Music Therapy in the US Healthcare System: Past, Present, and Future

Music has played a very prominent role in humankind's history, shaping how we interact with the world around us. Outside of its artistic foundation, music has been critical for connecting human beings, in such processes as strengthening friendships, bringing communities together, marking the beginning of a bond through marriage or the end of life at a funeral, and as a way for people to connect with the divine (Turino, 2008). It is also an important vehicle to express various identities, allowing people to communicate, even when they don't share the same language. Beyond these purely aesthetic and cultural functions, music plays a role in healing practices around the world. In this paper, I discuss the use of music as an alternative form of medicine to help patients with neurodegenerative diseases feel more alive again in the United States (Bakerjian, 2020).

Although music has been used in healing practices around the world for thousands of years, practices that use music as a component are generally considered "alternative" and are seen as less effective or prestigious in mainstream American society. This is surprising given that music has been proven to be effective for healing by many scientists, philosophers, and physicians, many of whom are based in the United States. Theresa Allison, a doctor and ethnomusicologist specializing in geriatric medicine who is also known for her research on music in end-of-life care, has documented that music can play an important role in everyday life for patients with dementia and their caregivers, by supporting social relationships and serving as a role of self-care for the patient-caregiver dyad (Allison, 2023). Her work is a part of a tradition of scientists, musicians, and therapists in the United States who have been advocating for the use of music in healing practices since the 1940s. Since this decade, these groups of practices have

been known in the US as music therapy. This paper is guided by the question: why is music therapy less prevalent than other forms of therapy in the United States? In a conversation with Dr. Allison, I learned that the answer to this question is linked to economic reasons. I therefore narrowed down my question: why do insurance companies refuse to reimburse patients for music therapy treatment? My goal is to contribute to making music therapy widely available to patients in the US. This paper will shed light on the obstacles that many music therapists have encountered in becoming more accessible for everyone.

My research methods include a brief literature review of the history of music therapy, from works written by ancient philosophers such as Aristotle and Plato, to modern publications that touch on the varying uses of music in healing in cultures across the world. I will also include scientific studies that prove the efficacy of music therapy in the United States, such as those written by Dr. Theresal Allison, Dr. Lee Bartel, and Dr. Chan. I also plan to consult official documents to understand the copyright laws and legislation surrounding the practice of music therapy in the United States, along with exploring insurance policies, and seeing what and what isn't covered. Finally, I will interview researchers in music therapy, gathering their insight on how music can be used as a healing practice in the same way that traditional Western medicine is.

This paper is structured in two main parts. The first section will give a brief overview of the history of music and healing across the world, culminating with the creation of music therapy in the US. The second discusses the legislation surrounding music therapy, the role of the healthcare industry, and resistance to coverage and reimbursement from insurance companies. I will also examine why music is not a widespread part of medical care, which will help contextualize the path forward. This section will be facilitated by my conversation with Dr.

Allison, an expert on this topic. I conclude by discussing the implications of my study, focusing on offering ideas on how to make music therapy more accessible to the average person in the United States.

Music in healing around the world

Music healing has been used in cultures across the world for several thousands of years, first being documented in preliterate cultures such as the indigenous peoples in the Americas and subsequently in literate societies such as the ancient Greeks and ancient Chinese. In this section, I discuss the history of healing practices that specialize in music around the world, and how they made their way into the modern healthcare system of the United States. This will include an overview of practices found in Native American tribes, Ancient Greece, Medival Europe, and China, which will be followed by the birth of music therapy during the mid-20th century in the US.

Native American Tribes

The various Native American groups in North America have long-standing and well-known traditions that instrumentalize music for healing purposes. A wide variety of songs were believed to treat several illnesses by connecting humans with spiritual entities. These songs were known for the use of many different sacred instruments, such as rattles and drums, that produced several rhythms believed to be powerful during healing sessions (Densmore, 1927: p. 558). A wide variety of songs were believed to treat several illnesses, via the connection between a superhuman being within the tribe and a spiritual entity. Instrumental music has been generally used in rituals to capture the attention of spirits that would be used during these healing ceremonies.

Frances Densmore, an American anthropologist and ethnographer, documented the belief of the Native American tribes' comparisons of the human organism to an orchestra, and man as the conductor. "Sickness may be compared to the sound of the orchestra tuning up, and recovery to the change when the conductor taps his baton and the instruments swing into rhythmic unity. If the conductor should fail to appear…that would be like the death of the body," (Densmore, 1927: p. 555). She dives into the rich history of the use of music healing in Indian[1] tribes, saying that the tribe doctors have visions come to them from "supernatural visitants", giving them specific directions like shaking a rattle, performing a special dance or pounding a drum in a healing ritual (ibid).

People from the Papago tribe in Arizona believed that rhythm and vibrations were the most powerful form of medicine. The Papago Indians believed that a mythical creature called the Brown Buzzard "…went over the highest and lowest mountains and dropped medicine into each mountain top" (Densmore, 1927: p. 556). The Papago would then obtain those songs from the mountains to use in ceremonies to bless the tribes with rain each year and to treat two types of diseases that were associated with the spirits of the dead.[2] Some doctors within the tribe were given physical remedies which they would sing to make them work, while other doctors relied solely on their power and songs to heal the ill. In some of the tribes, some specialized men diagnosed those who were sick and determined the animal or entity at fault. They then sent those people to a doctor who specialized in healing songs for whichever illness had come over them. Although healing practices vary from tribe to tribe, many of these stories and traditions involving the medicinal powers of music were a constant among Native Americans. The Native Americans

[1] Densmore references the Native Americans as "indians" in her book, which is less politically correct nowadays.
[2] Information pertaining to the Papago tribes is obtained originally from the defunct Bureau of American Ethnology of the Smithsonian Institution in Washington

are just but one of many examples of preliterate societies where the traditional knowledge and practices related to the healing properties of music were passed down orally through generations.

Ancient Greece

The Ancient Greeks have some of the first written documents mentioning the incorporation of music in medicinal treatments. There are records of Greek physicians using a variety of instruments including flutes, zithers, and lyres to aid digestion, heal the sleep cycle, and treat mental disturbances, (Meymandi, 2009: p. 43). Aristotle, one of the most notable Greek philosophers, mentioned in his book, *De Anima* (c.a., 350 BCE) that "flute music could arouse strong emotions and purify the soul" (ibid). Music in healing is also found throughout Greek literature, most notably in Homer's *Iliad*. In this epic poem, Apollo is convinced to stop the plague he brought upon the Achaeans, via a sung supplication in the form of a paean (a song of praise and triumph). Homer also mentions the use of 'epaoidai', which translates to "spells sung upon a person or specific part of the body". This, unlike the paean, had no connection to the divine and is only focused on the 'healing of the hemorrhage' and 'tightening of the bandage' in common mankind, (Provenza, 2020: p. 352).

The first documentation of music's use to treat mental illnesses in Ancient Greece was by Asclepiades of Bythnia (124–40 B.C.). They created the health and disease theory, known today as molecular medicine. Asclepiades also promoted the humane treatment of people with mental illnesses, which were previously thought to have been possessed by evil spirits. He moved those patients out of the dark confined rooms, gave them sunlight, and a healthy diet, and treated them with massages and therapy revolving around music. He specifically focused on the use of Phrygian and Dorian mode scales, with the belief that this would help those out of a dark and

melancholy state (Thaut, 2014: p.150). Asclepiades started a movement by combining music with other therapy practices, which would lead to the improved treatment of those having to coexist with a mental illness.

Ancient Chinese

The Chinese also have an extensive history in the traditions of curative music. Peregrine Horden, the author of *Music as Medicine*, wrote "In one sense, the whole of Chinese culture, including music, is therapeutic," (Horden, 2014: p.47). Chinese traditional five-tone music therapy dates back more than 2,000 years, originating from the Yellow Emperor's Classic of Internal Medicine (Yang, 2021: p.2). This is the earliest medical classic in China, which states "Heaven has five tones, as Man has five organs," (ibid). The five-element music healing includes five tones, which are Gong, Shang, Jue, Zhi, and Yu. The Gong tone connects to the spleen, the Shang tone connects to the lung, the Jue tone connects to the liver, the Zhi tone connects to the heart, and the Yu tone connects to the kidney. These five tones correspond to the scale commonly known in the music world as the pentatonic scale, with the respective tones C, D, E, G, and A (Zheng, 2017). This therapy is meant to regulate the function of these five organs, maintaining stability and promoting health. Studies, such as those done at the Art Therapy Research Center in Wuhan, the School of Traditional Chinese Medicine in Beijing,[3] and Wonkwang University in Korea,[4] have shown this therapy to be effective in several diverse groups of people, including students, pregnant women, and even cancer patients.

Early Chinese texts also present evidence for the use of music in healing to help cope with extremely traumatic events, like those that occurred during the Warring States Period (481-

[3] *Chinese Traditional Five-Tone Music Therapy*
[4] *An examination of the relationship between five oriental musical tones and corresponding internal organs and meridians*

221 BCE). Ori Tavor, a professor at the University of Pennsylvania, learned that the Ancient Chinese used a combination of music and dance to allow people affected by this trauma to heal (Tavor, 2022: p.70). This movement was brought on by Confucian thinker Xunzi in the third century, who believed that the route to social and political harmony involved the participation of common folk and the cooperation of the elite government heads. Xunzi was revolutionary for their ideas, due to most of the elite members of society responded to the trauma following the downfall of the Zhou regime by tending to their well-being, at the expense of the public. Xunzi began to promote their therapeutic regimen, by promoting participation in choreographed ritual events (li) that were accompanied by musical performances (yue). This movement helped those recovering from the bloody wars that had occurred during this time by promoting individualism, good health, and emotional satisfaction, all united through music (Tavor, 2022). Five Tone Music Therapy and the general incorporation of music in therapeutic healing from traumatic events were two key points that arose from the Chinese culture.

Medieval Europe

The Middle Ages were a turbulent period for the use of music adjacent to medicine. On one hand, medieval church leaders supported the use of music in healing, believing music relieved and even prevented emotional depression, and melancholy, and brought harmony to the soul, (Silverman, 2022). Galen, a Greek physician and philosopher who was alive during the 2nd and 3rd centuries, was the first physician to use pulse as a sign of illness (Pasipoularides, 2014). At that point, there was no clear understanding of how blood circulates the body. Still, the pulse (speed, duration, and intensity) of urine was useful in identifying different types of diseases. He accredited music to this research, explaining that "...the language of music was useful in understanding pulse, and comparisons between the two aided diagnosis" (Callahan, 2000: p.161).

Galen's discovery fathered the research and works of Pietro d'Abano, an Italian medical writer alive during the Middle Ages. He was known for his prestigious work, *Conciliator*, which combined much of the medical and astrological knowledge from his time, and for creating a home for the study of "pulse music". Abano revised Boethius's classification of music, creating a subcategory of *musica humana*, called *musica organica*, where he placed "pulse music". Pulse was also used to track the systole and diastole phases of a heartbeat, this being debated by many other notable figures, such as Gentile, Japoco, Ugo, and Pietro Vermiglioli (Siraisi, 1975). These important discoveries further aided research into the role that music plays in day-to-day life.

Between the 14th and 17th centuries, people started to view music as the opposite of therapy, due to the social phenomenon called the "Dancing Mania". This strange occurrence, also known as the St. Vitus dance, consisted of a large number of people uncontrollably dancing until they collapsed (Midelfort, 1999). This spectacle shed a bad light on music, likening it to the Devil's work. Musicians attempted to help control the crowd by accompanying the dances, but it seemed to have the opposite effect and fueled the mass hysteria. This, coupled with Benjamin Franklin's invention of the armonica, which was found to overstimulate the nervous system resulting in reports of seizures, halted any new developments regarding the use of music in a therapeutic context. Discoveries that furthered the research and promoted the use of music in a scientific context didn't begin to re-emerge until the 17th and 18th centuries (Thaut, 2015). A variety of authors, such as Kircher (1684), Craanen (1689), Baglivi (1696), Brendel (1706), Ettmueller (1714), Albrecht (1734), Nicolai (1745), Brocklesby and Brocklesby (1749), and Roger (1758), released papers encouraging the explicit use of music and medicine in a therapeutic context. The public eventually warmed back up to the use of music in healing due to the press promoting the use of music adjacent to medicine in the early 18th century. This positive

perception of music's healing potential was fundamental for the eventual development of music therapy in the US, in the twentieth century.

Music Therapy in the US

As I have explained, the longstanding traditions involving music in healing in North America were collectively labeled, "music therapy" starting in the 1940s in the United States. According to the American Music Therapy Association (AMTA), the first known reference to music therapy appeared in an unsigned article titled "Music Physically Considered" that was published in the *Columbian Magazine* in 1789. A few decades later, music was referenced in two medical dissertations written by Edwin Atlee (1804) and Samuel Matthews (1806), who were students of Dr. Benjamin Rush: a physician and psychiatrist who advocated for the use of music in the treatment of medical diseases. The use of music in a therapeutic context further gained support in the early 1900s. Several short-lived organizations were formed, including the National Society of Music Therapeutics (active between 1903 and -), the National Association of Music in Hospitals (1926-x), and the National Foundation of Music Therapy (1941-x). Even with the contributions they made to various journals and books on music therapy, they were unable to develop an organized clinical profession (American Music Therapy Association).

It wasn't until the 1940s that music therapy finally started to root itself into the educational curriculum. Everett Thayer Gaston, known as the "Father of Music Therapy", devoted almost 30 years to research on music therapy. He believed that music had a purpose beyond aesthetic satisfaction, and it had the power to help a wide variety of patients, ranging from emotionally disturbed children to the geriatric population. He suspected if music educators were taught how music is entangled with psychology, anthropology, sociology, and physiology,

they would be able to spread the therapeutic values of music (Johnson, 1981: pp. 280-281). Gaston explained the function of music therapists by stating “music is the adjective and therapy is the noun in the term ‘music therapy’, the chief concern becomes not the music, per se, but what the therapist does in the matter of his understanding interpersonal relationships with the patient,” (Gaston, 1954: p.28). The first music therapy college training programs rose in the footsteps of Gaston’s research, starting with Michigan State University (1944) and followed by the University of Kansas(1946), College of the Pacific (1947), Chicago Musical College (1948), and Alverno College(1948).

The National Association for Music Therapy (NAMT) was the first successful organization to create a constitution and by-laws, develop standards for university-level training, create a registry and board certification requirements, and make clinical research a priority. Founded in New York on June 2, 1950, NAMT became a historical landmark for the cultivation of music therapy in the United States. This association operated from 1950 to 1997, which then merged with the American Association of Music Therapy (est. 1971), leading to the formation of the American Music Therapy Association, which is still alive to this day. AMTA’s official definition of music therapy is an expanded version of Gaston’s, defining music therapy as “the clinical & evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program” (AMTA Website). It is important to note that music in healing did not lead to the creation of what we know today as music therapy, but rather the practice rose from several thousand years' worth of research, exploration, and support of the use of music adjacent to medicinal practices. Today, the American Music Therapy Association advances public

awareness of the benefits of music therapy and advocates for increased access to quality music therapy services in the rapidly changing world.

Current Standing and Future of Music Therapy in the United States

In this section, I focus on the implementation of music therapy in the US, starting with a diagnosis of four critical aspects for understanding the importance of music therapy in the United States, and closing with proposals that will aid music therapy in becoming more accessible4 for everyone. The diagnoses include the legislation surrounding music therapy; copyright laws that form a roadblock for music therapists performing their services to the best of their ability; healthcare insurance policies regarding accessibility to alternative treatments, specifically music therapy; and current research on the effectiveness of music therapy in a healthcare setting. In my proposal of finding viable pathways toward making music therapy widely available for US citizens, I draw on my conversation with Dr. Theresa Allison.

Diagnosis:

Legislation on Music Therapy in the US

Since its creation in the 1940s, music therapy has begun to root itself in the American healthcare system as a respected alternative treatment. There are a few notable dates for the emergence of music therapy into US college academic curriculums; including 1944, when the first academic curriculum in music therapy was designed at Michigan State University; and 1946, when the first full academic course about music therapy was taught at Kansas University in Texas (Horden, 2014: p.381). While this was a big step for music therapy becoming a recognized practice, it wasn't until 1976 that the Association of Professional Music Therapists

was formed, becoming the governing and representative body of this profession, membership open to fully trained and qualified music therapists (Horden, 2014: p. 389). As a result of this, the Department of Health and Social Security granted music therapists a career and grading structure, likened to professions similar to it in 1982 (ibid).

The establishment of the Certification Board of Music Therapists (CBMT) in 1983 allowed for the creation of a board certification exam, giving a pathway for aspiring music therapists to obtain certification after the proper schooling and training. This national certification, known as the MT-BC, was a good start but was met with skepticism from the public and even music therapists themselves because of its limited recognition across the healthcare system. One certificant wrote a letter to the board, saying "The B.C. credential has no status with anyone except music therapists. Unless the B.C. means something to the education department and administrators who hire music therapists, there is no reason to maintain this credential" (Register, 2013: p. 160). To address these concerns, CBMT board member Dwayne LaFon wrote a lengthy response, outlining these critical issues. He stated that the primary purpose of this credential was to provide quality assurance to the public, not to provide job ability. He also addressed the various costs associated with professional lobbying and memberships of professional organizations, both of which play a key role in achieving recognition (Sena Moore, 2015: pp. 78-79).

In the next decade, two major pieces of legislation were passed with advocacy for music therapy at the national level, the American Disabilities Act (1991), and the re-authorization of the Older Americans Act (1992). Both pieces gave promise for the inclusion of music therapy services and professional recognition for clinical efficacy, which were effective in addressing the concerns raised by members of the music therapy community regarding the visibility of the

profession to the public at large (Register, 2013: p. 160). State licensure wasn't suggested until 1994 when an essay was written to the board titled "'Certification versus Licensure: What are the Differences?". This letter described licensure as the [state-mandated] ''laws which regulate a given occupation'' (Oliver, 1994: p. 1). State licensure provides both title protection and protection of a profession's Scope of Practice (practice protection) and prohibits others from holding themselves out to the public as a music therapist or as one who practices music therapy (ibid). Over the next six years, the CBMT board worked with the newly formed American Music Therapy Association (1998) to bring a unified front to the profession, recognizing the MT-BC as the sole credential for practice. The Regulatory Affairs Advisor (RAA, est. 1999) worked in conjunction with the AMTA to address the concerns of regulation on the state and federal level, and to aid in the reimbursement process for music therapists (Register, 2013: p. 161). A report filed to the CBMT board in December 2000 outlined the progressive development of this licensure. "Twelve requests in ten different states were made. These requests encompassed the development of a registry language, clarified position qualifications, and included music therapy as part of a creative arts license in a mental health bill" (ibid.).

The next several years that followed included the establishment of the Director of Government Relations, which was a full-time position within the AMTA. This position enabled there to be full focus on the ever-increasing amount of duties surrounding the reimbursement and recognition of music therapy. Concurrently, several states (including Massachusetts, Texas, Wisconsin, and Pennsylvania) revised the language surrounding psychotherapy practices in the United States. This ensured the full acceptance of the MT-BC credential, which included additional coursework in counseling to qualify for a counseling license (Oliver, December 2002, p. 9; Oliver, May 2003, p. 4, Oliver; May 2004, p. 2). A major milestone for the music therapy

profession was outlined in the passage of a bill in New York State (passed in 2002), stating that licensed music therapists were one of four professions under the Creative Arts Therapists umbrella that were able to seek licensure. Although passed in 2002, the bill did not go into effect until 2006, due to an attempt to obtain exemption language for therapists with an MT-BC certification, allowing them to practice music therapy at a Bachelor's Degree level. Ultimately, it was set in stone that to become a Licensed Creative Arts Therapist (LCAT), one must first obtain a master's degree in music therapy (Register, 2013: pp. 161-162). With music therapy programs having strikingly similar educational curricula as other sister professions (dance, art, and drama therapists), the AMTA and CBMT had to rethink their strategy for making this certification unique to music therapists in other states. The following years encompassed advocation for recognition at the state level, helping define the definition of music therapist licensure and separate it from similar professions. While music therapists treat across the lifespan like other arts-based therapists do, the other creative arts-based therapists tend to focus on counseling and analytically-based interventions with their clients, which doesn't accompany the majority of the music therapists' clientele (AMTA, 2012).

The State Regulation Operational Plan, passed by the AMTA and CBMT board directors on June 17, 2005, focused on achieving state recognition for the music therapy practice and solidified the requirement for the MT-BC credential for competent practice. This led to the official collaboration between these two organizations, noting that both mission statements had very similar goals in addressing the needs of music therapists (BC Status, 2005). This partnership further promoted advocacy for music therapists and pushed for state recognition. Voluntary task forces with three to five music therapists were sent out nationwide, with the first five established in Colorado, Florida, New Mexico, New Jersey, Ohio, Rhode Island, and Utah. The task force

members had the mission of gathering data on current regulations and legislation surrounding music therapy and pinpointing the state-specific agencies that allowed music therapists to work with their clients. By the fall of 2007, a task force had been established in every state, with some states even asking additional groups to be sent out to handle state-specific issues. In September of 2007, Washington State Senate Representative Jeannie Darneille offered to sponsor music therapy legislation. This involved the Sunrise Review process, which is used in many states and is known as the precursor to the introduction of legislation (Register, 2013: pp. 162-163). This process marked the beginning of formal regulatory pursuits in various states, including Oklahoma, Illinois, North Dakota, and Nevada. At this point, task forces steadily inclined, with eleven bills being introduced and two Sunrise Reviews being introduced to pursue legislation within the following year (ibid). The Arizona Task Force (2010) helped narrow down the passage of regulatory language specific to music therapy in the Department of Developmental Disabilities, with the help of sponsorship by Senator Al Melvin. California followed suit, passing a counseling bill that included language protecting the rights of music therapists to practice, followed by six other states passing legislation to license and register music therapists in 2011. This cascade of proactive advocacy for music therapists nationwide ensured music therapy would be an officially recognized and protected profession nationwide.

Copyright Laws Around Music Used in Music Therapy

Copyright laws surrounding the methods of distributing music pose a large threat to music therapists. According to Donald R. Simon, J.D./LL.M. at the Kansas City Volunteer Lawyers and Accountants for the Arts, copyright gives creators exclusive rights to their music, and no one else can use it without their permission, which gives an economic incentive to the original creators of the music (Rachelle, 2019). This poses an issue for music therapists,

considering they use music within their sessions and would have to obtain special permission from each artist. In an interview conducted by University of North Carolina graduate student Megan Suggs; Media and Journalism scholar Amanda Reid asserted that although there is no record of a music therapist ever being sued for copyright infringement, they are cautious about it. The pandemic created a large problem for music therapists, due to their practices no longer being strictly confined to a face-to-face setting. While copyright laws allow the unrestricted use of music in therapy sessions when they are in person, there are restrictions when the sessions are conducted online. The Digital Millennium Copyright Act (DMCA), passed in 1998, prevents copyrighted material from being distributed without permission on the internet. This puts music therapists in a tough spot, inhibiting music therapists from being able to perform to the full extent of their abilities. For clients that have a poor (or no) internet connection, receiving a recording of these sessions is a feasible solution. Still, current copyright laws don't allow for the distribution of specific songs without permission. This copyright law causes music therapists in the United States to be very cautious with the services they perform (Suggs, 2022). In another study, one of Reid's (2021) interviewees revealed that music therapists express a variety of emotions regarding the copyright barrier. "Eeek! It [copyright] makes my hair stand on end. I just can't feel safe. I can't ever get a straight answer," expressed one therapist that was interviewed (Reid, 2021: p.5). Another exclaimed: "For music therapists, it's kind of a gray area; you're essentially playing other people's music and you're getting paid to provide the service" (ibid).

The COVID-19 pandemic forced music therapists to quickly adjust to delivering their services in an online format. Thankfully, as Reid (2021, p.6) has documented, many artists are willing to let their music be used in these sessions. For instance, when well-known filmmaker

and songwriter Lin Manuel Miranda was asked for permission to use“My Shot” from “Hamilton” by a therapist, he (or his publicist) responded “This is awesome. I wish you and your patients the best” (ibid).

This specific music therapist found that the use of “My Shot” in her sessions with clients was extremely beneficial, due to her clients being able to resonate with the meaning behind the song. Clients were able to reflect on what “their shot” is, what steps they need to take to not “throw it away”, and where they need to “rise up” in their lives (ibid). Most of the lyrics in this song discuss an ambitious person struggling in the everyday world, with ‘shot’ referring to opportunity and ambition that the listener must take advantage of. “My Shot”, which is in the key of G-minor, at some point shifts to its relative major, B-flat, a brighter key that reinforces the hopeful and positive message of the lyrics. The minor to major chord lifts (i-3III & iv-VI) in this song show the ambition and drive that Hamilton has to leave his stamp in the world and make a difference for himself and others.

Miranda’s song is not the only of its kind. In a study conducted by Daniel Thomas and other art therapy researchers at Chroma in the UK, Thomas found that other songs, such as We Will Rock You by Queen, Another Brick in the Wall by Pink Floyd, and Three Little Birds by Bob Marley were all in the top five songs used by music therapists (Chroma, 2017). All four songs have a strong groove that acts as a rock for the listener, paired with empowering lyrics to motivate the listener to make a change in their lives or keep powering through. This is counterintuitive, because many people may imagine that the music that is used in music therapy is soft and gentle, unlike what Reid and Thomas have presented in their research. They found that these songs with a strong beat are quite useful in therapeutic contexts, but research conducted by Theresa Allison and other ethnomusicologists like them found that every person

has their preferred playlist, and while this music works for some it isn't universal across the board.

Healthcare Insurance Policies Surrounding Music Therapy

The US healthcare system is referred to as "...the world's most expensive and least effective system compared with other nations" (Kumar, 2011: pp. 366-388). It puts people with chronic and pre-existing conditions at an extreme disadvantage, with many families having to pay for necessary treatments out of pocket. Private insurance companies are extremely picky at what they decide to cover, and each state has a different policy regarding reimbursements of therapeutic services. The AMTA website claims that "music therapists have received reimbursement through Medicare, Medicare waivers, Medicaid, and private insurance companies; however, successful reimbursement through these entities varies from state to state" (AMTA, 2019). Music therapists must weave through a strict set of rules to receive compensation for their services, including the procedural and diagnostic codes, explanation of the therapy interventions, assessment results, and treatment plans, along with proof that the services are medically necessary. This stack of work is required for each appointment and is much more drastic than what many other doctors, or even traditional therapists/psychologists have to endure to receive a paycheck.

Kimberly Sena Moore, a music education professor at the University of Miami and a music therapist, conducted a study to reveal how much and how often music therapists are reimbursed for their services, and the steps they must take to receive payments. She surveyed a variety of music therapists, recording the results from 55 documented reimbursement cases throughout five US states (Colorado, Georgia, Maine, South Carolina, and Texas). She found

that licensed music therapists were reimbursed around $96.45 per hour on average, with about two-thirds of the reimbursements coming from referrals from doctors or physician's assistants (Sena Moore, 2020: pp. 72-73). In other words, a patient is more likely to be reimbursed if their session was via medical referral than via self-referral. Moore also found that when music therapists use certain technical terms within the insurance reimbursement papers, such as (ICD-10) and Current Procedural Terminology (CPT) codes, they are more likely to receive a reimbursement than without. The most common codes used are CPT 97530 and the ICD-10 codes for Autism Spectrum Disorder (ASD) and identified clinical needs (e.g. communication) (ibid.). However, when a patient is simultaneously treated by a music therapist and a mainstream therapist, the effectiveness of using these codes by music therapists to get reimbursed may be diminished when mainstream therapists use the same codes. Healthcare companies tend to prioritize mainstream therapists over music therapists (ibid: p.76). In a conversation with physician and ethnomusicologist Theresa Allison, I learned that outside of referrals given by a doctor, some hospitals will bring a music therapist right to the patients residing there. UCSF Benioff Children's Hospital in San Francisco was one of the first facilities to establish a music therapy program for children, curating treatment plans for each child that will benefit them the most. Unfortunately, these programs are supported purely through philanthropies, which limits access. Allison also mentioned a VA nursing home in San Francisco that hired a music therapist to come to the facility. "They think it's worth it to take one of their paid activities, 'recreation therapist positions' and give it to a music therapist."[5]

[5] p.c. Theresa Allison, Zoom conversation, Feb. 9, 2024

Music Therapy Research

Research has produced incontrovertible evidence of the benefits of music therapy, which is true in various aspects, from mental to physical health, old and young, and in patients with different conditions. Studies have investigated how applicable music is in the field of medicine. Some of the earliest research I found promoting the use of music therapy occurred in the 1950s, with two pioneers in this field: Paul Nordoff and Clive Robbins. Nordoff, an American pianist and composer, and Robbins, a teacher of children with special needs, met by chance in 1959 at Sunfield Children's Home in Worcestershire, England. Dr. Herbert Geuter, a psychologist who was running a research program at the school, convinced Nordoff to assist him in an experimental program with Robbins where children with disabilities would engage with music in an attempt to improve their condition. Nordoff and Robbins worked together for about two years, having these children experiment with different instruments, creating musical self-portraits of their emotions (Horden, 2014: pp. 386-388).

The two pioneers eventually left Britain and continued their research in the US at the University of Pennsylvania. They brought their musical experimentation to a daycare specific to autistic children, where they reached the milestone showing how the use of improvisational music therapy could bring about change. One particular child, who was a five-year-old who was described as psychotic and autistic, made tremendous strides within the program. Starting as unable to speak with very volatile behavior, he used the music therapy sessions to express his emotions and frustrated feelings. "Gradually, his screaming turned to crying-singing, and his singing developed into speech, thus improving his ability to make relationships, communicate, and fulfill his potential" (Nordoff and Robbins, 1980: pp. 23-36). This case was but one of many

fascinating participants in the extensive research of these two pioneers, which paved the way for modern music therapists in the 21st century.

Dr. Theresa Allison et al. have conducted some of the most impactful studies on how music therapy can ease the living of geriatric patients with neurodegenerative diseases. Their research found that daily engagement with music within caregiving dyads (caregiver and patient) supports all aspects of well-being and eases the work of caregiving for patients who have Alzheimer's (Allison, 2023: p. 19). One patient who often lashed out at their caregiver and family had an extremely positive response to music therapy manifested in behavioral changes and another patient who was previously nonverbal started to laugh and smile when listening to a specially curated playlist (ibid: pp. 12-17).

A review of a series of studies shows that listening to music over a period of time can also reduce the symptoms of depression (Chan, 2011: p.346). Dr. Debra Bakerjian, at the UC Davis Betty Irene Moore School of Nursing in Sacramento, CA, conducted a study that investigated the use of Music and Memory (M&M) in nursing homes. Fifteen residents were chosen from nursing homes to participate, and were each given an iPod that had a specially curated playlist unique to each resident. A baseline report was established, and the program monitored their results quarterly. Bakerjian saw that the use of M&M led to improvements in several categories. The use of antipsychotic drugs declined by 11%, antianxiety medications by 17%, and antidepressants by 9%. Aggressive behaviors, depressive symptoms, pain, and falls decreased by 20% per quarter (Bakerjian 2020: pp. 4-7). Overall, negative neurological symptoms improved, showing that music can be used to support and improve end-of-life care in these facilities.

Aside from positive neurological effects, music has been shown to improve the symptoms of progressive neurodegenerative diseases such as Parkinson's, as shown in the study by Dr. Lee Bartel, et al. This research. showed that vibroacoustic therapy can significantly improve the physical symptoms of Parkinson's. Patients would lay down on a device similar to a subwoofer, and specific patterns of vibrations would be concentrated in specific places of their bodies. After this therapy, patients reported a significant decline in physical symptoms, such as twitching, stiffness, and pain. Bartel viewed two different groups of patients that had been studied: patients who only listened to relaxing music during their sessions, and patients who listened to music while simultaneously having 40 Hz sine waves applied through a bed with integrated vibrotactile simulation. It was found that both treatments resulted in a large gain on the "activities of daily living" scale, due to the 'music-only' sessions also producing a vibration effect because the music was played through the bed speakers. (Bartel, 2017: pp. 156-157). This handful of studies shows the large range of patients that can benefit from the use of music therapy, improving their day-to-day lives.

The Future

Music Therapy has made significant headway in the United States healthcare system, but it seems to have a long journey ahead of it. Countless studies have been conducted on the use of music in a variety of healthcare settings, proving its efficacy in the treatment of a variety of neurological diseases. Yet, music therapists still struggle to be fully reimbursed for the services they perform. One of the solutions I am offering to this ongoing struggle is to create unique CPT codes for music therapists, which in theory should increase the rate at which insurance companies reimburse these services. New CPT codes have to be approved by two committees within the American Medical Association: the CPT Editorial Panel, which oversees the

development of new codes; and the CPT Advisory Committee, which assists the Editorial Panel and acts as a middle ground between other stakeholders (i.e. insurance companies) and them. Both committees follow standard procedures that involve strict and rigorous protocols using medical evidence to determine the validity of proposed new codes (Leslie-Mazwi, 2016: p. 2). With the overwhelming amount of evidence regarding the efficacy of music therapy, new codes shouldn't have too rigorous of a process being approved. Once these new CPT codes are recognized by the AMA board, a solidified pathway will be created for music therapists' services to be recognized as unique to the US healthcare system. Music Therapists and those who advocate for them have made significant progress in establishing this practice as a recognized and accepted profession in the United States healthcare system, but have a long journey ahead of them. It may take years, if not another decade, for this practice to be viewed as equal to those like it, but with continuing pressure put on legislators and private insurance companies, music therapy will finally find its rightful home in the US healthcare system.

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