

## Full-Length Article

**Music Therapy at SingHealth**Lee Peng Patsy Tan<sup>1</sup>, Ashley Marie Spears<sup>2</sup>, Melanie Kwan<sup>2</sup>, Hei Loi Christal Chiang<sup>3</sup><sup>1</sup>Music and Creative Therapy Unit, Singapore General Hospital, Allied Health Division, Singapore, Singapore<sup>2</sup>KK Women's and Children's Hospital, Singapore, Singapore<sup>3</sup>Singapore General Hospital, Singapore, Singapore**Abstract**

Since the first official music therapy program was started in 2005, clinical services and research activities have started to have a modest impact across the SingHealth network. While tracking the milestones achieved, this paper will detail some of the challenges that were encountered when pioneering music therapy within a healthcare cluster in Singapore: namely, funding and debunking common misconceptions. Strategies to bridge cultural adaptations and overcome systemic funding challenges included piloting a wide range of clinical programs, and tapping into research, grant, or other third party funding. Ongoing work is being carried out to frame adjunctive clinical treatment pathways within the acute, rehabilitation, and long-term care settings.

**Keywords:** *Development, Clinical Services, Medical Music Therapy, Singapore, SingHealth*

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**Healthcare in Singapore**

Singapore, with a population of 5.31 million [1] is located at the southern tip of the Malay Peninsula in Southeast Asia, and has been internationally recognized for its efficiency in running one of the best healthcare infrastructures in Asia [2]. In 2000, the World Health Organization ranked this small, multi-cultural island-city in 6<sup>th</sup> place when comparing the performance of healthcare systems from around the world [3]. The high ranking highlighted successful community health outcomes that had been achieved with its low government expenditure, amounting to only 3-4% annual GDP [4].

Singapore's universal healthcare system was devised to ensure that all Singaporean citizens and permanent residents have equal access to quality and affordable basic medical services. To create this infrastructure, the governing body, Singapore's Ministry of Health focused on three ideals: promotion of healthy lifestyles and preventive healthcare;

personal responsibility for wellbeing through mandatory healthcare savings and copayments for treatment; and management of affordable and competitive costs--through the private sector which provided 80% of primary and preventative care, and conversely, the tertiary care sector which provided 80% of hospital care [4-5].

This efficient framework had been designed to contain the costs of healthcare. Yet, even with the highest level of financial assistance, healthcare costs tend to accumulate and become a substantial financial burden especially for patients with chronic or terminal conditions. As Singaporeans tend to view the family as a unit, based upon its Confucianistic roots in collectivism, or the social outlook of interdependence, the costs of care are shouldered by patients and their families. With this in mind, patients tend to be conscious of healthcare service costs and the impact it may bear on the family's finances. In other words, culturally, it is rather common for a patient to refuse recommended services so as not to stress the family's finances. The majority of households are dual-income, and caregiving of children, the medically frail, and the elderly is often left in the hands of foreign domestic helpers. As we outline the development of music therapy within the nationalized healthcare system, specifically SingHealth, we will look more closely at some of the barriers posed by local and cultural influences, related funding challenges, and discuss various strategies that were explored or implemented for overcoming them.

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## Music Therapy at SingHealth

SingHealth, the largest academic healthcare cluster in Singapore, sees approximately 3 million patients and performs 175,000 surgeries annually [6]. This makes up for over half, 51%, of all day surgeries in Singapore [7]. Established in 2000, the group operates two major hospitals along with polyclinics and specialists centres. Currently, SingHealth employs four music therapists between its two major hospitals, namely, the Singapore General Hospital (SGH) and Ksdang Kerbau Women’s and Children’s Hospital (KKH).

Although Music therapy is increasingly gaining recognition as an allied healthcare profession around the world, the discipline has yet to be formally recognized as one of the “core” allied healthcare therapies (such as Physiotherapy or Occupational Therapy) by the governing body, Singapore’s Ministry of Health. Hence, no clinical pathway has yet been defined to access subvention for medical music therapy services. This lack of subvention translates into costs being fully absorbed by patients and their families. In addition, there has been a demand for data to demonstrate the need for and validate the efficacy of music interventions with local populations. However, the lack of funding itself has made it difficult to gather the supporting clinical evidence and collection of local data has been opportunistic with small numbers. In addition, amongst the general public and professional bodies, widespread misconceptions about music therapy abound.

Patients and medical teams had in the past, tended to assume one of three false assumptions: first, music therapists prescribe music, second, their role is to entertain patients who are bored, or third, that they “teach” patients to play or sing songs. A common response was that of surprise to hear that training is at a university level and that one must obtain a formal degree abroad (there are no local training facilities at this time) as compared to the assumption that anyone can “do” (such as shake a maraccas and sing to residents in a nursing home) or only needs to complete a short certification course to learn a technique or method. In recent years, there has been greater understanding about the unique role of trained professionals as various clinical initiatives have yielded positive outcomes across numerous medical populations.

Thus, the misconceptions about music therapy have gradually been addressed alongside concurrent efforts by the local professional association in raising the awareness of this allied health profession. The foundation has, in this way, been slowly and painstakingly laid for ongoing advocacy efforts--to educate various audiences how to discern between music medicine and the clinical interventions by trained music therapists; that in fact, music therapy was not a collection of music strategies or techniques that could be applied by other disciplines. The various clinical efforts at both hospitals did generate positive interest, and SingHealth Administrators even requested a formal presentation to learn more about the role of music therapists within the public healthcare framework in 2009 [8]. With a foot-hold placed in the door

within the public healthcare system, the process of building a local evidence base had begun.

Next, we will explore the steps taken to initiate and develop clinical programming as outlined in *Figure 1*. Various implications from cultural contexts in Singapore will also be discussed, as they are unique in and of themselves, and are markedly distinct from those framed in the West. Lastly, the goals for advancing medical music therapy in Singapore in the years to come will be outlined.

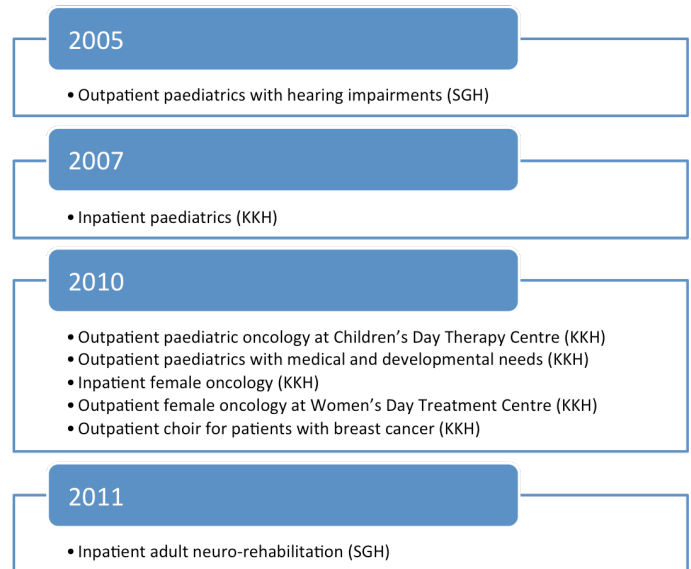


Figure 1: Expansion of Clinical Services at SingHealth

### 2005: Paediatric Outpatients with Hearing Impairments (SGH)

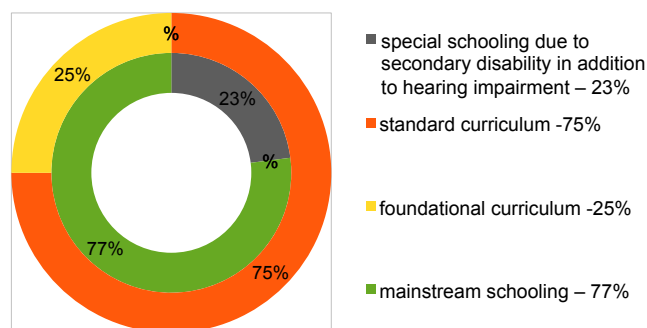
The Centre for Hearing and Ear Implants at SGH, a first-of-its-kind in the Asia-Pacific region, specializes in treating children and adults suffering from various types of hearing disorders [9]. Its “Listen and Talk Programme”, launched in July 2001, has provided hearing screening, audiology services, auditory-verbal therapy, parental guidance, along with school and home visits [10]. The first music therapist was also qualified and employed at the SGN ENT Centre as an Auditory-Verbal Therapist as there was no medical music therapy position in 2005. When team members decided that the Centre should consider offering services that would be unique, it was a natural bridge to launch music therapy services for the hearing impaired. A case study on the “Musical Experience of a Pre-lingual Teenage Cochlear Implant Recipient in Singapore” was conducted that same year [11].

Hence, with funding from the National Kidney and SingHealth Foundations, musical instruments were purchased and a room was renovated to accommodate the distinct acoustic needs for piloting music therapy in 2006. Sixteen children with hearing impairments were selected for the initial

pilot programme. Data collection for the pilot programme included pitch and rhythm perception as well as progress in speech and language assessments conducted by the Auditory-Verbal Therapists.

The program was specially designed for hearing impaired children whose medical condition was compounded with developmental issues or a severe language delay. As these children were of normal intelligence but identified as “at-risk” under the Singapore’s mainstream educational curriculum, music therapy goals were designed to ensure the children were able to cope with the demands of mainstream classrooms and participate in all of the school activities like their normal-hearing peers (Figure 2). With the successful pilot, the first music therapy program in Southeast Asia, “*Music to the Ears*” was officially launched by March of 2007 [12].

**Children with hearing impairments who receive music therapy**



**Figure 2: Successful Transition to Mainstream Schooling**

In addition, about 10% of the children in the “*Music to the Ears*” programme moved on to learn a musical instrument and progress through the curriculum administered by the Associated Board of the Royal Schools of Music (ABRSM). Many positive comments were received from the parents. According to a letter from Y. S. Tan (March 2009), “*My daughter is a six year old hearing impaired child who has been going for music therapy for the past six months. I am very pleased by her progress that she has made in her hearing ability and speech articulation . . . as a child, she loves the lively and musical way the therapy is conducted . . . I have seen many children, like my daughter, improve.*”

During the pilot phases of “*Music to the Ears*” program, these patients were able to access music therapy services fully funded by the hospital. However, after the pilot phase, patients were charged for music therapy services. Financial assistance was made available to qualified patients based upon means-testing (to evaluate financial status and eligibility for assistance) by the medical social worker. The funding for financial assistance was made available through fundraising events. The positive feedback and results supported the importance of music therapy, specifically for the hearing impaired population, and directly led to continued program growth.

Three years after the first initiative, The Music and Creative Therapy Unit was set up in 2008 to widen the range of populations served within the Outram campus. Music therapy came under the umbrella of the Allied Health Division and a full-time position became available. As the work of music therapists expanded, the distinctions between medical music therapy and the use of music within other allied health professions became clearer and respected over time. The outpatient services for the hearing impaired patients continued while services were extended to the recipients of heart and lung transplants, as well as Parkinson’s and Alzheimer’s disease support groups. By 2009, the music therapy services were expanded to various wards which included haematology, neurology, burns and neuro-rehabilitation. Funding models followed the “*Music to the Ears*” program, whereby pilots were at first funded by the hospital and once considered official, became chargeable to the patient. So as to ensure access for those with financial concerns, means-testing was once again provided through the medical social worker to bridge affordable services for those in need.

**2007: Inpatient Pediatrics (KKH)**

In September 2007, a two-month pilot music therapy program was offered to hospitalized children. This pilot was the result of more than six months of meetings and pitching proposals to the hospital administration. Under the auspices of the Hospital Play department, then headed by a psychologist who had undergone Child Life training overseas, the music therapist provided coverage in the general, High Dependency and surgical wards.

The objective of the pilot programming was to demonstrate how music could address the needs of local hospitalized children and to document the outcomes of music interventions with pediatric and adolescent populations<sup>13</sup>. The first challenge was to educate the staff that music therapy did not equate musical play with the children, nor was it for entertainment purposes. This challenge was overcome by giving internal talks to the medical and nursing teams, and communicating the positive and functional outcomes observed within sessions to both parents and the medical team.

During the pilot program, 314 pediatric patients who received services showed improved positive coping behaviors. The goal of music therapy was to empower hospitalized children to utilize opportunities within the music to regain their locus of control, and to remain calm before, during and after medical procedures. The medical team observed that negative behaviours (e.g. fretfulness, crying, regression, withdrawal, low mood) were reduced. For instance, three young patients with special needs did not require any sedation to complete their elective EEG as a result of interventions from the music therapist. Other procedures that were supported included lumbar punctures and needle sticks [13].

## Rehabilitation and Allied Health Services (KKH)

The positive results of the pilot program enabled the hospital administration to have a better understanding about the benefits of music therapy for pediatric patients. It also provided the justification for increased staffing to service other hospitalized patients over the years. Still, it took another three months before the first local formal music therapy position was framed, and another two and a half years before a full-time medical music therapist was recruited in 2010. The latter was made possible by an award of grant funding to explore music interventions for female patients with cancer.

At KKH, music therapy services have resided under the Rehabilitation Department along with other allied health professionals (Occupational Therapy, Physiotherapy, Speech Language Therapy) working together as a multi-disciplinary team. As a specialized tertiary-level centre treating a wide range of female and pediatric conditions, inpatient clinical services have tended to be diffused throughout the hospital. For instance, care within the wards has not been clustered according to the category of medical conditions but instead wards are organized based on the level of financial assistance patients received while taking into account their medical needs. Thus, music therapy initiatives had been pitched broadly and the referrals have come from all across the hospital, from numerous internal and external teams.

The resulting diffuse effect of pitching music therapy across the lifespan has been both an asset as well as a challenge, given the limitations of staffing. Networks have been built across teams ranging from the Neonatal Intensive Care Unit to Psychosocial Trauma Support Services to Women's Oncology (Breast Cancer and Gynae-Oncology). On numerous occasions, a careful juggling act was required in order to sustain old networks and nurture established services, as well as to develop new initiatives. In addition, KKH music therapists had also been invited to provide professional input, e.g. for managing noise pollution in the Neonatal Intensive Care Units, to provide supportive care at external events, e.g. Breast Cancer, Thalassaemia, and Eczema Support Groups, and to provide educational opportunities at external events, for example, the Inaugural Paediatric and Perinatal Annual Congress in 2012 [14].

The weekly caseload averages 30 pediatric patients who are seen anywhere from one to five times a week, depending on the severity of their needs. On a monthly average, 14 pediatric patients are newly referred by the medical team. Overall the caseload consists of 46% new pediatric inpatient referrals, 46% repeat admissions of previously known oncology/hematology patients, and 6% of patients who were being followed up from the previous month. The top three reasons for referral include: to support coping, to alleviate anxiety/fear, and to promote positive mood/motivation.

Although referrals for services need to be signed off by the attending doctor, any member of the team, e.g. Medical Social Worker, allied health therapists, or nurses, can flag the patient for screening and Assessment. As the hospital is a training

facility, there are regular rotations of trainee doctors and nurses who are scheduled through fixed terms of clinical attachments, resulting in an ever present need to educate and create awareness. Though the caseload has remained consistent—with more than thirty patients each week, the staffing has remained limited. Attempts to alleviate staffing challenges continue to be an issue. Traditional methods, such as an internship training programme, have been hindered by a limited pool of interns due to the lack of local university-level academic programs. In addition, the local standard practice of fees being charged by local institutions for interns' training stints is different from overseas models which might provide the intern with a stipend. However, clinical observations and placements are regularly provided on a case-by-case basis.

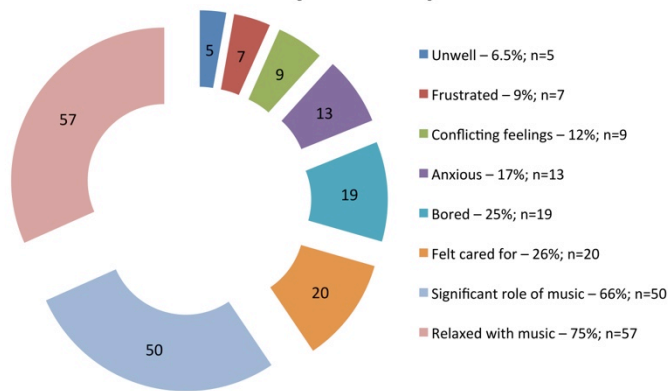
To date, an average of more than 1000 sessions have taken place in both the paediatric and women's wards annually. Thus far, patients have been able to access music therapy services free-of-charge, seeded through grant-funding from the hospital's endowment and the *SingHealth Arts for Health* funds. Various funding models that fit within Singapore's healthcare culture have since been discussed towards sustainability and service growth. Many patients that receive services regularly are from disadvantaged backgrounds with poor social histories, have limited family resources, or are awaiting foster-care placements. Hence, the advocacy of and justification of accessible services for those with the highest needs and least amount of resources will continue to be an ongoing challenge.

## 2010: Music Therapy for Female Oncology Patients at KKH

With the award of the SingHealth's Arts for Health funding and expansion of its team of music therapists, the music therapy service began to develop its work with the teams at the Women's Day Treatment Centre and Oncology wards in July 2010. Many of the patients referred to music therapy by the medical team exhibited low mood and/or pain. Patients who had been hospitalized for over a week were screened for distress or unmet needs [15]. As the presence of the music therapists became more visible across the hospital, other medical teams would occasionally also refer pregnant women on bed rest to support their coping and decrease their anxiety. By 2012, the service received an average of eight referrals for adult females who were hospitalized each month.

The Women's Day Treatment Centre is where patients receive their chemotherapy as outpatients. Before services were started, an informal pre-intervention survey was carried out over two weeks. Patients were invited by the nurses to fill out a one-page form about their music interests, background, preferences and perceived needs while receiving outpatient treatment. The informal, opportunistic survey results of 76 respondents identified areas of emotional need (*Figure 3*) and opened a window to engage the female oncology patients with music interventions targeted at promoting positive coping strategies, moderating mood swings during the course of treatment, and refocusing acute pain and

**Pre-Intervention Survey of 76 respondents**

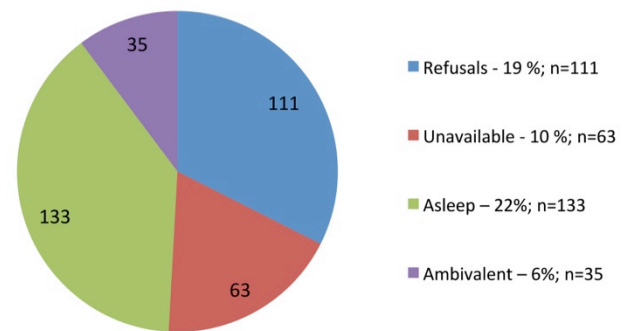


**Figure 3:** Pre-Intervention Survey of the Emotional Needs of Female Oncology Outpatients

discomfort to an aesthetically pleasing auditory stimulus for relaxation or rest [16,17].

Subsequently, in 2012, a preliminary program analysis (M. Kwan, MT-BC, unpublished data, March 2013) was conducted of the responses for the first 287 outpatients at the Women’s Day Treatment Centre. This background information was useful in order to better understand and articulate the needs of patients, logistical challenges, and benefits of music therapy with local oncology patients. The data showed a 43% acceptance and participation rate, with 3 patients receiving up to seven sessions. The music therapists had conducted 262 sessions over 134 hours. The information will be used to frame future research protocols with controls. Of the 262 sessions that took place, 100 (38%) involved passive listening (where there was no spontaneous or active singing or playing of instruments, and the patient listened to live music by the therapist with or without vocals of familiar selections that were identified at the point of contact, and following verbal or musical cues for deep breathing to facilitate relaxation). 130 (50%) sessions were characterized by listening, active singing or playing experiences, or the use of mixed modalities (both active and passive). 48 (19%) sessions were characterized by high energy and participation, whereby patients actively engaged in singing, playing, discussing lyrics or song-writing. In fact, the preliminary data was helpful to dispel prevalent misconceptions by members of the staff or public, i.e. that music was “child’s play”, performance or entertainment, that music did not fit within a hospital environment, or that patients may be too ill to engage. In reality, several patients reported that they found music helpful during the initial needle-stick procedure, especially during their first visit. For example, a patient anonymously expressed her value of experiencing music interventions for the management of pain, along with concern over the costs of treatment before being discharged (anonymous written feedback communication, July 2012), “If the hospital is able to provide this service free, in fact, is a merit point to help the

**Status of 57% of patients who did not engage in MT  
n = 342 encounters**



**Figure 4:** Status of 57% outpatients who did not engage in MT

patients to move out of their depression, pain, worries. If this service is charged, the music therapist will have less chance(s) to get close to the patient(s) to deliver their professional help to heal the patients.”

While some refusals (Figure 4) could be attributed to feeling unwell or lethargic due to treatment, the high numbers of ambivalent and refusal responses were also reflective of some local cultural barriers. These barriers to engagement in music included, for examples, the perception that music was a skill that needed time and practice to acquire, or that those with lower educational levels would not be able to appreciate music as a sophisticated entity, and lastly, that the sickly had no use or mood for music. For some patients, these barriers were addressed in the subsequent weeks, where increased opportunities for engagement led to their participation in one or more sessions.

As the patients were all receiving treatment in the same room, the majority of patients reported that they were not inconvenienced by music they heard in their environment. Only one patient strongly refused and subsequently, sessions were scheduled around her visits to honor her wishes. As each patient had their individual plan for treatment, their appointments tended to vary in timing and frequency. This has made continuity of care a challenge, as patients may not be scheduled at the same time each week. To overcome this obstacle, short-term goals that could be achieved within one session ensured appropriate closure in case there was no subsequent session. Sessions were also timed to coincide with the patient’s scheduled course of treatments in order to address longer-term goals. The focus was on equipping patients with coping skills through music for their immediate needs and also to affirm their internal and external coping resources for anticipated future challenges.

On a monthly average, 25 patients were supported through music to identify and utilize positive coping strategies that would serve to reduce their anxiety or discomfort

associated with treatment at the Women's Day Treatment Centre in 2012 [18-20]. The service had appeared to be generally well-received by staff, patients and their family members and visitors. One patient reflected anonymously after her session (written feedback, July, 2012), "*Music therapy has its way to pull a patient out of the fire (pain, frustration, stress, depression).*" The background information provided a context to discuss adaptations, which were necessary for local populations, and served as a background to frame formal research protocols.

### **2010: Meeting the Unmet Needs of Female Oncology Patients (KKH)**

It had been reported that more than 1550 women were diagnosed with breast cancer each year in Singapore. [21]. As these patients face unique challenges, the value of peer support has been key to their recovery. Hence, in 2010, a weekly choir was set up in conjunction with the Alpine Blossoms Breast Cancer Support Group to promote reintegration back to one's daily life through singing and music appreciation. The enthusiastic nursing staff initiated and facilitated ongoing recruitment and logistical support of this choir. The aims were to increase opportunities for peer support and encourage acceptance of illness and its accompanying life changes. Choir members were encouraged to share their musical preferences and made song requests towards a "Holiday Delights" concert. Friends and family were invited to support this annual concert. Due to the wide range of music preferences, songs from a variety of genres were sung in Mandarin, and other dialects as well as English. With facilitation from the music therapists, choir members also worked on an original song each year. The choir had since also participated in events such as *SingHealth Inspirational Patient Award Ceremony* (2011) and other hospital-related events. Based upon the positive responses of these participants, the nurses at the Breast Cancer unit expressed keenness for further collaboration to support the unmet needs of newly diagnosed patients that were related to mood, anxiety and quality of life. This led to developing of adjunctive outpatient support group programming to promote positive coping through music strategies for women recently diagnosed with breast cancer and who are undergoing chemotherapy. After completion, these patients, along with those diagnosed with other types of cancer would be invited to participate in the Choir.

### **Outpatient Paediatric Oncology (KKH)**

Various projects had been explored to gather data on local needs, to test the feasibility for programming, and to demonstrate the role of music therapy with a range of populations within the hospital. For example, in 2010, the music therapists began to visit the *Children's Day Therapy Center*, where pediatric patients received chemotherapy and blood products as outpatients. Music therapy was aimed to

decrease anxiety and normalize the environment for the patients, family members, and staff. Paediatric patients were encouraged through music to engage with their peers, express their feelings, and demonstrate their locus of control.

During the pilot programme, a total of 74 children received services, along with their family when present. A pilot post-intervention survey had a return rate of 71% (12 of 17 surveys were completed). The survey scale had a range of the following five choices: "*not at all helpful, not helpful, undecided, somewhat helpful, and very helpful.*" In relation to the effect of music therapy to decrease their child's anxiety while in the hospital, 100% found the session "*somewhat helpful to very helpful*". In addition, 90% of the caregivers found the sessions to be "*somewhat helpful to very helpful*" for their own stress and anxiety. Of the parents who completed the survey, all (100%) felt that music therapy should be considered a valuable service in the hospital. This data helped to demonstrate the validity that parents saw in the program for their children with chronic medical needs.

### **Paediatric Outpatients with Medical and Developmental Needs (KKH)**

Another pilot outpatient program was initiated in August of 2010. There had been an identified lack of accessible professional services within the community for children under the age of seven with chronic medical needs and a diagnosis of developmental or learning delays. The pilot Early Intervention program was offered at no cost to participants to address this gap in services, and the program data served to justify the feasibility of implementing a cost-recovery model in the future for pediatric outpatients.

A single in-service session was sufficient in generating a steady flow of 53 referrals that filled the caseload over the 17 months of the pilot program. The most common reason for referral was to promote the development of communication skills. Other reasons for referral were to support the development of social skills, sensory processing and self-regulation. 61% of patients referred received 2 or more sessions and showed many positive responses during the music therapy sessions. Improvements were observed in areas such as nonverbal/and verbal communication, peer interaction, impulse control, following of directions, attending to tasks, imitation, self-awareness, identification and spontaneous engagement. The cultural emphasis on "home programs", where parents would tend to prefer learning the skills of facilitating various activities at home versus coming in to the hospital for therapy on a regular basis, was a challenge in therapy. To overcome this challenge, parents were encouraged to participate within the sessions and music resources were given to them so that they could continue to musically engage with their child at home.

After completion of data collection, the pilot outpatient program was concluded in December 2011. A survey was administered and completed by seven of the ten parents, with the results showing that 100% of the parents "*strongly agreed*"

that their child had benefitted from music therapy. One parent wrote anonymously (written program feedback, December 2011), “Before the music therapy, my child showed no sign of improvement with many sessions of speech therapy for the past years. Only during this year, she vocalized some sounds and we see her interest in learning improve and her social skill are also better than before. She always looks forward to the music therapy session” and “My son’s words increased from 3, which it had been for almost a year, to 20 or so since we started music therapy. He is more willing to respond and interact with the help of his therapist.” In addition, 100% shared that they would be willing to pay for outpatient music therapy services. These positive results, including the high number of parents willing to pay for services, has put the department in a strong position to justify increased recruitment of staff once the hospital is able to iron out some of the other logistical challenges.

**2011: Inpatient Adult Neuro-rehabilitation (SGH)**

There was another shift in the perception of the power of music after a presentation by Dr. Gottfried Schlaug about Melodic Intonation Therapy with stroke patients in 2011. The neuro-rehabilitation doctors and the Director of the Allied Health Division began to display an interest in learning more about the benefits of music for patient care. The music therapists were able to share supporting literature and advocate about the role of music therapy in rehabilitation. The administrators' support led to the launch of music therapy programming to enhance the functional and socio-emotional aspects of care in 2011, with the Singapore General Hospital serving as the pioneering institution of music therapy for local neuro-rehabilitation populations.

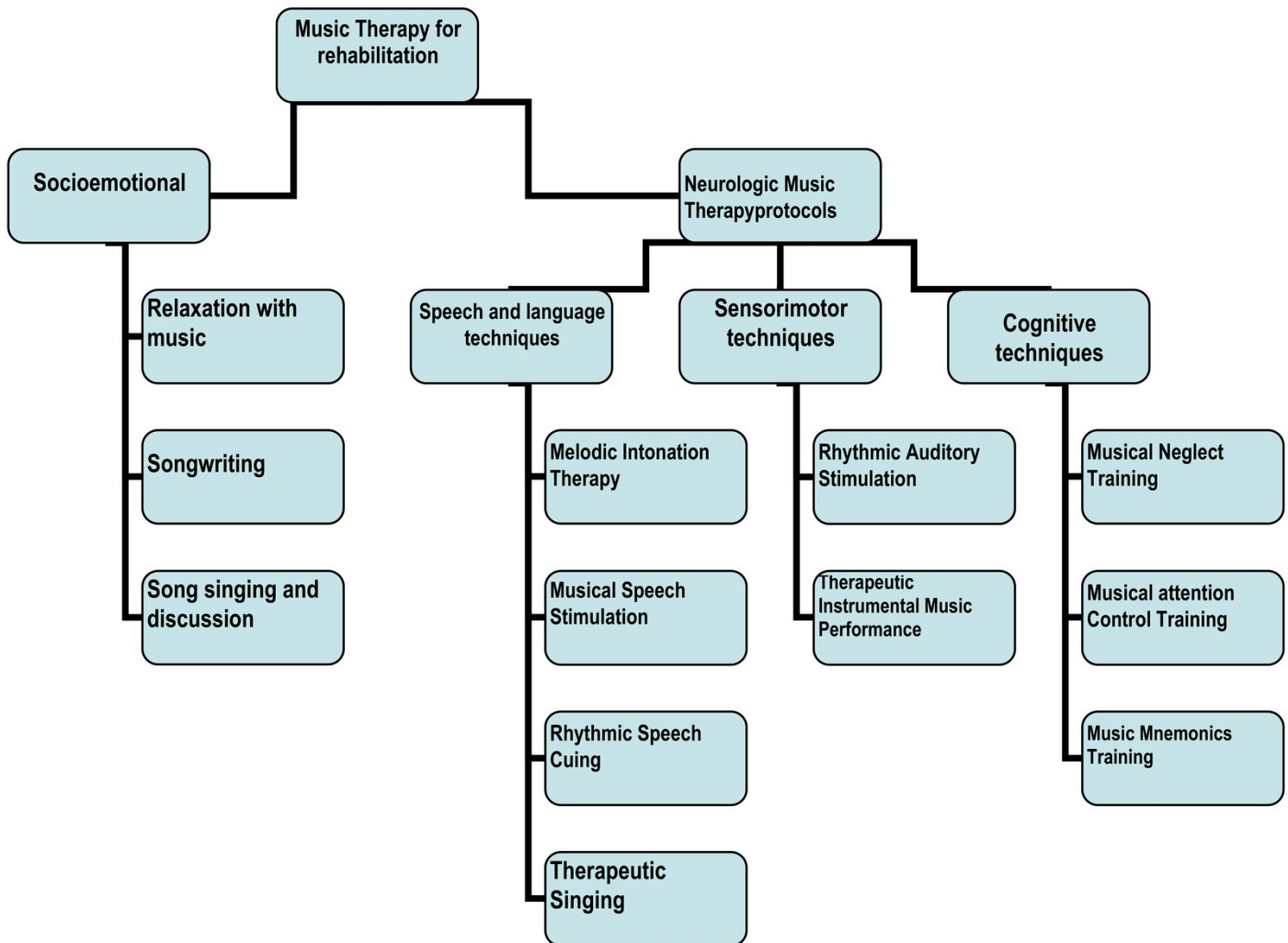


Figure 4: Music Therapy Interventions for Rehabilitation

Most of the inpatients that were referred suffered from stroke, Parkinson's disease, traumatic brain injuries or spinal cord injuries. Clinical interventions were individualized to facilitate emotional adjustment and rehabilitation of functional skills, in collaboration with other disciplines.

The ultimate goal was to improve quality of life and facilitate the most “independent” state possible for patients with their various conditions. Research has shown that 55% of the acute stroke rehabilitation population in Singapore experience depression [22].

After assessment, music therapy interventions were implemented according to the multidisciplinary team's rehabilitation goal towards functional recovery (Figure 5). The average caseload of 25 inpatients were seen two to five times each week, based on their needs and treatment plan. To date, over 250 inpatients have been referred for music therapy from a multidisciplinary team and more than 1700 inpatient sessions have been conducted. The primary reasons for referral were socioemotional support (51%), cognitive rehabilitation (27%), sensorimotor (13%) and speech rehabilitation (9%). Changes and mood and pain were studied. Analysis of the data showed an average of 28% improvement for mood and 38% reduction for pain perception within a single music therapy session [23].

The effectiveness of using music for pain management was further supported by patient feedback. According to a letter from H. B. Abas (November, 2011), *“I have suffered from ‘failed back syndrome’ for the last few years. The pain is very terrible, where I can’t control and it occurs from my back, shooting down to my right leg to toes. It also prevents me from having a good sleep at night. Therefore, I have to depend on a very strong painkiller ‘Oxycodone’ just to control the pain . . . After (a) few sessions of music therapy, my pain (was much better) controlled, meaning that I can sleep well at night and participate in many daily activities in the ward. My painkiller dosage also has been reduced. If I feel very painful while doing exercises or after, I just sing or hum a song . . . That helps me with managing my pain better.”* While there have been many positive results from this program, there have also been numerous challenges.

One challenge often faced by local elderly hospitalized patients relates to their lack of motivation which may compromise their quality of life. The low motivation may affect their mood and become more apparent during significantly long hospital stays. It may be attributed to certain cultural beliefs, such as having entitlement to take it easy after working hard during one's prime. This lack of motivation may be further reinforced by the concept of filial piety where one expects to be dutifully cared for by one's children. Many families in Singapore employ domestic helpers in the homes to assist with care of young children and the elderly. The presence of these domestic workers inadvertently tends to foster the mindset mentioned above. For some patients, familiar music has been used effectively as a positive reinforcement and motivator towards active participation during ward activities. The music interventions had increased

their compliance with rehabilitation goals. In this way, music therapists had been able to collaboratively co-treat with other allied healthcare professionals, as well as motivate patient's adherence to medical protocols.

Nevertheless, despite the challenges, the positive outcomes of improved mood and limb functions led the Music and Creative Therapy Unit to secure research grant funding and IRB approval to engage in three projects over the past two years, that are ongoing: to study the effects of *Therapeutic Instrumental Music Playing* (TIMP) on improving the upper limb functions, the effect of music on the mood and participation of stroke patients, and *Rhythmic Auditory Stimulation* (RAS) on gait performance of Parkinson's patients.

### The Future of Music Therapy at SingHealth

Since the first official music therapy program was started in 2005, clinical services and research activities have started to have a modest impact across the SingHealth network. The small pool of trained professionals available in Singapore, has limited medical music therapists at SingHealth to be purely clinically-focused in their work. There have been minor explorations of tapping research funding to demonstrate efficacy. Ongoing work is being done to frame adjunctive clinical treatment pathways within the acute, rehabilitation, and long-term care settings. As efforts have been channeled into creating better understanding about the role and effect of music therapy for different populations within the hospital, there will be increased clarity to defining clinical pathways and referral guidelines, i.e. when to refer to music therapist, psychologist or medical social worker. It is hoped that the dialogue about holistic healthcare may eventually broaden to include cultural, ethical, and spiritual aspects of healthcare. But for the present, music therapists within SingHealth remain resolved to find solutions for sustaining accessible and affordable services in a manner that fits within the Group's vision for excellence and leadership.

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### Biographical Statements

Dr. Patsy Tan, a Board-Certified Music Therapist (MT-BC, CBMT, USA), one of the founding members for both the Association for Music Therapy, Singapore as well as International Association for Music and Medicine, introduced music therapy into local healthcare settings in Singapore.

Ms. Ashley Spears, a Board-Certified Music Therapist (MT-BC, CBMT, USA) since 2010, works with children and women in an acute medical setting in Singapore.

Ms. Melanie Kwan, a Board-Certified Music Therapist (MT-BC, CMBT, USA) since 2000, has expanded the awareness about music therapy for local dementia, hospice and palliative care populations, in addition to developing paediatric and women's services at KK Hospital.

Ms. Christal Chiang, a Board-Certified Music Therapist (MT-BC, CBMT, USA) since 2008, works with patients undergoing rehabilitation due to neurological diseases, e.g. Stroke, Traumatic Brain Injuries, Parkinson's Disease at Singapore General Hospital.