to join the choir was based on their love of music, love of singing and/or their love of community. However, there was another dimension that emerged that was mainly focused on the promotion of health and the therapeutic benefits of the choir. Stige (2010) writes, “…choir participation is a holistic enterprise with effects that may range from physical to cognitive, emotional, and social domains” (p. 261). He recalls one statement from a choir participant saying, “…singing in a choir is humane/caring” (p. 264), and generally found in his analysis of his interviews that the choir experience was one that promoted self-fulfillment, self-care, care for others, and professional care (e.g. mutual trust) (Stige, 2010).

Through the music making experience of being in the choir together, sharing in similar interests (e.g. sharing mutual motivation to sing in the choir), and working towards a mutual goal, the members of the Senior Choir cultivated their own sense of community and mutual trust through a collaborative musicing experience that would not exist without the presence of music to support and bond these individuals together. Furthermore, in their collaborative musicing experience they were able to nurture an environment that fostered a sense of wellbeing and self-care for themselves and the collective.
Summary

Literature suggests music as an essential resource of cultivating social capital, connecting families, and communities to promote a sense of well-being through the Community Music Therapy approach (Andsell, 2002; Andsell, 2010; DeNora, 2005; Elefant, 2010; Pavlicevic, 2010; Procter, 2011; Ruud, 2013; Stige, 2002; Stige, 2010; Stige, Andsell, Elefant, & Pavlicevic, 2010; Stige, 2014). Furthermore, research supports music therapy services as a resource to assist mothers, fathers, and families in coping with the extreme circumstances faced in a Neonatal Intensive Care Unit (Abrams, et al., 2007; Arnon, et al., 2006; Baker & Mackinlay, 2006; Cevasco, 2008; Creighton, 2011; Edwards, 2011; Loewy, et al., 2013; Schwartz, 2007; Schwartz & Ritchie, 2007; Shenfield, Trehub, & Nakata, 2003; Standley, 2007, Whipple, 2008). As a result, it can be suggested that music therapy within a NICU setting may be an essential tool in addressing the unique clinical needs and socioeconomic issues faced by families in the Detroit-Metro area.

Edwards (2011) writes, in compromised situations like the Neonatal Intensive Care Unit, a secure, healthy, relational bond is an absolute priority as the baby’s survival is completely dependent on the care system. Whether this bond develops between one parent, or more, it is a responsibility of the family unit to provide security, support, and nurture for the sake of the baby’s potential to thrive. Music can be the tool most effectively promoting this bond, as these attachments are vital for the infant’s regulation of basic homeostatic and physiological processes (e.g. body temperature, sleep cycles, digestion and motor stability) (Edwards, 2011). Healthy relational bonds established by the family supports the infant’s ability to thrive.
In providing music therapy services and offering music making opportunities to promote social capital, empower, and address optimal health, and wellbeing for families at high risk for infant mortality, Community Music Therapy as a theory and practice can meet the clinical needs as well as socio-economic factors influencing these families in the NICU.

**Statement of Purpose**

The purpose of this paper is to simulate a grant proposal of music therapy services within a NICU clinical context using a Community Music Therapy model, highlighting the potential of music-making experiences to empower and cultivate resources to address the systemic socio-economic issues, as well as, clinical issues, faced by mothers and families in the Detroit-Metro area.

**Method**

For the purpose of this simulated grant proposal, I will collect information pertinent to the proposal outline retrieved from W.K Kellogg Foundation’s website, www.wwkf.org. Based upon their commitment to optimizing child development through education and promotion of health, securing families through meeting their individualized needs, and building supportive communities through civic engagement and racial equality (www.wwkf.org, 2015), I decided upon the W.K Kellogg Foundation as the most effective template to use in identifying the complex nature of this particular grant proposal. Additionally, if this proposal were to be explored further as a potential grant rather than simulated, my wish would be to follow up with W.K Kellogg Foundation as a potential collaborator for financial support.

**Grant Outline**
The following information has been adopted from the grant proposal on the W.K Kellogg Foundation website. The template will be provided in the appendix for review.

The grant for this program will address the following requests for information and questions.

1. Organization Type.
2. Target Geographic Area.
3. Describe Specific Geographic Area(s) Most Impacted By This Work.
4. Please select the main areas or priorities addressed by the project for which you are seeking funding support. It is possible to select multiple options, but is not necessary to select more than one.
5. What is the name of your project? (150 characters max)
6. Provide an overview of your project. (300 characters max)
7. Summarize in one sentence the specific purpose for which you are asking Kellogg funding. (220 characters max)
8. Briefly explain the problem or need your project aims to solve. (3000 characters max)
9. How will your project help vulnerable children succeed? (3000 characters max)
10. Describe the target demographics of the population your program will directly serve. (3000 characters max)
11. What specific outcomes do you expect to achieve? (3200 characters max)
12. Project Start Date.
13. Project End Date.
14. Provide any additional information you want us to know about the timing of your project. (3000 characters max)
15. What contact (s) has your organization had with Kellogg Foundation programming staff regarding this project? Please leave blank if no previous contact was made. (1000 characters max)

16. What is the total budget for this project?

17. What is the total amount you are requesting from the Kellogg Foundation?

18. Does any part of this project involve lobbying?

19. Estimate the percentage of families benefiting from this project who have an income at or below 200% of the current federal poverty guidelines.

20. Estimate the percentage of families benefiting from this project who are single-parent households.

21. Of the single parent households indicated above, estimate the percentage that are female head of households.

22. Estimate the percentage that indicates the range of heads of households benefiting from this project who have a high school education or less.

23. Estimate the ethnic demographic of the number of populations this project will serve by the following racial/ethnic categories (options include: white (Not Hispanic or Latino), Black or African American, Native Hawaiian or Other Pacific Islander, Hispanic or Latino, Asian, American Indian or Alaskan Native, Two or More Races)

24. Legal Organization Name (225 characters max)

25. Other named your organization is known by (225 characters max)

26. Preferred Mailing Address

27. Phone Number

28. Provide the overall purpose of your organization.
29. Are you an employee/board member of the organization that is submitting this request?  

For the purpose of this paper, I will distinguish myself as an individual (grant suggests the choice of Nonprofit, For Profit/Non-Charity, Public/Government, or individual) to seek funding for music therapy services. However, for the future of this program, it is of the opinion of the author that the establishment of a legal corporation may be beneficial in the search for financial support. All the sections inquiring for information for a corporation have not been included in the grant outline.

**Recruitment Process**

As this is a simulated grant proposal there will not be a need to recruit families for this program. However, for future implementation the recruitment process will be fleshed out as the grant proposal progresses. For projected future use of this grant, I would like to identify DMC’s Children’s hospital of Michigan as the facility to begin a NICU music therapy program proposed in this simulated grant proposal. The desire for the future is for patients to be referred by staff and other members of the interdisciplinary team. This process will be advised through the use of in-services, and through self-referrals. Follow up care will be proposed through the WIN Network as an additional potential service and resource offered. Due to the affiliation with all major health systems in the Detroit-Metro area (Detroit Medical Center, Henry Ford Health System, St. John Providence Health System, and Oakwood Healthcare System) and their commitment in the formation of Detroit Regional Infant Mortality Reduction Task Force ([http://www.winnetworkdetroit.org](http://www.winnetworkdetroit.org), 2015), this is the optimal choice for a collaborative effort to address continuity of care for mother’s and families at high risk for infant mortality.
Ethical Considerations

As stated before, this is a simulated grant proposal, however it is important to consider ethical implications for possible future implementation of the grant. Hypothetically, it is my desire to have mothers and families referred to be met prior to the treatment process to ensure a full understanding of what music therapy is and how music therapy can be used as a resource. This meeting will also be beneficial for the music therapist to establish a therapeutic rapport and develop a better understanding for who she is as a mother, what are her needs, what are her strengths, and surrounding attributes of the family culture. Mothers referred to the program will be informed of the program and their participation will be voluntary. They do not need to begin or continue with the programs services. They will be provided the necessary information to inform their choice but ultimately it is their decision to have music therapy as part of their care.

Summary

Detroit is a city of unique needs, challenges, and cultural diversity. Due to the varying needs, it is essential for services provided to align with meeting the individualized needs of this population. The socio-cultural issues currently plaguing the city of Detroit today have their own distinct pasts. These issues have fermented through the years and have manifested themselves into the many disparities present, one being the infant mortality rate. In order to address the infant mortality epidemic facing the city of Detroit, services need to address clinical needs of the families of those at high risk and the socio-cultural implications associated with the significantly high rate of infant deaths (Bouffard, 2014, Grady & Enander, 2009; Johnson, 2015).
Music, as indicated in the literature has traditionally been used in culture as a resource to enhance communal bonds as a mechanism of social capital (DeNora, 2005; Procter, 2011; Stige, Andsell, Elefant, & Pavlicevic, 2010; Stige, 2014). Through the lens of therapy, music not only provides a means of entertainment for some, but it acts as a transformative resource to offer client’s opportunities of understanding their own selves on a deeper level; comprehend values, and point of view through the unique dynamic of the therapeutic relationship (Andsell, 2002; Andsell, 2010; DeNora, 2005; Elefant, 2010; Pavlicevic, 2010; Procter, 2011; Ruud, 2013; Stige, 2002; Stige, 2010; Stige, Andsell, Elefant, & Pavlicevic, 2010; Stige, 2014).

Additionally, music therapy as a resource within the NICU clinical setting has been suggested as a beneficial tool in forming parent-child bonds, decreasing anxiety amongst parents and staff, and assisting premature infants in their development, neurologically and emotionally (Abrams, et al., 2007; Arnon, et al., 2006; Baker & Mackinlay, 2006; Cevasco, 2008; Creighton, 2011; Edwards, 2011; Loewy, et al., 2013; Schwartz, 2007; Schwartz & Ritchie, 2007; Shenfield, Trehub, & Nakata, 2003; Standley, 2007, Standley, et al., 2010; Whipple, 2008). Despite the overwhelming amount of literature supporting the benefits of music therapy in the Neonatal Intensive Care Unit, there has been little to no services provided in the hospitals surrounding the Detroit-Metro area as a resource for families at high risk despite recent accounts from the CDC estimating premature deaths making up for two-thirds of the infant mortality rate (Johnson, 2015).

These are the underlying factors of why it is imperative to begin to implement services to address both social and clinical needs presented by those at high risk for infant
MUSIC THERAPY & NEONATAL INTENSIVE CARE UNIT

This simulated grant proposal for music therapy services using Community Music Therapy philosophies in a Detroit NICU will be the foundation of a future endeavor to present a grant proposal for the Detroit Medical Center’s, Children’s Hospital of Michigan.

**The Detroit Institute for Music And Medicine: A Simulated Grant**

**Organization type**

Individual founding: The Detroit Institute for Music and Medicine

**Target geographic area**

The Detroit Medical Center is located in Detroit’s Midtown in Michigan’s most populated city. It mainly serves the residents and families of Wayne County, however, is also considered a prominent Children’s Hospital for the Detroit Metropolitan area consisting of three counties: Macomb, Oakland, and Wayne.

In the tri-county city infant mortality has rivaled that of a third world country (Bouffard, 2014). The infant mortality death rate has ranged from 13.6% to 14.9% in the last to two to three years (Bouffard, 2014, [www.dadacenter.kidscount.org](http://www.dadacenter.kidscount.org), 2015). The families most vulnerable to being at risk are: 1) parents to premature or low birth weight infants (29%), 2) intermediate or inadequate prenatal care (61%), 3) Less than a 12th grade education (42%), 4) unintended pregnancy (30.5%), and 5) multiple stressors and/or social chaos (21.3%) ([www.henryford.com](http://www.henryford.com), 2015).

Currently, the Sew Up the Safety Net for Women and Children (SUSN) and the Detroit Regional Infant Mortality Reduction Task Force in the city of Detroit are taking major strides in addressing the public need, however these programs show little statistics demonstrating whether these services are helpful in meeting families vulnerable for infant mortality.
mortality and their varied, unique needs. Additionally, statistics of infant mortality rate have altered very little over the seven years since the initiative launched in 2008. With this knowledge, there is still a great need and it is not being addressed by the services in place today. This is the underlying motivation to propose music therapy as an additional resource for the families in the Detroit-Metro area. Music therapy has demonstrated to be an essential tool within various hospital and community settings, as it is an individualized, holistic approach that is well suited to meet multifaceted needs for those it serves.

**Describe specific geographic area(s) most impacted by this work**

The Detroit Institute of Music and Medicine through the Children’s Hospital of Michigan will mainly serve the residents and families of the Detroit Metropolitan area in the state of Michigan. Proportional to its location, midtown Detroit would likely receive the greatest benefit from this program. Midtown is located along the east and west side of Woodward Avenue in Detroit and is considered both a business district and cultural center of the city as it includes major historic districts including Cass Corridor, Brush Park, Cass Historic District, and West Canfield Historic District. Midtown is also where the Detroit Library and the Detroit Institute of Arts is Located.

Currently, midtown is dominated by Wayne State University’s campus as it covers over 203 acres in the center of Detroit. As part of the Wayne State University, Detroit Medical College founded in 1868, is located near the Detroit Medical Center (DMC). The DMC in midtown consists of several hospitals Harper University Hospital, Grace Hospital, Hutzel Women’s Hospital and Children’s Hospital of Michigan. In
addition to these, Detroit Receiving Hospital and partnered institutions such as, the Karmanos Cancer Institute are all located in Detroit’s Midtown area.

According to a Michigan state census, 35.5% of Detroit’s families have an income in the past 12 months below the poverty level (www.bridgemi.com, 2015). For those with less than a high school degree their likelihood of falling below the poverty line increases from 6.9 to 10% (www.bridgemi.com). Additionally, the families of those women giving birth, nearly 4 out of 5 are those are of a single, female-head households (www.bridgemi.com, 2015), one-third of which have not graduated high-school or received a GED (www.bridgemi.com, 2015), and 1 of 6 (16.5 %) of these births are premature babies (www.marchofdimes.com, 2015). Furthermore, the rate of a preterm infant in Detroit is highest for African American infants at 18.5% (www.marchofdimes.com, 2015), while premature births and low birth weight are the leading causes for infant mortality in the city of Detroit (www.bridgemi.com, 2015).

The factors affecting low-income women are one of the largest contributors to the heightened prevalence to premature birth (e.g. availability to family planning resources, health conditions pre-conception, access to pre-natal care, stability in relationships, access to adequate support systems, management of medical needs for some newborns, environmental concerns, access to good nutrition, promotion of breastfeeding and education on preventable accidents to assure safe sleep environments for the infants) (Bouffard, 2014; Johnson, 2015; www.bridgemi.com, 2015). Through the growth of the music therapy program, pre-natal and post NICU services will be implemented to provide essential care needed to address infant mortality in the city.
As part of the Detroit Medical Center’s Children’s Hospital of Michigan, the Detroit Institute for Music and Medicine will be established to assist families of the Detroit-Metro area who are at high risk for infant mortality.

Please select the main areas or priorities addressed by the project for which you are seeking funding support. It is possible to select multiple options, but is not necessary to select more than one.

The Detroit Institute for Music and Medicine is seeking funding for music therapy services to support, empower, and opportunities for the enhancement of bonding for parents at high risk for infant mortality in the Detroit-Metro area. Priorities addressed by this project would be: families with infants admitted into the NICU, families at high risk (e.g., high risk factors including: health status of women pre-conception, age, access to pre-natal care, ethnicity, socioeconomic status, environmental concerns, support for the complex medical needs for some newborns, etc.) and the overall aim is to address the needs of the families at greater risk to assist in the improvement of infant mortality numbers in the Detroit-Metro area.

What is the name of your project

The Detroit Institute for Music and Medicine

Provide an overview of your project

The Detroit Institute for Music And Medicine

Although, the Neonatology program at the Children’s Hospital of Michigan at the Detroit Medical Center has been ranked among America’s best Children’s Hospital in the United States, it does not currently address some of the most critical needs of premature infants and families recognized as integral in the literature, and furthermore incorporated
by may state-of-the art units that exist throughout much of the country. The Neonatal Intensive Care Unit consists of 40 beds and is a Regional Level IV NICU with the capability to provide optimal care. What are lacking are programs addressing family-centered care and specific interventions tailored to address attachment, facilitate bonding between parents and child, and cultivate a sense of empowerment for parents to embrace their role as primary caregiver.

Serving the greater Detroit-Metro area, the Children’s Hospital of Michigan transports sick patients and provides outreach and education to families from all over the state (www.childrensdmc.org, 2015). As part of the Children’s Hospital of Michigan, The Detroit Institute for Music and Medicine will fill a void related to family care by providing a range of music therapy techniques as well as activities to enhance feeding, prolong sleep, increase quiet-alert states which will best meet the family and infant’s needs during their stay at the hospital. The Program additionally will stimulate and foster a means and incentive for continuity of care for parents to utilize at home, and in this way, their participation will be honored and understood as a necessary part of the interdisciplinary team, that began in the NICU through the non-invasive, evidence-based interventions provided through music therapy.

**Program Costs.** Funding for the Detroit Institute for Music and Medicine will be needed on a yearly basis. The seed money to launch and sustain the program during the first five years is integral to the program’s success. This funding will support the salary of the program coordinator who will be a board certified music therapist and who is additionally trained in the NICU (See appendix B). It will also support the start up and ongoing costs associated with the program. A detailed budget is attached (See appendix C
& D). As the program progresses, The Detroit Institute for Music and Medicine will seek additional philanthropic funding to aid in its expansion. This includes the prenatal program as well as, post NICU music therapy resources planned for implementation in the third year of the program.

**Daily Scope of Practice**

- Music therapy services will be a service provided to all families in the NICU as part of their overall care and all referrals will be recommended by the nurses, physical therapist’s (PT’s), social workers (ACSW), and approved by the Attending neonatologist.

- Five to six individual sessions will be conducted with either the parents at bedside or with the infant at bedside using techniques best suited to meet medical, neurological, and emotional needs (Abrams, et al., 2007; Arnon, et al., 2006; Baker & Mackinlay, 2006; Cevasco, 2008; Edwards, 2011; Loewy, et al., 2013; Schwartz, 2007; Schwartz & Ritchie, 2007; Shenfield, Trehub, & Nakata, 2003)

- Parents will be encouraged to record their voices singing lullabies, talking, and/or reading stories to their infant, to be played while they are not on the unit in the hospital. This will be monitored by the music therapist and provided when best suited for the infant.

- Both parents will be offered individual music therapy sessions addressing their medical, psychological, and emotional needs.

- Environmental Music Therapy (EMT) will be offered and played within the space as a means of respite for staff and families in the NICU.
• A trained graduate student intern in music therapy will assist with the program coordinator to develop a rapport with families and expand services to more families as the program develops.

• A research scholar will assist with the program and research projects conducted through the Detroit Institute of Music and Medicine.

**Weekly Scope of Practice.**

• A “Mommy & Me: Community Sing” will be conducted once a week that will involve patients, doctors, nurses and additional staff in a group music experience.

• Families that have other siblings unable to enter the NICU will be offered the opportunity to record songs, write songs and/or read stories for their sibling to be played and monitored by the music therapist in the isolette/crib.

• Single-parent group music therapy (“Sounding Joy”) sessions will be offered on a weekly basis to address the unique concerns of being a single parent while additionally fostering a sense of community and building a support system through a shared experience in the NICU.

**Monthly Scope of Practice.**

• Provide food and drinks donated by local companies for families during a two-hour monthly event called “Motown Café”. Families, staff, and patients are offered the time to mingle, share music, and/or enjoy local musicians and visiting artists of Detroit.

**Yearly Scope of Practice.**
• Two in-service training sessions will be offered to instruct the NICU staff about the benefits and ways of incorporating music therapy into the care for families and infants in neonatal care.

• An end of the year event: “Beyond the Isolette”, will be organized and facilitated by the music therapist. Families from the NICU will be invited back to share music, poetry, prose, and art to express and/or share their experiences as parents, their time at the hospital, and in the NICU. This will be an open event for all families and staff in the NICU.

• A graduate music therapy student will receive training for the completion of his or her clinical hours in the techniques best suited to meet the varying needs of families and infants in the NICU, overseen by the program coordinator on the days and hours she is present in the NICU.

• Year 2: At the end of the year an evaluation of care and services will circulate amongst the staff and families in the NICU. This evaluation will also include demographic information on mother’s involved in music therapy services. This will provide program coordinator, community liason, and supportive staff insight in what treatments may need altering and what interventions worked effectively. It will also provide a demographic overview of the families and/or mothers seen over the course of a year. This information will be organized to coordinate the implementation of prenatal and post NICU music therapy services. With the information collected, music therapy services can be executed to best serve the population in an effective and accessible manner.
Summarize in one sentence the specific purpose for which you are asking Kellogg funding

The Detroit Institute for Music and Medicine is asking the W.K Kellogg Foundation for financial support to begin a comprehensive Neonatal Intensive Care Unit music therapy program for the Detroit Medical Center’s Children’s Hospital of Michigan, which will serve neonates, their vulnerable parents, and staff with the goal of at least 2% decrease in infant mortality deaths over the course of 5 years in African American women ages 18-27, giving birth to premature infants 32-37 weeks gestational age.

Briefly explain the problem or need your project aims to solve

The Detroit Institute for Music and Medicine’s aim is to address the infant mortality rate in the city of Detroit through the resource of music therapy services. As part of the initiatives already founded by the city of Detroit (e.g. The Detroit Regional Infant Mortality Reduction Task Force, Sew Up the Safety Net, Women Inspired Network), an additional service of music therapy in a Neonatal Intensive Care Unit will be a potential resource in assisting families that are at high risk for preterm infants.

Music therapy research in the past two decades has indicated strong correlations between the services provided in a Neonatal Intensive Care Unit with the aiding in bonding/attachment, familial psychosocial concerns (e.g. anxiety, postpartum, etc), infant’s ability to self-regulate, as well as the development of suck/swallow/breathe mechanisms essential for the infant’s discharge from the hospital. Infant’s receiving music therapy services in the NICU improve self-regulation through elongated periods of sleep and/or quiet alert states, essential for neurological, emotional and physical development for the infant. Music therapy research also indicates music’s essential role
in facilitation of bonding between parent and child. Music can be beneficial for attachment and strengthening the relationship between parent and child, as well as between both mother and father, by decreasing anxiety and empowering their role as caregivers.

With the resource of music therapy, mothers, fathers, and families that are considered high risk for preterm infants with a higher probability of failure to thrive, will be supported by the Detroit Institute for Music and Medicine through the establishment of a therapeutic rapport to beneficially engage, assist with psycho-education, and empower parents and families as primary caregivers throughout their infant’s hospitalization. Once established within the NICU, the Detroit Institute of Music and Medicine will likely follow up with families through the networks established by the Detroit Regional Infant Mortality Reduction Task Force as part of their continuing care and organize to implement prenatal care as well.

**How will your project help vulnerable children succeed?**

Birth weight and preterm births generally are strong indicators about the mother’s general wellbeing and their nutritional status. Additionally, low birth weight and/or preterm delivery also indicate newborn’s survival, growth, overall long-term health, as well as psychosocial and emotional development. Infants that are born underweight and/or preterm are seen to generally have more cognitive disabilities and are major predictors of infant mortality (Bouffard, 2014; Johnson, 2015; www.bridgemi.com, 2015). Through the use of a Community Music Therapy based approach (Andsell, 2002; Proctor, 2011; Stige, 2002; Stige, Andsell, Elefant, & Pavlicevic, 2010; Stige, 2014) based in concepts of empowerment, musical dialogues through supportive musicing,
inclusiveness, local community, with the aim to transform societal perspectives through tolerance, acceptance, and togetherness, The Detroit Institute for Music and Medicine is proposed as an additional resource in the NICU.

As part of the interdisciplinary team to provide psychosocial support for all families in need, specifically families at high risk for infant mortality, the program is proposed to aid in the survival of those susceptible for failure to thrive. By addressing the various elements that leave these families susceptible to infant mortality, The Detroit Institute of Music and Medicine will be designed to address the individualized needs of the families in the NICU of The Children’s Hospital of Michigan.

In recent years, the statistics presented by the Sew Up the Safety Net for Women, show 1 in every 3 infant deaths are related to prematurity or complications related to prematurity (www.henryford.com, 2015). Their numbers go on to show Detroit’s infant mortality rate as high as 14.9% in comparison to the national number of 6.6 % and also addresses the disparities present between Caucasian and African American households, showing nearly double the rates of infant mortality for families of African American decent (www.henryford.com, 2015). Lastly, the statistics show that 20% of the infant mortality cases are related to multiple stressors and social chaos experienced by the parent’s and families of the infant (www.henryford.com, 2015).

It is the Detroit Institute for Music and Medicine’s plan to provide services as part of the continuing care for the mothers and families at most risk for infant mortality. These risk factors were indicated above and are the following: 1) prematurity and low birth weight (29%), 2) intermediate or inadequate prenatal care (61%), 3) Less than a 12th grade level education (42%), 4) unintended pregnancy (30.5%), and 5) multiple
In establishing relationships with the families within the NICU, the families will be provided the option to continue care with music therapy services through the support of the Detroit Regional Infant Mortality Reduction Task Force as an additional resource. Music therapy will also organize annual community events to bring the families from the NICU back together to have the opportunity to share their experiences. This is done to foster a sense of community and supportive systems.

In teaming up with this initiative, the music therapist can continue to follow the family and mother's care to ensure that they are receiving optimal support during a critical time for the family. Music therapy will be used as a supportive resource to ensure the continuing of the bonding process, the empowerment of parent's in their role as primary caregiver, and the overall wellbeing of the family. In addressing the family's unique needs, music therapy services can reduce factors that may contribute to infant death rates once discharged from the NICU (e.g. poor nutrition, SIDS, injury, infection, etc).

**Describe the target demographics of the population your program will directly serve.**

**Ethnicity**

Race plays a most crucial indicator in infant mortality. The susceptibility of an infant's failure to thrive for an African American household is double that of a Caucasian in the city of Detroit (www.bridgemi.com, 2015). The highest rate was that of two years ago reaching 15% in some areas of the city, more than double the national average of infant mortality. Researchers like Grady & Enander (2009) have proposed that this may
be due to intrinsic, structural racism within the city of Detroit. They go so far to suggest that the health systems in the city are intrinsically racist and do not offer the equal care offered to Caucasian households. This leaves families with a poor perception of the care provided by the health systems. Additionally, Shultz and Skorcz (2012) reveal that these numbers are not isolated events of African American women in low-income, deprived areas, it occurs across varied socioeconomic statuses, further suggesting it goes deeper than just the environmental factors and can possibly unveil inherent racial injustices within health institutions altering perception of care.

Detroit has also a long, unique history of racial tension and the only way to address these racial divides is to openly discuss the disparities and discuss the issues. An open and honest conversation about possible racial issues within a nurturing environment may be a unique opportunity to cultivate supportive networks and address possible issues of isolation and marginalization. A forum with the aim to form a community where these women feel empowered and a sense of belonging may help to reduce the infant mortality rate. The goal with a community music therapy approach is to empower and support those who may feel alienated by society, bringing a sense of togetherness, and release tensions felt from their feelings of exclusion.

**Poor Health Conditions**

The health decisions as a mother, and also as a father, are hugely important in providing the necessary environment for the infant to thrive. Preterm infants and infants that are low birth weight are usual indicators that the mother’s health may not be optimal. Either the mother is unable to receive the necessary prenatal care to carry the baby full term, or was unaware of adequate prenatal care the health conditions of mother pre-
conception and post-conception are important components to address in exploring infant mortality.

According to “The Impact of Detroit on the State of Mortality Rate and the Causes and Manners of Deaths for Wayne County Infants” shared by the Michigan Public Health Association, infant mortality rates for mothers who receive inadequate care is 17.2% in comparison to mothers receiving “adequate” care at 5.7% (www.mipha.org, 2012). Additionally, 1 in 4 Detroit households do not own a vehicle (www.bridgemi.com, 2015), making transportation to proper care more difficult for many Detroit residents. In providing accessible care with a large presence in the community, The Detroit Institute for Music and Medicine will work with the families and their unique needs, collaborate with social workers and/or other psychosocial support networks to assist in their needs, and work to build services to provide a comprehensive program that goes beyond that of the hospital and NICU. In working collectively with the care teams of WIN and Sew Up the Safety Net a part of the continuity of care music therapy can be an essential tool in continuity of care for families at high risk.

In year three, the program will begin to organize resources to provide an outreach to community leaders to assist families and pregnant women in need of prenatal care. In providing counseling and music therapy services as a means of prenatal care, this program will use the established communities in the city (e.g. churches, women’s groups, etc) to offer resources that are efficient and accessible for these mothers prior to giving birth.

Income
The economic status of a mother is a major risk factor in the susceptibility of infant mortality rate. In the Detroit-Metro area the average income was $52,462 (www.bridgemi.com, 2015) while 35.5 percent of the families in the city are considered below poverty (www.bridgemi.com, 2015). Families without the means to receive prenatal care due to their financial limitations will be a higher risk than those that are able to receive the care (www.mipha.org, 2012). Also, as stated above, 25% of Detroit households are unable to afford a vehicle and/or high insurance (Detroit is one of the highest care insurance rates in the country) (www.bridgemi.com, 2015). Having a service like music therapy included in the care at the hospital will assist with anxieties associated with the care of a preterm infant and will be an essential tool in addressing the potential financial stressors by collaboratively providing psychosocial support for the families in the NICU.

Young Motherhood

According to Michigan Public Health Association, mothers under the age of 20 make up for 7.5% of the infant mortality rate, while mothers between the ages of 20-29 are 9.8% of the rate (www.mipha.org, 2012). These numbers show the vulnerability of young mothers and their risk of infant mortality. Depending on the situation of the familial support, there may be possibilities of the father being absent, mother dropping out of school to support herself and care for her baby resulting in lower wage positions that may place her in a more financial distress. Mother may also not understand the severity of her infant’s condition and not receive the necessary care for herself or the baby. Whatever the scenario may be for these young mothers, music therapy has been seen to be an effective supportive resource for young mothers (Baker & Mackinlay,
MUSIC THERAPY & NEONATAL INTENSIVE CARE UNIT

2006) as it provides a forum to psycho-educate, alleviate stress (Arnon, et, al., 2006; Loewy, et al., 2013) and empower parents in their role as primary caregiver (Cevasco, 2008; Edwards, 2011).

**What specific outcomes do you expect to achieve?**

The main aim for The Detroit Institute of Music and Medicine is to address the infant mortality rate in the city of Detroit. Through the use of music therapy, the mothers and families that are at high risk will be provided the opportunity to have an additional resource offered through the hospital to address their unique needs. The music therapist will establish a therapeutic relationship within the NICU, supporting and empowering mother and father as the primary caregiver. When needed, music therapy will also have siblings and other family members record their voices as they read stories or sing lullabies, so that they can support mother, father, and the infant through the hospitalization without physically being on the unit. Furthermore, it is an additional goal for music therapy to follow the mothers once they leave the hospital through programs like Sew Up the Safety Net and WIN Network as an additional resource to offer continuity of care and ensure that they are receiving the support once they leave the hospital. With the establishment of this program, the primary goal is to decrease infant mortality rates by at least 2% over the course of 5 years in the population of African American women ages 18-37, giving birth to premature infants ranging between 32 and 37 gestational age.

Outcomes of future research studies conducted at Children’s Hospital of Michigan through the Detroit Institute for Music and Medicine such as, pilot studies, research studies on the effects of music therapy on infants first two years of life, studies on
heartbeat lullabies (e.g. lullabies constructed around the rhythm of the infant’s heartbeat), and studies on the effects of group music therapy and single parenting households will not only support music therapy as an additional tool in the NICU, but it will also help to gain more attention to the hospital and services offered at Children’s Hospital of Michigan. Within the second year (See Appendix D) the clinical director will begin to work on a proposal for a longitudinal study of infants in the NICU receiving music therapy and infants in the NICU not receiving music therapy. These studies will be supported through the funding (See appendix C) support of the W.K Kellogg, as well as other philanthropic funders depending on the need addressed.

As a result of this study, other cities experiencing similar difficulties with infant mortality rates may consider music therapy as an additional service to the Neonatal Intensive Care Unit. The national rate remains high as well, ranging between 6.7-7% over the last few years (Macdorman, et al., 2014). As determined by these studies, music therapy may be considered a crucial part of standardized care in the NICU in addressing the unique, individualized needs of families on the unit.

After a period of three years, the program will begin organizing resources to implement pre-natal counseling as an additional part of music therapy care. In connecting with community organizations already established in the city of Detroit, the community liason and program coordinator will work with community leaders to reach out to young pregnant women who may be at high risk. According to research (www.bridgemi.com, 2015; www.henryford.com, 2015; www.marchofdimes.com, 2015) inadequate prenatal care is a leading contributor in infant mortality, as is the mother’s
health condition prior to birth. Providing resources for families and mother’s to be in an easy accessible manner may influence the infant mortality rate.

Project Start Date

September 12th, 2016

Project End Date

September 10th, 2021

Provide any additional information you want us to know about the timing of your project.

As music therapy services become more prevalent within hospitals as part of the interdisciplinary team, The Detroit Institute for Music and Medicine will be a founding music therapy service specifically allocated for a NICU in a Detroit hospital placing the DMC as one of the few hospitals taking on innovative, holistic care for it’s patients. With a presence of child life and music therapy within the pediatric facility, music therapy within the NICU will be an addition to the already renowned Children’s Hospital.

Having a timeline for five years is significant for the growth of the program and the research study proposed to explore the possible effectiveness of music therapy on the infant mortality rates. It will take time to develop and grow but with the time frame of five years the program will be able to grow, as well as, explore other philanthropic avenues to support its sustainability and expansion.

What contract(s) has your organization had with Kellogg Foundation programming staff regarding this project? Please leave blank if no previous contact was made.

Not applicable- no contact has been made to the Kellogg Foundation.

What is the total budget for this project?
$1,500,000

What is the total amount you are requesting from the Kellogg Foundation?

$1,500,000

Does any part of this project involve lobbying?

This project does not involve lobbying.

Estimate the percentage of families benefitting from this project who have an income at or below 200% of the current federal poverty guidelines.

35.5% (www.bridgemi.com, 2015)

Estimate the percentage of families benefitting from this project who are single-parent households.

60-70% (www.bridgemi.com, 2015)

Of the single parent households indicated above, estimate the percentage that are female head of households.

59.3% (www.bridgemi.com, 2015)

Estimate the percentage that indicates the range of heads of households benefitting from this project who have a high school education or less.

<table>
<thead>
<tr>
<th>Status of Household</th>
<th>Less Than High School Degree</th>
<th>High School Graduate/ Equiv (e.g. GED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>30.5%</td>
<td>21.9%</td>
</tr>
<tr>
<td>Single Father</td>
<td>56.9%</td>
<td>40.1%</td>
</tr>
<tr>
<td>Single Mother</td>
<td>60.4%</td>
<td>50.4%</td>
</tr>
</tbody>
</table>
Estimate the ethnic demographic of the number of populations this project will serve by the following racial/ethnic categories (options include: white (Not Hispanic or Latino), Black or African American, Native Hawaiian or Other Pacific Islander, Hispanic or Latino, Asian, American Indian or Alaskan Native, Two or More Races)

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>10.6%</td>
</tr>
<tr>
<td>African American</td>
<td>82.7%</td>
</tr>
<tr>
<td>Native Hawaiian/Pacific Islander</td>
<td>n/a (0%)</td>
</tr>
<tr>
<td>Hispanic of Latino</td>
<td>6.8%</td>
</tr>
<tr>
<td>Asian</td>
<td>1.1%</td>
</tr>
<tr>
<td>American Indian or Alaskan Native</td>
<td>n/a (0%)</td>
</tr>
<tr>
<td>Two or More Ethnicities</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

Legal Organization

Elizabeth Anne Barone, founder of The Detroit Institute for Music and Medicine

Provide the overall purpose of your organization.

The Detroit Institute for Music and Medicine through the Children’s Hospital of Michigan will provide music therapy services as a forum to support mothers and families of infants admitted into the NICU, especially those who are at high risk for infant mortality. As part of the interdisciplinary team, the music therapist will work with
families by supporting, engaging, and empowering their role as primary caregiver throughout the hospitalization of their infant.

Are you an employee/board member of the organization that is submitting this request?

Yes, I, Elizabeth Anne Barone, am a founding member of this organization.

Discussion

Resources are a major factor in the infant mortality rate amongst the Detroit-Metro communities. External resources are needed, however, intrinsically cultivating personal resources is just as essential in addressing the needs of women at high risk. Programs like WIN Network, providing a tremendous service as a supportive mechanism, recognizes the importance of addressing the multitude of factors placing these women and families at high risk for infant mortality. Working to empower, educate, and support these families, as well as, connecting them to others to form a supportive network and community of mothers is a wonderful model to emulate. Like Saergert, Thompson & Warren (2001), providing the "power to" (p.6) a marginalized group can be the most profound resource offered and most transformative for future generations. Perhaps, the empowerment of these communities may be what is necessary for addressing the infant mortality rate of Detroit.

Unfortunately, the transient model for membership of WIN Network and Sew Up the Safety Net make it difficult to acquire definitive data on whether it has had an impact on the infant mortality rate (Johnson, 2015). Additionally, the statistics show (Bouffard, 2014; Johnson, 2015; www.bridgemi.com, 2015, www.marchofdimes.com, 2015; www.mipha.org, 2012) that there has been very little change in the rates since the
founding of the programs in 2008.  A proposal of additional services, like music therapy, can serve the families and mothers at high risk within a NICU setting. It can also provide services through the SUSN, and/or the WIN Network as an additional resource for psycho-social support while providing opportunities to research and identify specific factors influencing the infant mortality rate within the city of Detroit.

The literature surrounding music therapy and the Neonatal Intensive Care Unit strongly suggest the benefits of such a resource within the hospital. It both enhances the community of the hospital, staff and family, while facilitating the cultivation of internal resources needed as a parent of an infant in the NICU. Most importantly, the music and primal rhythms can be used as a mechanism to support and enhance the premature infants abilities, an essential tool for their neurologic, emotional, and psychological development. It empowers, builds relationships and can provide the additional supportive network needed for families who are at high risk with their infants in the Detroit-Metro area. Like the WIN Network, it may serve as a means to organize, connect and bring the community together, but designed purposefully to meet the individual’s unique needs. In addressing the distinctive characteristics of families in the city of Detroit, on both a holistic, medicinal, and socially aware level, music therapy using CoMT principles can be used as an effective tool for the families whom are at most risk for infant mortality.
References


http://www.detroitnews.com/article/20140130/LIFESTYLE03/301300005


http://quickfacts.census.gov/qfd/states/26/2622000.html

Detroit Infant Mortality Rate. (2012). The Impact of Detroit on the States Infant Mortality Rate and the Causes and Manners of Deaths for Wayne County Infants. Retrieved from:


National Academy Press. Retrieved from:


Action on Reflection (pp.253-274). Great Britain, UK: Ashgate Publishing Limited.


Appendix A

*Organization Type:* (Choose One) Nonprofit For Profit/Non-Charity (Latin America and the Caribbean only) Public/Government Individual

*Target Geographic Area*

Target Geographic Area indicates specific geographic areas that are expected to benefit from your project. Select each state or country that is intended to be served by this project. Select all that apply.

Describe specific geographic area(s) most impacted by this work:

Please select the main areas or priorities addressed by the project for which you are seeking funding support. It is possible to select multiple options, but is not necessary to select more than one. (Latin America and the Caribbean only)

*What is the name of your project?*

Enter the name or title of the proposed project. If you haven't named your project yet, we recommend a short name (one to five words) that reflects what you are trying to achieve and can be easily remembered by various audiences. [150 chars max]
*Provide an overview of your project:

Provide a brief summary of your project. Include how you will address the need(s) of your project. [3000 chars max]

Appendix A (Cont’d)

*Summarize in one sentence the specific purpose for which you are asking for Kellogg funding:

Concisely describe the specific purpose for which you are asking for Kellogg funding. For example, "improve early education in pre-schools in "X" county by training teachers." [220 chars max]

*Briefly explain the problem or need your project aims to solve: (Latin American and the Caribbean only)

Help us understand the context of your project by describing the problem and need your organization aims to solve. The use of data is strongly recommended. [3000 chars max]

*How will your project help vulnerable children succeed?

Provide specific details how this request will improve the lives of vulnerable children who are living in poverty through a systemic and/or community change approach. [3000 chars max]

*Describe the target demographics of the population your program will directly serve:

Who is the population that will directly benefit from your project? Please be as specific as possible. For example, include average age, ethnicity, languages spoken, income, etc. [3000 chars max]

*What specific outcomes do you expect to achieve?

Describe what will be different as a result of this project for the target population described.
Please be as specific as possible. For example, "x" families will increase their monthly income by "y"%; or "x" children will improve their school performance by 3rd grade by "y"%.[3200 chars max]

Appendix A (Cont’d)

*Project Start Date

Enter the month and year your project begins.

*Project End Date

Enter the month and year your project concludes.

Provide any additional information you want us to know about the timing of your project.

Provide any additional information regarding the timelines for the project. [3000 chars max]

What contact(s) has your organization had with Kellogg Foundation programming staff regarding this project? Please leave blank if no previous contact was made.

Previous contact with staff is not required prior to submitting a grant request and is used for review purposes only. Contact with staff does not increase funding opportunities. If you have had contact with WKKF programming staff regarding this request, please provide their name(s). [1000 chars max]

*What is the total budget for this project?

Estimate the total amount needed to support this project.

*What is the total amount you are requesting from the Kellogg Foundation?

Provide the dollar amount being requested from the Kellogg Foundation for this project in US dollars. Enter numeric values only.

*Does any part of this project involve lobbying?

Direct lobbying occurs when an organization communicates with a legislator, legislative staff, or in limited cases executive branch officials, about a specific piece of legislation and reflects a view on the legislations. Specific legislation encompasses proposed legislation, legislation already introduced, ballot initiatives, referendum, bond measure, etc.

Grassroots lobbying is a communication with the general public that reflects a view on specific legislation AND encourages people to contact their legislative representation in order to influence that legislation. A broader definition may apply to paid mass media
*Estimate the percentage of families benefitting from this project who have an income at or below 200% of the current federal poverty guidelines: (US-based projects only)

*Estimate the percentage of families benefitting from this project who are single-parent households: (US-based projects only)

*Of the single-parent households indicated above, estimate the percentage that are female head of households: (US-based projects only)

*Estimate the percentage that indicates the range of heads of households benefitting from this project who have a high school education or less: (US-based projects only)

*Estimate the ethnic demographics of the number of populations this project will serve by the following racial/ethnic categories (enter whole numbers only): (US-based projects only)

*Legal Organization Name:

*Other name(s) your Organization is known by:

*Provide the overall purpose of your organization:
Appendix B

ELIZABETH BARONE, MT-BC

CLINICAL EXPERIENCE: Music Therapy

Beaumont Hospital: Royal Oak, MI November 2016-Present

• Founding music therapist for the Beaumont Children’s Hospital Music Therapy Program.
• Offer music therapy services for families within the Pediatric Unit, PICU, Pediatric Hematology/Oncology, and Pediatric Emergency Room.
• Provide hospitalized children and their family procedural, emotional, and familial support to assist in coping with the challenges of hospitalization, illness and/or disability.
• Facilitate a group music therapy experience of 8 to 10 children each week for approximately 45-60 minutes.
• Provide Environmental Music Therapy for the nursing stations in two locations on the pediatric floor.

CLINICAL EXPERIENCE: Child Life and Music Therapy Internship/Practicum

Mount Sinai Beth Israel (The Louis Armstrong Department of Music and Medicine): New York, NY June 2015-August 2015

• Primary Supervisor: John Mondanaro, MA, MT-BC, LCAT, CCLS and Marcia Graham, CCLS.
• Offer services as part of the Child Life and Music Therapy department to families within the Pediatric Unit, PICU, NICU and Pediatric Emergency Room.
• Provided hospitalized children and their family procedural, emotional and familial support to assist in coping with the challenges of hospitalization, illness and/or disability as part of an interdisciplinary team.
• Organized and assist in coordinating special events (e.g. birthdays celebrated in the hospital, Christmas in July, etc.) for patients and family members.
• Offered developmental appropriate interactions for the familial system to normalize hospital environment, engage patients and provide a beneficial experience in a medical facility.

Mount Sinai Beth Israel (The Louis Armstrong Department of Music and Medicine): New York, NY September 2014-June 2015

• Primary Supervisor: Christine Vaskas, MS, MT-BC, LCAT.
• Certified NICU Music Therapist: Acquired over 900 hours within the Neo-Natal Intensive Care Unit and Antepartum Unit at Roosevelt Mount Sinai Hospital.
• Provided music therapy services for families to assist with coping throughout hospitalization through the use of RBL techniques (e.g. Song of Kin) to empower and provide opportunities for families to cultivate their internal resources to process the hospital experience.
• Assisted in orientations and observations (O&Os) for both domestic and international music therapy students interested in music therapy services in the NICU.

Essex County Hospital: Cedar Grove, NJ January 2014- May 2014

• Primary Supervisor: Julie Abrams, MT-BC.
• Conducted group music therapy sessions with approximately 3-10 men and women, ranging in age from 18-60 in an adult psychiatric in-patient facility: primary diagnoses of the clients who attend the group music therapy sessions are: schizophrenia, bi-polar disorder, depression, and anxiety disorders.

• Developed session plans according to both individual and group needs and strengths.

**Saint Barnabas Medical Center: Livingston, NJ**
September 2013-May 2014
Primary Supervisor: Melissa Santiago, MS, MT-BC, CCLS.

• Conducted one-on-one music therapy sessions, as well as group sessions with family/caregivers, within a pediatric unit (including: PICU, pediatric oncology and burn unit) with children and young adults with varying diagnoses.

• Designed sessions to primarily normalize the hospital environment for patient and family members, helping decrease anxiety associated with hospitalization through development of personal resources, and increase the child’s self-expression to provide a sense of control within the hospital environment.

• Developed individualized sessions based upon chronological age, as well as, developmental status.

**Appendix B (Cont’d)**

**VNA – Englewood Hospice: Englewood, NJ**
December 2013-January 2014
Primary Supervisor: Lisa Broniak, MT-BC.

• Provided one-on-one sessions in an assisted living community and within client’s homes- diagnoses varied however, the vast majority were diagnosed with dementia

• Offered group music therapy sessions once a month at an assisted living community- group sizes varied from 10-20 clients, both men and women and ages varied between 60-90’s - diagnoses varied, however, most clients were diagnosed with a form of dementia.

• Conducted sessions on an individualized basis to assist in decreasing pain perception, increase spouse – client interaction (if spouse present) and increase quality of life through meaningful sensory stimulation.

**Matheny Medical & Educational Center: Peapack, NJ**
Fall 2012-Spring 2013
Primary Supervisor: Megan Chappius, MT-BC.

• Offered group music therapy sessions (4-8 individuals, both men and women) with young adults, ranging in age of 18-25, with multiple developmental disabilities, primarily cerebral palsy.

• Designed sessions based upon site’s humanistic philosophies but also incorporated behavioral techniques to meet developmental milestones (e.g. to meet fine/gross motor needs and strengths, increasing peer interaction, as well as communication and self-expression).

**EDUCATION**

Montclair State University: Montclair, NJ
January 2012-Present
Masters in Arts, Music Therapy
Honors and Awards: David Ott Scholarship 2014: Outstanding Music Therapy Intern, Alpha Epsilon Lambda Honor Society
Certified in Level One Bonny Method of Guided Imagery- Supervised by Dr. Brian Abrams and Madeline Ventre

Emerson College: Boston, MA
September 2003- December 2006
Bachelor in Arts, Emphasis in Theatre Studies
Honors and Awards: Cum Laude, Zeta Phi Eta National Professional Fraternity

**RELATED EXPERIENCE (Work & Volunteer)**

**Pitching Monkeys: New York, NY**
November 2009- December 2015
• Worked as a free-lance publicist with a small team as part of a boutique firm to coordinate media interviews (e.g. internet, radio and television).

• Pitched interviews to television and radio stations nationally and internationally.

• Constructed, edited and updated calling databases and contact information.

• Produced numerous segments and conducted media training for our varying client’s.

VNA- Englewood Hospice: Englewood, NJ
February 2014- September 2014
• Provided music as a volunteer for patients in hospice. This also included music for families and caregivers present with their loved ones during this time.
• Participated in seminars to deepen the understanding of services provided through VNA hospice.
• Documented sessions for continuity of care within the interdisciplinary team.

Heartsong: White Plains, NY
November 2011 - March 2012
• Assisted a music therapist in both group and individual sessions with children diagnosed with multiple disabilities, primarily autism and cerebral palsy.
• Participated and assisted with family/caregiver events developed by Heartsong to cultivate a supportive community for those caring for children with multiple needs.

AM-TREE Day Care: Montvale, NJ
May 2004 - September 2006
• Worked as a teacher aid after high school and during breaks in school.
• Assisted with class consisting of 10-12 children ranging from 16-18 months of age.
• Participated and assisted with family/caregiver events developed by AM-TREE to nurture a communal spirit amongst the parents and caregivers.
• Developed and nurtured relationships with families to cultivate deeper relationships and care-giving opportunities.

Appendix C

Budget: Year One

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salary of Program Coordinator</td>
<td>$60,000</td>
</tr>
<tr>
<td>Community Liaison (35hr/wk - $25/hr)</td>
<td>$42,000</td>
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<td>Support Staff (35hr/wk - $20/hr)</td>
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<td>Remo First Sounds: Rhythm, Breath, Lullaby developed by Dr. Joanne Loewy (includes: 16” Lullaby Ocean Disc, a Gato Box, and Heavy Duty Cushioned Canvas BackPack)</td>
<td>$250</td>
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<tr>
<td>Classical Nylon String Yamaha C40 Classical Guitar</td>
<td>$125</td>
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<td>Remo HealthRhythms Collection (<a href="http://www.westmusic.com/p/remo-healthrhythms-dp-0085-00-essentials-collection-204206">http://www.westmusic.com/p/remo-healthrhythms-dp-0085-00-essentials-collection-204206</a>)</td>
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<td>D’Addario EJ45-Pro-Art Nylon Classical Strings (2x)</td>
<td>$14 ($7/box)</td>
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<td>Snark Guitar Tuner (<a href="http://www.amazon.com">www.amazon.com</a>)</td>
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<td>$3</td>
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<td>Apple MacBook Pro 13-inch Laptop (<a href="http://www.apple.com">www.apple.com</a>)</td>
<td>$1,099</td>
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<tr>
<td>iPad Pro (<a href="http://www.apple.com">www.apple.com</a>)</td>
<td>$800</td>
</tr>
<tr>
<td>USB Flash Drive SanDisk Ultra 64 GB (<a href="http://www.amazon.com">www.amazon.com</a>)</td>
<td>$22</td>
</tr>
</tbody>
</table>
### Resources for Community Outreach
- Fundraiser Budget: $20,000
- Food and Drinks: Yearly budget for Motown Café: $24,000
- Miscellaneous office expenses (sustaining resources/ funds to support research): $198,000

### Total Funding Request: $300,000

#### Appendix C (Cont’d)

#### Budget: Year Two

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<td>$250</td>
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<td>D’Addario EJ45-Pro-Art Nylon Classical Strings (2x) (<a href="http://www.amazon.com">www.amazon.com</a>)</td>
<td>$14 ($7/box)</td>
</tr>
<tr>
<td>Snark Guitar Tuner (<a href="http://www.amazon.com">www.amazon.com</a>)</td>
<td>$8</td>
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<td>YMC Capo-03 Single Handed Guitar (<a href="http://www.amazon.com">www.amazon.com</a>)</td>
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<td>Apple MacBook Pro 13-inch Laptop (<a href="http://www.apple.com">www.apple.com</a>)</td>
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<tr>
<td>Resources for Community Outreach</td>
<td>$25,000</td>
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<tr>
<td>Fundraiser Budget</td>
<td>$25,000</td>
</tr>
<tr>
<td>Food and Drinks: Yearly budget for Motown Café</td>
<td>$30,000</td>
</tr>
<tr>
<td>Miscellaneous office expenses (sustaining resources/ funds to support research)</td>
<td>$75,866</td>
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Total Funding Request: $300,000

Appendix C (Cont’d)

Budget: Year Three

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<td>Remo First Sounds: Rhythm, Breath, Lullaby developed by Dr. Joanne Loewy (includes: 16” Lullaby Ocean Disc, a Gato Box, and Heavy Duty Cushioned Canvas BackPack)</td>
<td>$250</td>
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<td>(<a href="http://www.remo.com">www.remo.com</a>)</td>
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<tr>
<td>Classical Nylon String Yamaha C40 Classical Guitar</td>
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Resources for Community Outreach $27,000
Fundraiser Budget $27,000
Food and Drinks: Yearly budget for Motown Café $30,000
Miscellaneous office expenses (sustaining resources/ funds to support research) $65,606

Total Funding Request: $300,000

Appendix C (Cont’d)

Budget: Year Four

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<td>Fundraiser Budget</td>
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Total Funding Request: $300,000
Appendix C (Cont’d)

Budget: Year Five

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</tr>
<tr>
<td>Community Liaison</td>
<td>$50,000</td>
</tr>
<tr>
<td>Support Staff</td>
<td>$41,000</td>
</tr>
<tr>
<td>Stipend for Music Therapy Research Fellow</td>
<td>$5,000</td>
</tr>
<tr>
<td>D’Addario EJ45-Pro-Art Nylon Classical Strings (2x) (<a href="http://www.amazon.com">www.amazon.com</a>)</td>
<td>$14 ($7/box)</td>
</tr>
<tr>
<td>HP Inkjet Toner 940XL/940 Black &amp; Color (<a href="http://www.staples.com">www.staples.com</a>)</td>
<td>$103</td>
</tr>
<tr>
<td>Resources for Community Outreach</td>
<td>$32,000</td>
</tr>
<tr>
<td>Fundraiser Budget</td>
<td>$32,000</td>
</tr>
<tr>
<td>Food and Drinks: Yearly budget for Motown Café</td>
<td>$35,000</td>
</tr>
<tr>
<td>Miscellaneous office expenses (sustaining resources/</td>
<td>$34,883</td>
</tr>
<tr>
<td>funds to support research)</td>
<td></td>
</tr>
</tbody>
</table>

Total Funding Request: $300,000
Appendix D

Timeline: Year One

<table>
<thead>
<tr>
<th>Milestones/Activities</th>
<th>September 2016-August 2017</th>
<th>Key Staff involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ In-service to introduce music therapy services to the staff. Inform on referral</td>
<td>1st Quarter</td>
<td>Program coordinator, NICU staff, interdisciplinary staff</td>
</tr>
<tr>
<td>process and the benefits of music therapy</td>
<td>2nd Quarter</td>
<td>X</td>
</tr>
<tr>
<td>▪ Establish the “Mommy &amp; Me: Community Sing” for the weekly group meeting.</td>
<td>3rd Quarter</td>
<td>X</td>
</tr>
<tr>
<td>▪ Establish “Sounding Joy” group for single parenting for weekly meetings</td>
<td>4th Quarter</td>
<td>X</td>
</tr>
<tr>
<td>▪ Begin coordinating with visiting artists that want to play in the hospital and/or</td>
<td>X</td>
<td>Program coordinator, interdisciplinary staff</td>
</tr>
<tr>
<td>already playing in the hospital- collaborate and seek to establish any music</td>
<td></td>
<td>Program coordinator, NICU staff</td>
</tr>
<tr>
<td>programs to be under the umbrella of the Detroit Institute for Music and Medicine</td>
<td></td>
<td>Community Liason, Support Staff</td>
</tr>
<tr>
<td>▪ Begin Monthly “Motown Café”: 2 hours of local music, visiting artists</td>
<td></td>
<td>Program coordinator, interdisciplinary staff, hospital</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>volunteers, Support Staff, Community Liason</td>
</tr>
</tbody>
</table>
Begin interviewing for Graduate music therapy student intern

2nd In-service for staff

If bereavement ceremony already an established event, work with interdisciplinary care to provide support for event. If not, coordinate a bereavement ceremony.

"Beyond the Isolette" yearly event

---

**Appendix D (Cont’d)**

**Timeline: Year Two**

<table>
<thead>
<tr>
<th>Milestones/Activities</th>
<th>September 2017-August 2018</th>
<th>Key Staff involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation for Graduate student music therapy intern</td>
<td>1st Quarter: X</td>
<td>Program coordinator, graduate intern</td>
</tr>
<tr>
<td>Fundraiser Event: Detroit Institute for Music and Medicine</td>
<td>2nd Quarter: X</td>
<td>Program coordinator, graduate intern, hospital volunteers, Community Liaison, Support Staff</td>
</tr>
<tr>
<td>Begin writing proposal for study: Observing NICU infants who receive music therapy vs. NICU infants that do not receive music therapy. What are the effects in the first two years of life?</td>
<td>3rd Quarter: X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, graduate intern</td>
</tr>
<tr>
<td>1st in-service: first conducted by program coordinator</td>
<td>4th Quarter: X</td>
<td>Program coordinator</td>
</tr>
<tr>
<td>IRB approval: What are the effects of music therapy on a premature infant’s first two years of life?</td>
<td></td>
<td>Program coordinator, NICU staff, interdisciplinary staff, graduate intern</td>
</tr>
<tr>
<td>Begin research study: graduate intern will assist</td>
<td>X</td>
<td>Program coordinator, graduate intern</td>
</tr>
<tr>
<td>2nd In-service: conducted by graduate intern</td>
<td>X</td>
<td>Program coordinator, NICU staff</td>
</tr>
</tbody>
</table>
**Appendix D (Cont’d)**

**Timeline: Year Three**

<table>
<thead>
<tr>
<th>Milestones/Activities</th>
<th>September 2018-August 2019</th>
<th>Key Staff involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation for Graduate student music therapy intern</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; Quarter X</td>
<td>Program coordinator, graduate intern</td>
</tr>
<tr>
<td>Fundraiser Event: The Detroit Institute for Music and Medicine</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; Quarter X</td>
<td>Program coordinator, graduate intern</td>
</tr>
<tr>
<td></td>
<td>3&lt;sup&gt;rd&lt;/sup&gt; Quarter</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, graduate intern</td>
</tr>
<tr>
<td></td>
<td>4&lt;sup&gt;th&lt;/sup&gt; Quarter</td>
<td>Community Liaison, Support Staff</td>
</tr>
<tr>
<td>Begin writing proposal for qualitative study on the effects of heart beat recorded</td>
<td>X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, graduate intern</td>
</tr>
<tr>
<td>lullabies on parental bonding</td>
<td></td>
<td>Community Liaison, Support Staff</td>
</tr>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; In-service: conducted by program coordinator</td>
<td>X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, graduate intern</td>
</tr>
<tr>
<td>IRB approval for heart beat recorded lullabies</td>
<td>X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, graduate intern</td>
</tr>
<tr>
<td>Begin to organize the data of “Year One” for the research study: The effects of</td>
<td>X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, graduate intern</td>
</tr>
<tr>
<td>music therapy on the first two years of life of premature infants”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Begin research: graduate intern will assist</td>
<td>X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, graduate intern</td>
</tr>
</tbody>
</table>
Appendix D (Cont’d)

Timeline: Year Four

<table>
<thead>
<tr>
<th>Milestones/Activities</th>
<th>September 2019-August 2020</th>
<th>Key Staff involved</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1&lt;sup&gt;st&lt;/sup&gt; Quarter</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; Quarter</td>
</tr>
<tr>
<td>Orientation for Graduate student music therapy intern and research fellow</td>
<td>X</td>
<td>Program coordinator, graduate intern</td>
</tr>
<tr>
<td>Fundraiser Event: The Detroit Institute for Music and Medicine</td>
<td>X</td>
<td>Program coordinator, Community Liaison, Support Staff</td>
</tr>
<tr>
<td>Begin writing proposal for study on music therapy and single parenting: What are the effects of group music therapy on single parent households? (&quot;Sounding Joy&quot;)</td>
<td>X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, graduate intern</td>
</tr>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; In-service: conducted by program coordinator</td>
<td>X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, graduate intern, music therapy research fellow</td>
</tr>
<tr>
<td>IRB approval for “Sounding Joy”</td>
<td>X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, graduate intern, music therapy research fellow</td>
</tr>
<tr>
<td>Begin to organize the data of “Year Two” for the research study: The effects of music therapy on the first two years of life of premature infants”</td>
<td>X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, graduate intern, music therapy research fellow</td>
</tr>
<tr>
<td>Begin to draft all findings in the heartbeat lullaby study</td>
<td>X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, graduate intern, music therapy research fellow</td>
</tr>
<tr>
<td>Begin research: graduate intern and research fellow will assist</td>
<td>X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, graduate intern, music therapy research fellow</td>
</tr>
<tr>
<td>Milestones/Activities</td>
<td>September 2019-August 2020</td>
<td>Key Staff involved</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------</td>
<td>----------------------------</td>
<td>------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2nd In-service: conducted by graduate intern</td>
<td>X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, graduate intern, music therapy research fellow</td>
</tr>
<tr>
<td>Begin interviewing for graduate intern music therapy student</td>
<td>X</td>
<td>Program coordinator, music therapy research fellow</td>
</tr>
<tr>
<td>Bereavement ceremony</td>
<td>X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, graduate intern, music therapy research fellow</td>
</tr>
<tr>
<td>Begin Outreach to foster relationships between Sew Up the Safety Net &amp; WIN Network</td>
<td>X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, Community Liaison, Support Staff</td>
</tr>
<tr>
<td>“Beyond the Isolette” yearly event</td>
<td>X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, Community Liaison, Support Staff</td>
</tr>
<tr>
<td>Collect data from prenatal pilot program</td>
<td>X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, Community Liaison, Support Staff</td>
</tr>
<tr>
<td>Collect data from post NICU program</td>
<td>X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, Community Liaison, Support Staff</td>
</tr>
</tbody>
</table>

Appendix D (Cont’d)

Timeline: Year Five

<table>
<thead>
<tr>
<th>Milestones/Activities</th>
<th>1st Quarter</th>
<th>2nd Quarter</th>
<th>3rd Quarter</th>
<th>4th Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation for Graduate student music therapy intern</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fundraiser Event: The Detroit Institute for Music and Medicine</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finalize research: The effects of music therapy on a premature infant’s first two years of life</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st In-service: conducted by program coordinator</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finalize research: heartbeat lullaby study</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Begin to organize the data “Sounding Joy” research</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd In-service: conducted by graduate intern</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Activity</td>
<td>X</td>
<td>Responsible Parties</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>---</td>
<td>-------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Begin interviewing for graduate intern music therapy student</td>
<td></td>
<td>Program coordinator, music therapy research fellow</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Begin interviewing for music therapy research fellow</td>
<td>X</td>
<td>Program coordinator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bereavement ceremony</td>
<td>X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, graduate intern, music therapy research fellow</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Beyond the Isolette” yearly event</td>
<td></td>
<td>Program coordinator, NICU staff, interdisciplinary staff, Community Liaison, Support Staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collect year data from Prenatal program</td>
<td>X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, Community Liaison, Support Staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collect year data from Post NICU program</td>
<td>X</td>
<td>Program coordinator, NICU staff, interdisciplinary staff, Community Liaison, Support Staff</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>