Music Care Partners

FROM ISOLATION TO INTEGRATION

DEVELOPING AN INTEGRATED MODEL OF MUSIC CARE

PILOT STUDY COMPOSITE REPORT

AUGUST 2017

ACKNOWLEDGEMENTS

Funding for this pilot study was provided by the Ontario Trillium Foundation.
Study participants included residents from Fenelon Court in Fenelon Falls (o/o Revera Living), Lakeview Manor in Beaverton (o/o Regional Municipality of Durham) and Port Perry Place in Port Perry (owned by Southbridge Care Homes and operated by Extendicare).

Room 217 Research Team
Bev Foster, Executive Director, Room 217 Foundation
Chelsea Mackinnon, Research Assistant, Room 217 Foundation
Sarah Pearson, Program Development Coordinator, Room 217 Foundation
Dr. Lee Bartel, Research Consultant, Bartel, Cameron & Associates
Site Teams from each LTC Site

About Lakeview Manor
Lakeview Manor is a 149-bed, three-storey long term care home in Beaverton, Ontario. It is owned and operated by the Regional Municipality of Durham. The current average age of residents is 79.85 years.

About Port Perry Place
Port Perry Place is a 107-bed, two-storey long term care home in Port Perry, Ontario. Port Perry Place is an established and valued part of the greater Port Perry community. The current average age of residents is 86 years.

About Fenelon Court
Fenelon Court is a 67-bed bungalow style long term care home in Fenelon Falls, Ontario. Fenelon Court is a small, rural home and has three home areas. The current average age of residents is 83.4 years.

About the Room 217 Foundation
The Room 217 Foundation is a social enterprise dedicated to caring for the whole person with music by producing and delivering therapeutic music products, providing skills and training for integrating music into care and supporting innovative research in music and care. The Music Care Partners program uses music to leverage change in caring communities.

About the Ontario Trillium Foundation
The Ontario Trillium Foundation (OTF) is an agency of the Government of Ontario, and one of Canada's largest granting foundations. With a budget of over $136 million, OTF awards grants to some 1,000 projects every year to build healthy and vibrant Ontario communities. OTF's Seed Granting Stream funds research to test an idea or program in its discovery stages. OTF is interested in 6 impact areas, one of which is Isolated People. One of the results they want to see in this area of impact is reduction of social isolation and loneliness.

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Long term care (LTC) culture is transitioning from a medical model into a social community or "home" model where decisions are made with residents, and within mutual relationships. Despite this shift, social isolation and loneliness are prevalent amongst LTC residents. Music is increasingly being used and accepted in healthcare to intentionally improve wellness and is an accepted psychosocial intervention used to improve quality of life.

The music care approach is a paradigm being developed by the Room 217 Foundation which promotes the use of sound and music to meet challenges of care, such as social isolation and loneliness of LTC residents. This approach empowers staff to use music as a holistic and human solution.

Music Care Partners is the next phase of development in the music care approach. The Partners pilot study has collected outcomes data to show that music care is a viable change agent that addresses needs and challenges of persons living in LTC. Room 217 received a seed grant from the Ontario Trillium Foundation to conduct the research in 3 Ontario LTC homes: Fenelon Court, Fenelon Falls, Port Perry Place, Port Perry, and Lakeview Manor, Beaverton.

In this pilot study, an adapted participatory action research methodology was used. The process included **exploring** (reconnaissance between investigators and LTC site team, defining the issues), **training** (baseline music care training including sound and music theory with experientials and strategies), **planning** (choosing a strategic goal with the music care delivery framework, determining evaluation tools and recruitment criteria, establishing steps, timelines and assigning responsibilities), **acting and evaluating** (implementing the music care initiative plan, collecting and analyzing the qualitative and quantitative data), **reflecting** (LTC site team/community making meaning of the results), and **pivoting** (celebrating the music care initiative or intervention and results, determining next steps).

A total of 45 residents participated in the Partners pilot study, from the three participating LTC homes. The study sample was representative of the overall populations at each LTC home, with an average age of 87 years and was 67% female. The Partners pilot study showed, through scientific evidence, that the purposeful and intentional use of music can decrease isolation and loneliness in LTC residents. This was evident in the site-specific validated tools, and within Resident Assessment Instrument (RAI) data that was collected across all three homes. Overall, both quantitative and qualitative data show strong evidence that doing music care changed culture at the three study sites.

There were several key learnings from this pilot study. Doing research and innovation in LTC settings is ideal because of the comprehensiveness of personal challenges that are faced within a community setting. There are inherent research barriers in this setting including staff fluidity, internal processes and dynamics, outbreaks, and staff buy-in. Music used for a specific outcome like reducing loneliness and isolation has ripple effects and can also influence behaviours and depression ratings concurrently. Rolling out and implementing a music care initiative with a LTC home requires competent leaders and adherence to a defined six-step process.

Through this pilot study conducted in the context of LTC, Room 217 has developed the Integrated Model of Music Care (IMMC). The IMMC bundles essential components of music care delivery into an actionable and measurable plan, which may be adaptable across the care spectrum to make meaningful change in other healthcare settings.

INTRODUCTION

Culture Change in Long Term Care (LTC)

Historically, long term care (LTC) has operated in an institutional corporate culture "workplace" with a focus on health care delivery. The staff rotate and have scheduled routines, where decisions are made for residents, with structured activities, and where there are hierarchal departments of staff caring for residents. Through the influence of pioneers like Rosemary Fagan, Barry Barkan, and Bill Thomas, LTC culture is transitioning into a social community or "home," with a focus on living, where staff assists the same residents with flexible routines. Decisions are made with residents within mutual relationships, and collaborative teams orchestrate planned, flexible and spontaneous activities. In spite of this move towards socializing care, one of the most salient issues in LTC culture is social integration of residents. Isolation, loneliness and depression are prevalent amongst LTC residents.

Reality of Isolation in LTC

An emerging issue in our aging society is the prevalence of loneliness and boredom in the lives of older adults. Loneliness and social isolation are often associated with older age and have been identified as risk factors for a number of health (both physical and mental) and other challenges (Grenade & Boldy, 2008).

The Ontario Trillium Foundation defines social isolation as people who have only a limited sense of belonging to the place where they are. Because of that, they keep to themselves and do not participate fully in what is going on around them. Often, they are very lonely as well, which can put them at higher risk of depression, addictions and even physical illnesses. Even the perception that one does not belong can lead to actual isolation. Understanding what causes this is critical to preventing it (Ontario Trillium Foundation, 2017).

While social isolation and loneliness are often used interchangeably, social isolation is an objective measure of the number of social contacts and interactions one has. Loneliness, on the other hand, is a subjective experience or feeling and is perceived negatively. (Solitude is the perceived positive feeling of that subjective experience.)

Transitioning into LTC may often be accompanied by both isolation and loneliness. In his book "Life Worth Living," Bill Thomas proposes that in LTC facilities for elderly individuals, loneliness, helplessness, and boredom are out of control and are steadily decaying the residents' spirits, adversely affecting quality of life (Thomas, 1996).

The worst part of living in a LTC home for the resident appears to be loneliness and lack of social contact with family, friends and nurses (Slettebo, 2008). In her study, Slettebo interviewed 14 competent residents (no dementia) who had lived at least 3 months in a nursing home in Norway. The purpose of the study was to describe their experience of living in a nursing home. The main finding was that they felt safe, but lonely. Emergent themes from this study included feeling safe, feeling lonely with subthemes of loneliness, experiencing sadness, and boredom, feeling both respected and not, and feelings of distrust.

Music Care: A Developing Approach to Care

Music is increasingly being used and accepted in healthcare to intentionally improve wellness. Music is an accepted psychosocial intervention increasing many aspects of quality of life (van der Vleuten, Visser

& Meeuwesen, 2012; Grocke, Bloch & Castle, 2009; Hays & Michiello, 2005; Hilliard & Russell, 2003; Coffman, 2002). However, there is a lack of standardization as to how music may be integrated into personal care goals and the physical care setting to produce the best quality of care. Without a care model that will inform musical interventions and solutions for the use of music in health care, the benefits of using music to enhance quality of life and care may be underdeveloped.

Using music in care needs to be intentional. In choosing to "do" music, care partners must acknowledge that the effects of sound and music have consequences to health and well-being. Doing music must be a decision to implement an initiative or intervention that, for example, will have physiological, emotional, or social implications. For example, humming may become a way of letting someone know you are there for them. Humming may be something done together as an activity. Humming may also be used to calm a resident through a care task like bathing or bedside transfers.

Room 217 has defined and developed a music care approach which allows the healing principles of sound and music to inform our caring practices. Music care is not a specific practice, rather, it is a paradigm within which music is inherently understood to be part of life, playing an integral role in all aspects of caregiving and care settings. Music care is intended to be relational and improve health and wellbeing and quality of life and care, thus contributing to overall culture change in health care.

Music care is more than a "complementary" approach to care. Research is demonstrating the benefits of music as a therapeutic tool, enhancing well-being, helping to manage physical and psychological symptoms in individuals with a variety conditions i.e. reduction of anxiety and pain (Bailey, 1986; Bernatzky et al., 2011; Ferrer, 2007; Gutgsell et al., 2013; Hanser et al., 2006; Hilliard, 2003; Li et al., 2011; Lin et al., 2011, Siedliecki et al, 2006), positive impacts on blood cortisol levels (Lai and Li, 2011); (Ventura et al., 2012), diastolic blood pressure (Ferrer, 2007), improved attention and memory, and reduction of responsive behaviours (Thaut *et al.,* 2009; Thaut & Hoemberg, 2014).

Music care allows for a variety of dimensions of delivery (Foster, Berends & Pearson, 2016) and can be implemented by all care partners. The music care delivery framework was developed as a research tool to support a hospital-based research study on the feasibility of music optimization (Nelson *et al.,* 2016). It emerged through the research team of music care experts triangulating the different perceived aspects of music care delivery with current research and grey literature. It was then tested against the collected data. The music care approach assumes that music care consists of ten domains of music delivery.

The 10 Domains of Music Care is an important tool because it addresses a growing need in caregiving practices for definitions and descriptions of the different types of music care practices. The framework also helps clarify professional roles and scopes of practice in the growing field of music and health care. It addresses a need for clearer terminology and understanding around terms like "music therapy," "music medicine," and "music care." It also provides a navigational tool to track existing music care initiatives. The framework can help to generate new areas for developing music care practices and strategies in the context of healthcare.

The Integrated Model of Music Care

The goal of music care is to integrate and assimilate music into the care environment as a primary approach to whole person care. The next phase of development in the music care approach to achieve this goal is to collect outcomes data on how music changes communities of care. By bundling essential components of music care delivery into an actionable plan that can be adapted across the care

spectrum, and can be uniquely delivered, Room 217 hopes to show that an integrated model of music care (IMMC) is an agent of culture change. The integrated model of music care is a tool that will illustrate how music can be systematically incorporated into each unique care practice. It is a research-informed tool that is dynamic in that it will be continuously updated by cutting edge research in music and health, including the current Partners pilot study.

While the body of evidence showing that music has many diverse and profound therapeutic properties is constantly growing, music does not yet have a concrete location or implementation strategy in the Canadian health care system. While it is remarkable that music can be used to target a plethora of health challenges (from isolation and loneliness, to gait impairment, and everything in between), this poses a challenge in terms of systematizing music as an approach to care. Therefore, the development and testing of an integrated model of music care which can account for the stark diversity in uses of music in care is of utmost importance.

From Isolation to Integration

Music care becomes an agent of culture change in LTC by addressing and improving community challenges. This pilot study explores isolation and loneliness of residents and how music care can change their experience from isolation to feeling a sense of belonging, engagement, participation, and interaction within the LTC community. Critical to this exploration are the care partners – staff, volunteers, family members – and their role in integrating music into the day-to-day life of residents. Integration will be a key focus in the IMMC.

"Integrating" could refer to and is not limited to:

- Integrating residents into community life
- Integrating music care approaches into everyday life
- Integrating the resident into their own healing process
- Integrating the resident into a relationship with themselves and with other residents
- Integrating the LTC community with the community at large
- Integrating music care training
- Integrating music care buy-in for all care partners
- Integrating music into the health care system through Local Health Integration Networks (LHINs)

ISOLATION & LONELINESS

What the Literature Says

Isolation and loneliness are increasingly being recognized as health risks for older adults (Grenade & Boldy, 2008). Although we do not have a true gauge of the prevalence of isolation and loneliness in the Canadian population, some doctors and policy makers are calling it an epidemic (Kar-Purkayastha, 2010). This is primarily a problem facing older adults, especially those living in LTC.

Isolation and loneliness are two separate concepts. *Isolation* is a concrete phenomenon: it refers to someone having limited access to individual relationships and community experiences. *Loneliness* is a subjective construct, occurring when an individual desires meaningful relationships that do not exist for them in reality.

Some researchers have attributed loneliness and isolation in LTC settings to perceived alienation from society (Cattan, White, Bond, & Learmouth, 2005). LTC residents can feel separated from their communities, both physically and emotionally, which can lead to isolation and loneliness. One doctor described his perception of lonely older adults that he encountered in his practice as being "left behind by a world that no longer revolves around them" (Kar-Purkayastha, 2010).

Studying loneliness in LTC can sometimes be challenging, since it is a personal, subjective experience. Phenomenology is a study design used to understand intrapersonal constructs (such as loneliness) by gaining an understanding of the whole person during the research process. A recent phenomenological study identified four themes that exemplify feelings of loneliness in frail older adults living in LTC:

- Being trapped in a frail and deteriorating body
- Being met with indifference
- Having nobody to share life with
- Lacking purpose and meaning (Sjöberg, Beck, Rasmussen, & Edberg, 2017)

While isolation and loneliness are different entities, the risk factors associated with isolation and loneliness have a lot of overlap. This is primarily due to scientific investigators targeting both isolation and loneliness within the same research study. We do not yet have enough information to bifurcate risk factors (Grenade & Boldy, 2008). Risk factors include: physical and mental health challenges, either self-assessed or clinically diagnosed, physical pain, the loss of a loved one, lack of a confidant or partner, and small or absent networks of friends and family (Grenade & Boldy, 2008; Emerson, Boggero, Ostir & Jayawardhana, 2017). Specific to LTC, one important risk factor is the inability to interact with others, both informally and during programmed activities. This inability to interact is caused by physical and cognitive "challenges," which could be age-related deterioration, or caused by onset of a recognized condition like dementia, or depression (Grenade & Boldy, 2008). While these factors have been associated with social isolation and loneliness, a "chicken and egg" relationship is present that makes it difficult to determine the direction of association between the variables. For example, an investigation by the United Kingdom Department of Health found that engagement through formal social activities reduced onset of physical frailty and cognitive deterioration.

The focal point of the current long term care system is health and safety. The desperate need for a paradigm shift in the overall system has been proposed by Kane and others, who recognize the value in a move towards a more quality of life focused care system (Kane, 2001). The World Health Organization (2003) reported that social isolation and exclusion are associated with "increased rates of premature death, lower general well-being, more depression, and a higher level of disability from chronic diseases."

Therefore, by addressing isolation, loneliness, and other quality of life measures, health and safety related outcomes (such as depression, physical illness, and reliance on medications) will be positively influenced (Kane, 2001).

Targeting Isolation and Loneliness

Many health promotion initiatives have targeted social isolation and loneliness in the past, with varying degrees of success. A systematic review published in 2005 reported on the effectiveness of different initiatives at decreasing social isolation and loneliness. Of the 30 identified studies, only nine were deemed effective by the reviewers (Cattan et al., 2005). None of these initiatives used any kind of music, suggesting that further research is needed to understand the effectiveness of music as target for loneliness and isolation outcomes.

Since that review was published, some qualitative literature has shown the Java Music Program has positive benefits related to isolation and loneliness. Specific themes included: decrease in loneliness, development of friendships, increased coping skills, and understanding and support (Theurer, Wister, Sixsmith, Chaudhury, & Lovegreen, 2012).

Music is also a component of the LEAP for Life program, which incorporates person-specific meaningful social activities into resident care plans. A study was conducted to determine the effect of the LEAP for Life program on resident engagement, satisfaction with care, loneliness, apathy, depression, and agitation (Low, Baker, Jeon, & Camp, 2013). Analysis revealed many positive changes, but none in the domains of loneliness or depression (Low et al., 2013).

None of the aforementioned musical initiatives use music as an approach to care. In other words, there is not enough flexibility to tailor the delivery of music to the needs of each specific resident and care setting. The music care approach promotes the strategic use of music, while controlling for the care environment, and tailoring practice to the specific health-related goals.

In summary, there is a significant need for a systematic approach to address isolation and loneliness in LTC. It is our belief that a music care approach, in the context of a participatory action research framework, provides the ideal combination of structure and flexibility for use in Ontario's LTC setting.

Partners Pilot Study: Site Specific Factors

In the Partners Pilot Study, each of the three LTC homes identified the ways that isolation and loneliness appear and manifest in their own context. A factor analysis on the cumulative set of isolation and loneliness indicators was conducted (Tables 1 & 2). This tool was created to help site teams during the planning process of their music care initiative.

Table 1: Factors of Social Isolation

Resistance	-Staying in bed -Not wanting to get up
Mobility	-Not being able to get up independently -Non-ambulant -Someone being 'palliative' and confined to their room (at end stage) -Ambulatory limitations
Sociability	-Not wanting to be social -Not being able to be social

	-Balance of individual/group interaction -Withdrawal -Engaging is perceived as negative 'I don't need to be there' -'Dislike' another resident who is at the program - personality conflict -Age - various decades - can't identify with another generation's preferences
Responsive Behaviours	-Psychosocial symptoms of dementia, i.e. weepy, anxiety -Increased responsive behaviour -Lack of expression -Withdrawal -Apathy - don't want to do anything
Boredom	-Real -Perceived -Not enough programs -Apathy - don't want to do anything
Self-Expression	-Lack of expression -Not being able to advocate for -themselves because they are non-verbal i.e. aphasia -Can't communicate - non-verbal because of disease -Can't express needs -Feeling of 'being a burden'
Sense of Safety	-Uncertainty of "who I am safe with" -Unmet needs -Too much noise/stimulation -Not near their bathroom - cause for anxiety -Fear of the logistics of transitions i.e. where is upstairs? Where do I live? How do I get upstairs? Who am I? -Feeling of safety in their room because it's known and familiar
Visitors	- Do they come? -Will they come? -Limited family visits
Time	-Dementia residents have their concept of time -Long periods of waiting
Programs	-Feeling like there is not enough program -Varying interests of residents for programs -Is program person-centred enough? -Funding supports go to medical rather than psychosocial programs -'Dislike' another resident who is at the program - personality conflict -Engaging is perceived as negative 'I don't need to be there'
Organizational Issues	-How does person-centred care get operationalized? -Funding supports go to medical rather than psychosocial programs -Systems are designed for groups -Staff scheduling -Outbreak -Private rooms except for a few
Diagnoses	-Depression -Hearing loss -Aphasia

Table 2: Factors of Loneliness

Verbal Expressions	-Negative comments i.e. "it's for babies", "you're crazy" -"I don't feel well" -"I'm lonely"
Somatic Expressions	-Sleeping all the time as a coping method -Being in a group but not participating -Labelled as 'attention seekers', i.e. repeated call bells, calling out, repetitive questions -Weepy, crying -Emotional responses -Exit seeking
Relationships	-Quality of relationships does not meet needs -No family visits -Residents miss their families -Miss staff - staff attachments - when regular staff is on holiday, off or on weekend -Not being able to express to someone, i.e. having companionship -Not having friends
Psychological Factors	-Mood change - even within a group, loneliness is experienced -Depression -Caught in the 'cog' or neurological loop
Feelings	-Sympathy, empathy -Being alone can be normal -Much loss - friends, family, independence, driver's license, community, pets, belongings -Believing they are 'next' to die -Losses keep going i.e. resident is a new friend, and then dies -Fearful
Other	-Being alone is healthy; feeling lonely isn't -Super complex residents with co-morbidities (complex in every way)

MUSIC CARE ASSESSMENT IN LTC

Each of the three sites in the Partners pilot study already use music in their homes. An assessment was made in each home about how music is perceived, valued, and used. As well, music care delivery in each home was mapped to the 10 Domains of Music Care tool in order to show what music care delivery is already happening, what is in progress, and what may be yet to come. In this section, site specific information is reported.

Fenelon Court Music Care Assessment

About Fenelon Court

Fenelon Court is a 67-bed bungalow style LTC home in Fenelon Falls, Ontario. Fenelon Court has three home areas, and the layout of the home is built around a central "lamp post". Each home area has a dining area, and a private living room. Upon entry, there is a large multipurpose living space that can be set up for a number of different programs and events. Fenelon Court is a small, rural home, and has a calm relaxed atmosphere to match. The current average age of residents is 83.4 years.

Room 217 has determined that it is important to recognize and consider the care setting in which music care is being delivered (Nelson *et al.,* 2016). Contextual factors – both physical or architectural in nature, and person-related factors like relationships, working groups, resident values and demographics, can have a profound influence on music care delivery. As Fenelon Court continues to work towards integration of music care, it is important to be aware of the care setting and its influence on music care practices.

Music at Fenelon Court: Overview

Music is valued by residents and staff alike at Fenelon Court, and the home invests in music programming and resources to benefit the lives of residents. The home participates in the Music & Memory program, providing personalized playlists for residents. Paid entertainers make up part of the monthly event calendar, and high school music students perform at the home as well. A registered music therapist works at the home once a week, delivering both 1:1 therapy and community music therapy programs. In addition to individualized sessions with palliative residents, coffee houses, resident recording projects, and community recitals are just some of the creative ways music therapy is being integrated into the home.

Dining areas have iPods, as requested by the Resident Council. Musical resources are an integrated part of the palliative care carts. Pathways Singing Program is used with targeted isolated residents.

An accredited music therapist works at Fenelon Court one morning a week, and her programming consistently has very high attendance. The resident interest in music therapy speaks to its importance and value.

With both an operating budget for music care services, and successfully integrated music programs, Fenelon Court demonstrates music care leadership at both the organizational and the front-line level of care.

Site Team Attitudes and Perceptions about Music at Fenelon Court

During their first meeting, the site team members provided their individual perspectives of music in the Fenelon Court care context. These attitudes and perceptions add contextual details to the state of music care in the home, prior to commencement of the study. It is important to note that attitudes and perceptions may have changed since the beginning of the study. Seventy-one percent of the site team was familiar with the term “music care”. Overall, there was confusion regarding the difference between “music care” and “music therapy”; 14% of the site team believed that music care and music therapy are the same, and 43% were not sure of the difference. Twenty-eight percent of the site team believed that Fenelon Court has designated areas for music-making, while 57% said there are designated areas for music listening (Figure 1). One hundred percent of the site team believes that everyone should be involved in music care delivery, although staff do not perceive it as very important. Currently, program staff deliver music care, which is supplemented by families, volunteers, and community groups. Care staff play a minimal role in music care delivery. Technology is used at Fenelon Court to deliver music care, including radio, television, CD players, iPods, and iPads. Fenelon Court has WiFi that is accessible to residents, visitors and staff members which can be used to stream music.

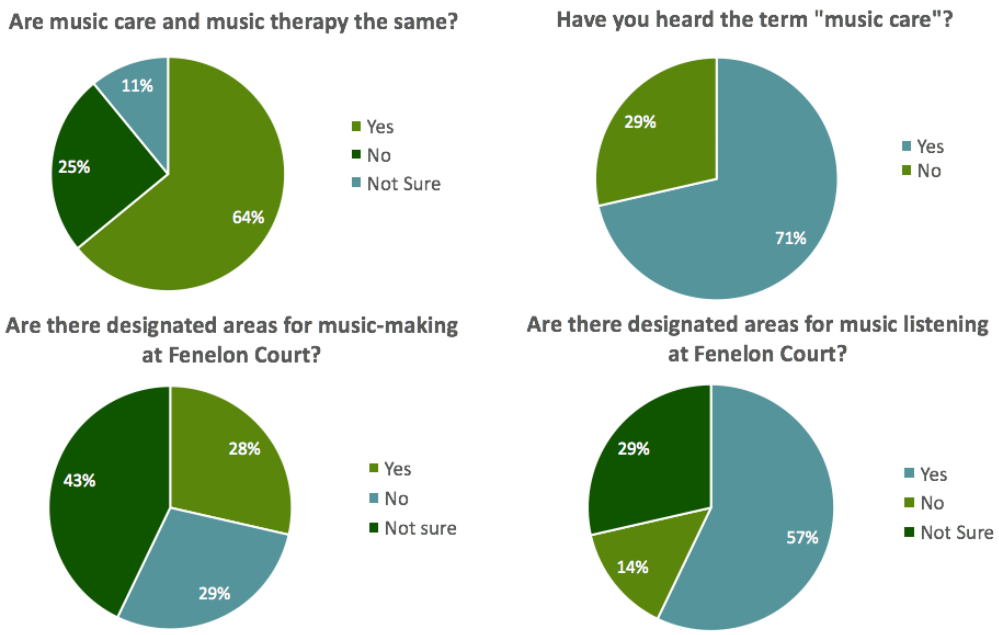


Figure 1: Understanding site team attitudes and perceptions of music care at Fenelon Court

At Fenelon Court, five of the ten domains of music care delivery were in use in the home, prior to the Partners pilot study: programming, community music, music therapy, musicking, and technology. Sound environment was being developed at the time of the study. Music Care Training occurred as part of the Partners pilot study. The site team shared that music medicine was on their "wish list" of music care domains to develop at Fenelon Court (Figure 2).

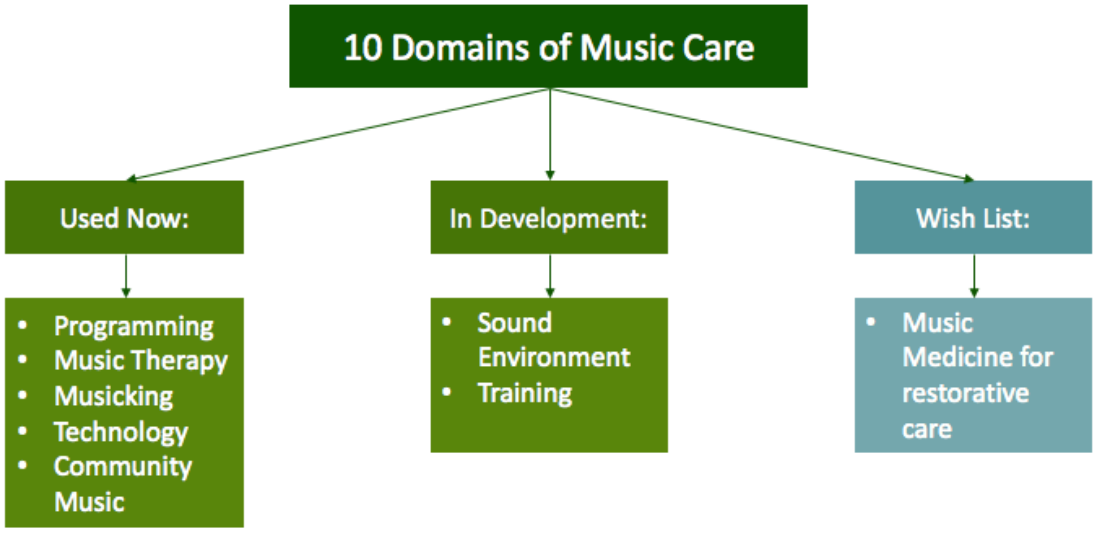


Figure 2: Domains of music care in the Fenelon Court context.

Port Perry Place Music Care Assessment

About Port Perry Place

Port Perry Place is a 107 bed two-storey LTC home in Port Perry, Ontario. Port Perry Place has four home areas on the second and third floors of the building. Each home area has a dining area, and an open concept common area, or a designated living room. Upon entry to the home, a large sunroom with plenty of space for visiting and events is located on the right; the remainder of the first floor consists of administrative offices and care centres (such as the spa). Port Perry Place is an established piece of the greater Port Perry community. The current average age of residents is 86 years.

Room 217 has determined that it is important to recognize and consider the care setting in which music care is being delivered (Nelson *et al.,* 2016). Contextual factors – both physical, or architectural in nature, and person-related factors like relationships, working groups, resident values and demographics, can have a profound influence on music care delivery. As Port Perry Place continues to work towards integration of music care, it is important to be aware of the care setting and its influence on music care practices.

Music at Port Perry Place: Overview

Port Perry Place is invested in making its home as musical as possible. The value Port Perry Place gives to music is already reflected in their programming. The Music & Memory™ project offers residents individualized music programming. Having been a beta site for the Pathways Singing Program, this program is now integrated into their regular schedule.

The home offers formal music programming such as resident choirs, community concerts, and intergenerational musicking with elementary school groups. Home-wide celebrations often include music (e.g., Scottish music for Robbie Burns Day). Entertainers visit the home and community groups give concerts. Residents also go into the community to see musical events. Music care is considered

upon intake: all residents are asked about musical preferences in their initial assessment. Staff are known for singing with the residents spontaneously, which encourages residents to sing alongside them. Each home area ("House") has a digital piano, and speakers can be located in different common areas for playing music.

Site Team Attitudes and Perceptions about Music at Port Perry Place

During their first meeting, the site team members provided their individual perspectives of music in the Port Perry Place care context. These attitudes and perceptions add contextual details to the state of music care in the home, prior to commencement of the study. It is important to note that attitudes and perceptions may have changed since the beginning of the study. Seventy-seven percent of the site team was familiar with the term "music care". Overall, there was confusion regarding the difference between "music care" and "music therapy"; 38% of the site team believed that music care and music therapy are the same, 8% were not sure of the difference. Thirty-three percent of the site team believed that Port Perry Place has designated areas for music-making, while 67% said there are designated areas for music listening (Figure 3). Ninety-two percent of the site team believes that everyone should be involved in music care delivery, and that overall, staff perceive it as important. Currently, program staff deliver the majority of music care, which is supplemented by families, volunteers, and care staff. Other music care is delivered by entertainers, and through arranged musicians and fiddle club trips. Technology is used at Port Perry Place to deliver music care, including radio, television, CD players, iPods, and iPads. Port Perry Place does not have WiFi that is accessible to residents, care staff, or visitors, so music and videos are pre-recorded.

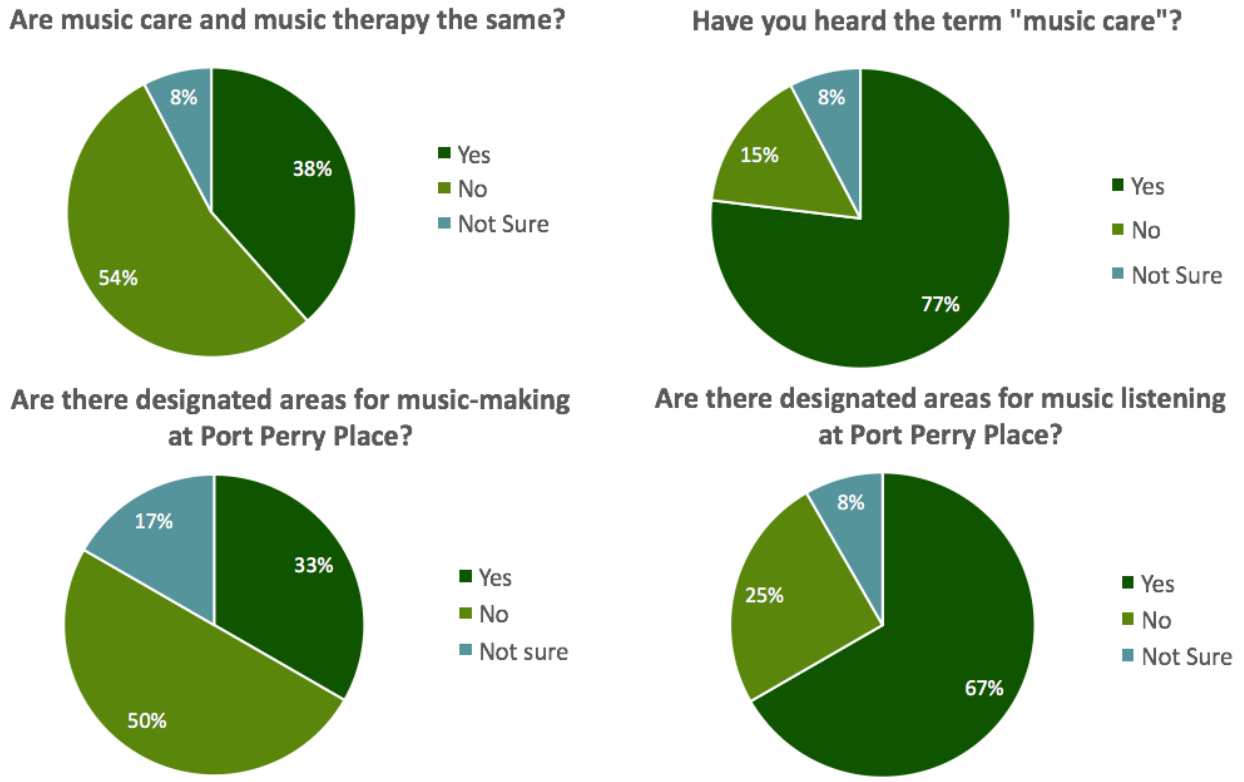


Figure 3: Understanding site team attitudes and perceptions of music care at Port Perry Place

At Port Perry Place, five of the ten domains of music care delivery were in use in the home, prior to the Partners pilot study: programming, musicking, technology, community music, and training. Music Care Training occurred as part of the Partners pilot study, and therefore was in development during the Partners Pilot study. The site team shared that sound environment and musicking were on their "wish list" of music care domains to develop at Port Perry Place (Figure 4). It is important to note that while musicking was already happening at Port Perry Place, the site team recognized that it could be implemented more fully to maximize impact on residents. Therefore, the musicking domain was also a component of their wish list.

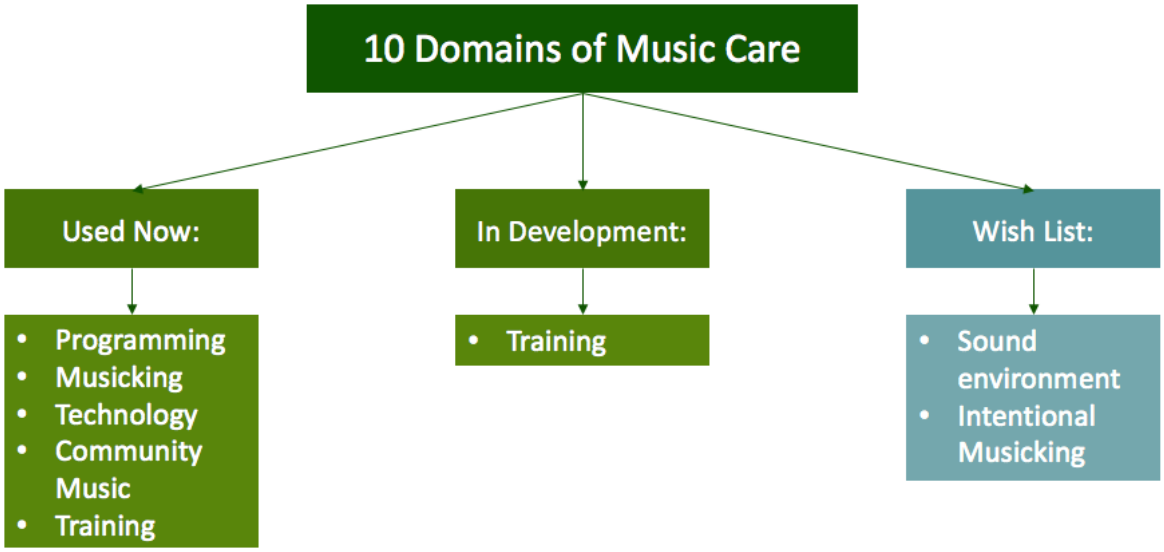


Figure 4: Domains of music care in the Port Perry Place context.

Lakeview Manor Music Care Assessment

About Lakeview Manor

Lakeview Manor is a 149 bed three-storey LTC home in Beaverton, Ontario. Lakeview Manor has five home areas on the first, second and third floors of the building. Each home area has a dining area, and an open concept common area, and bright living rooms with lots of sunlight. Upon entry to the home, a large open concept area with lots of space for visiting and events is located centrally and on the left. To the right is a library and sitting area, where residents often sit and greet visitors. There is a somewhat segregated hallway on the first floor where the administrative offices and meeting rooms are located. Lakeview Manor is an established piece of the greater Beaverton community. The current average age of residents is 79.85 years.

Room 217 has determined that it is important to recognize and consider the care setting in which music care is being delivered (Nelson *et al.,* 2016). Contextual factors – both physical, or architectural in nature, and person-related factors like relationships, working groups, resident values and demographics, can have a profound influence on music care delivery. As Port Perry Place continues to work towards integration of music care, it is important to be aware of the care setting and its influence on music care practices.

Music at Lakeview Manor: Overview

Lakeview delivers strong music care in the domains of: Community; Programming; Technology; and Musicking. Through engaging in the Partners program, they are investing in Training and Research.

Lakeview's access to digital music is impressive, especially compared to other LTC homes in the province. Multiple iPods and earphones are used across the home, and the home has a subscription to iTunes. There are pianos (digital and acoustic) in every Home Area. The Music in Memory project

engages 30 residents with personalized music, and volunteer performers perform regularly at the home, allowing them to build relationships with the residents through community music. Hymns and other sing-alongs, school group performances from the community, drum circles and volunteer therapeutic music all demonstrate the lively ways music is integrated into programming, and community-building at large. Staff engaging with residents in spontaneous musicking – singing, dancing – is common.

The home's infrastructure has music care potential. Beautiful windowed areas in Home Areas with benches and views of Lake Simcoe are prime spaces for environmental music. Open-concept nursing stations integrated into home areas make space more inviting; the library and main hall are welcoming and functional communal spaces. There is an underused Snoezelen Room that could be repurposed, and the big corners in the building are prime for programming. There is no centralized music "area" for managing digital music – the social worker stores all music technology resources in her office, and iTunes needs to be accessed via that office. Transport outside of the home is limited.

Site Team Attitudes and Perceptions about Music at Lakeview Manor

During their first meeting, the site team members provided their individual perspectives of music in the Lakeview Manor care context. These attitudes and perceptions add contextual details to the state of music care in the home, prior to commencement of the study. It is important to note that attitudes and perceptions may have changed since the beginning of the study. Eighty percent of the site team was familiar with the term "music care". Overall, there was some confusion regarding the difference between "music care" and "music therapy"; 20% of the site team believed that music care and music therapy are the same, 20% were not sure of the difference. Zero percent of the site team believed that Lakeview Manor has designated areas for music-making, and 0% said there are designated areas for music listening (Figure 5). One hundred percent of the site team believes that everyone should be involved in music care delivery, and that overall, staff perceive it to be somewhat important. Currently, program staff deliver the majority of music care, which is supplemented by families, volunteers, and community groups. Other music care is delivered by care staff. Technology is used at Lakeview Manor to deliver music care, including radio, television, CD players, iPods, and iPads. Lakeview Manor does have WiFi that is accessible to residents, and visitors, so music and videos can be streamed.

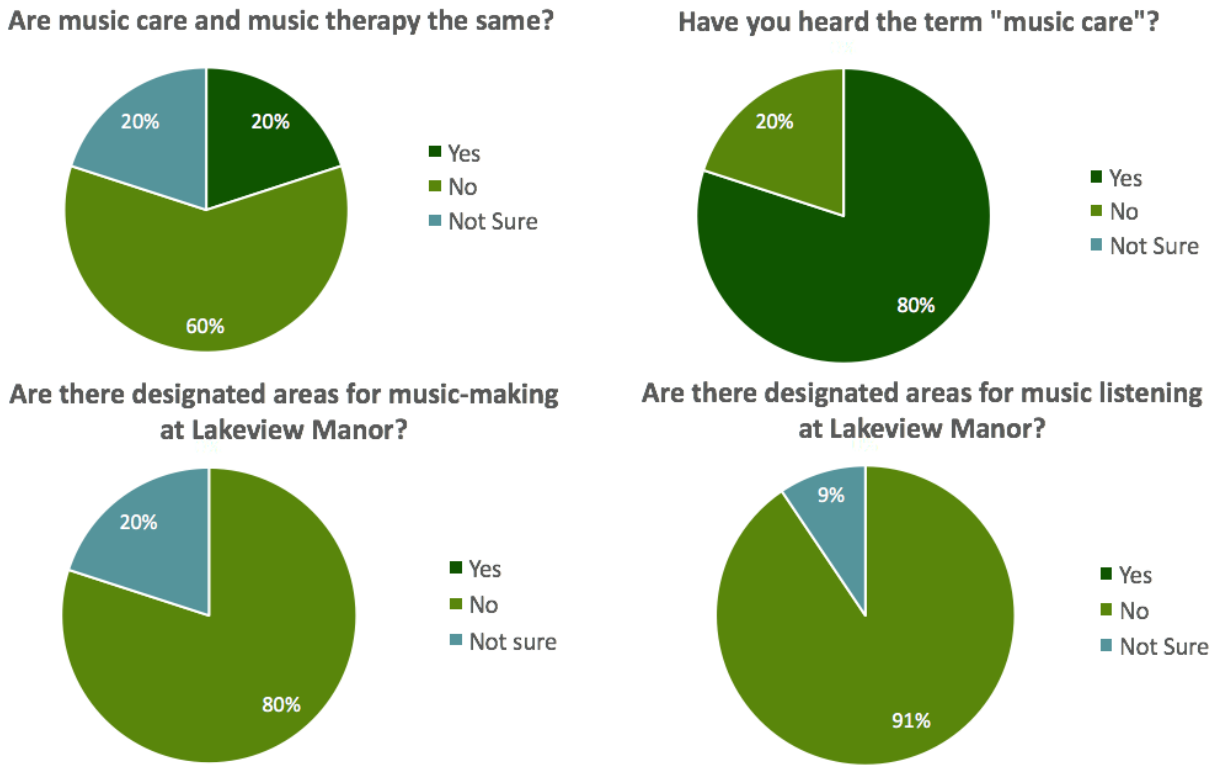


Figure 5: Understanding site team attitudes and perceptions of music care at Lakeview Manor

At Lakeview Manor, five of the ten domains of music care delivery were in use in the home, prior to the Partners pilot study: community, musicking, programming, technology, and training. Music Care Training occurred as part of the Partners pilot protocol, and therefore was also in development at the time of the study. The site team shared that music medicine, sound environment and robust training for care staff and volunteers were on their "wish list" of music care domains to develop at Lakeview Manor (Figure 6). It is important to note that while training was already happening at Lakeview, and in development through Partners, the site team recognized implementing music care training across the home would maximize impact on residents. Therefore, the training domain was also a component of their wish list.

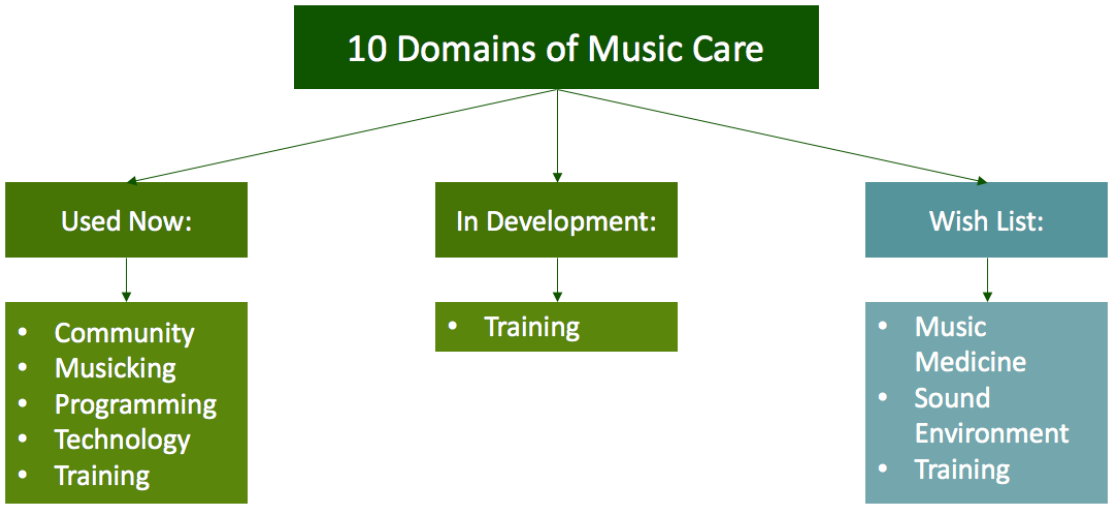


Figure 6: Domains of music care in the Lakeview Manor context.

PARTNERS METHODOLOGY

Participatory Action Research Methodology

We used a participatory action research (PAR) framework in this pilot study. In PAR methodology, the researchers (i.e. Room 217) come alongside a community-based team (i.e. LTC home) to solve a community problem. In this case, we used a music care initiative to decrease social isolation and loneliness in the long term care setting (Figure 7).

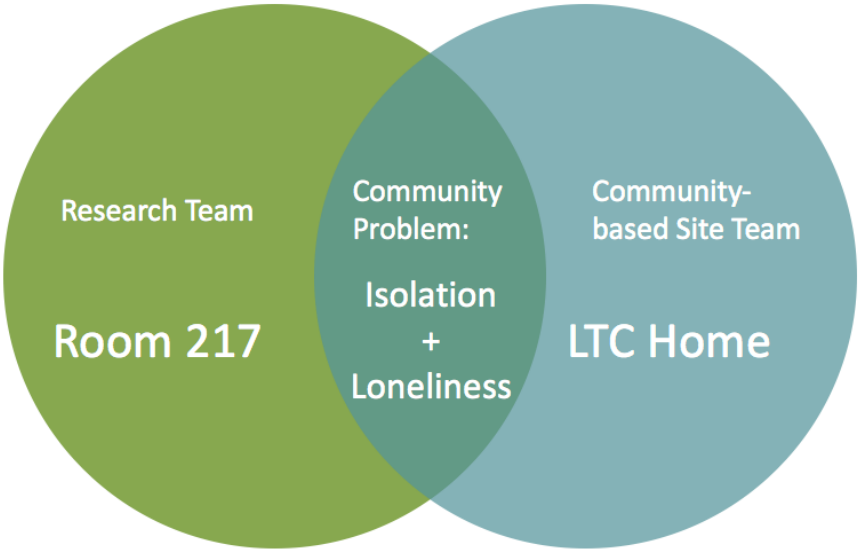


Figure 7: Participatory Action Research Partnership. This figure illustrates the partnership between two stakeholder groups jointly interested in addressing the community problem of isolation and loneliness.

The Steps

The first phase of PAR is **reconnaissance**, and consists of two parts: self-reconnaissance, where the investigators explored the evidence, beliefs, and behaviours surrounding the investigation; and situational reconnaissance, which is the exploration of the context in which the investigation will take place (Figure 8) (Dillon, 2008). Next is the **planning** phase, in which the community site team determines actionable steps, the plan for implementing these steps, and responsibilities for each action. **Act**, and **collect & analyze data** are the next two steps. Depending on the context, these steps may occur somewhat simultaneously. The final phase is called **reflect**, where the planning process may even begin for the *next* action phase (Walter, 2010).

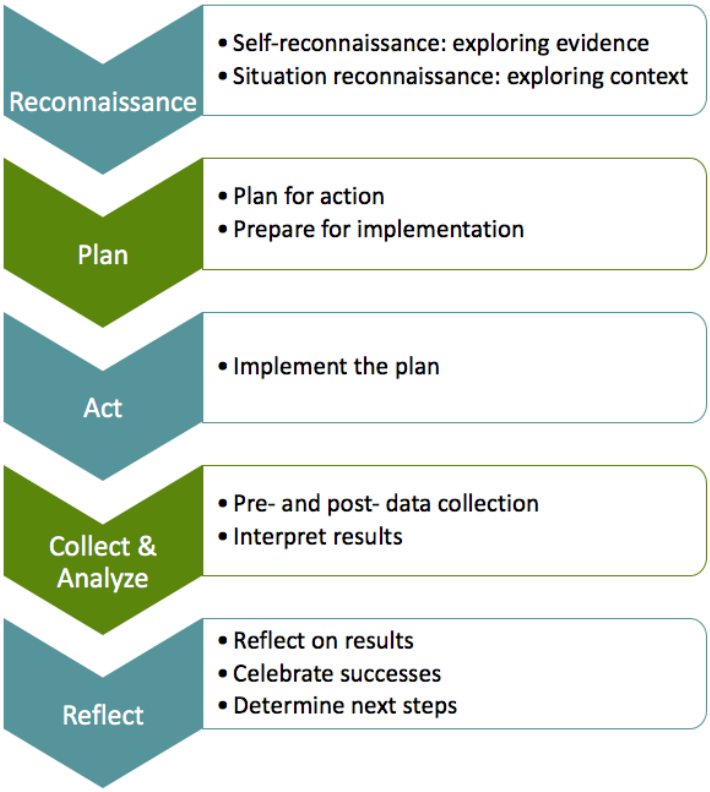


Figure 8: The Participatory Action Research framework steps**.** It is important to note that the reflect phase segues back into a subsequent planning phase. Thus, the methodology is a cyclical framework of evidenced-based reflection and change.

Adapting PAR for Music Care Partners

Participatory action research models can be applied in a number of different contexts. This means that the methodology must have some inherent flexibility. The purpose of this section is to describe the detailed process of the Partners pilot study in the context of a PAR framework (Figure 9).

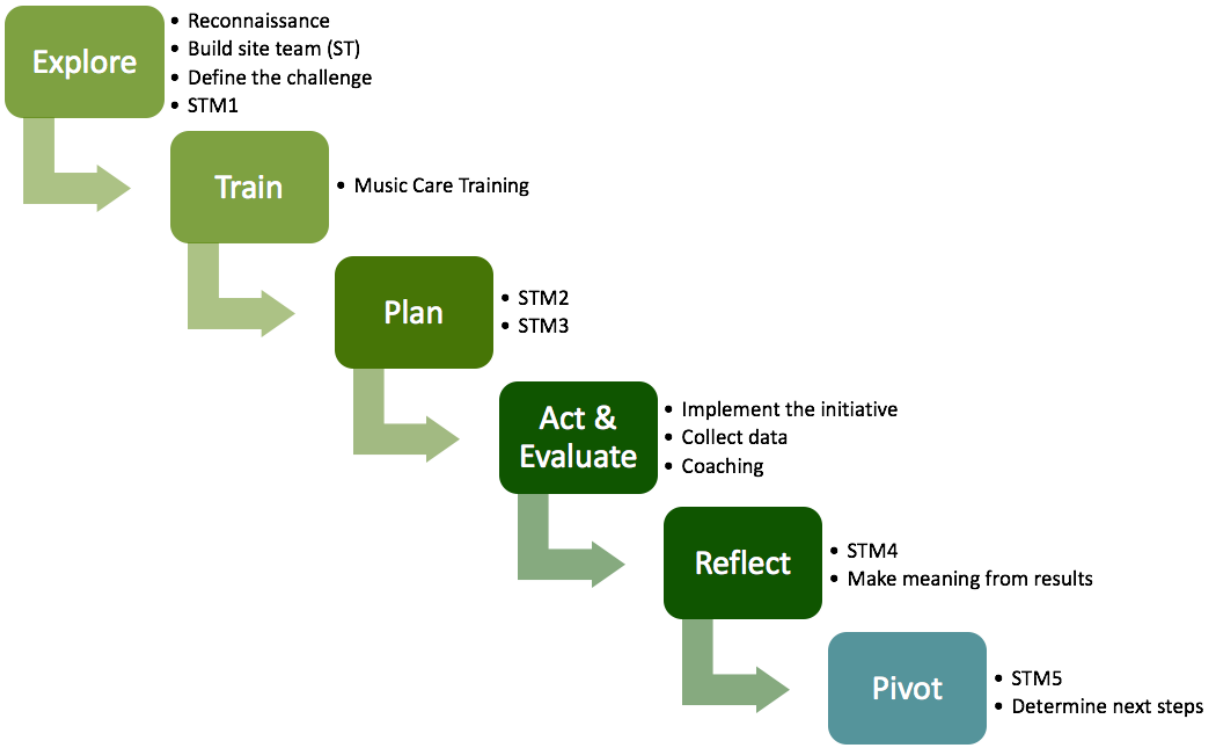


Figure 9: Pilot Study Process. It is important to note that this figure includes the five formal site team meetings within the process. Many additional meetings occurred between the research assistant and members of the each LTC community to answer questions, collect data, and provide consultancy when required.

The Partners process was oriented around five site team meetings (STMs). Prior to the commencement of the meetings, the **exploration**, or reconnaissance phase took place. Room 217's pilot study project manager and the site team lead at each site collaborated during this phase. The Partners pilot study site team in each LTC home was formed, and scoping for the project was completed.

Within the explore phase, the first site team meeting (STM1) provided an opportunity to explore the issue, the music care approach, and the research process. The site team identified key features specific to the isolation and loneliness experienced by the residents in their context. The team discussed the importance of addressing isolation and loneliness. Next, the music care approach was introduced, and site team members were oriented to the current music care environment in their home. Current music care delivery processes were mapped using the 10 Domains of Music Care delivery tool. Each site team member completed a survey about their personal attitudes and perceptions of music care in their context. Finally, the meeting facilitator introduced the study methodology, including the steps, responsibilities, and outcomes. Overall, this meeting began the very preliminary stages of planning by scoping out the three key components of the Partners pilot project: the issue, the music care approach, and the PAR methodology.

Training was an essential component of the PAR process in this study. All site team members at each site plus additional staff at each home completed a two-day Music Care Training, facilitated by a Room 217 instructor on the uses of music in care practices. This training provided the knowledge and skillset needed to implement a successful music care Initiative.

During the **planning** phase, the site team prepared for the implementation of their music care initiative. Two key site team meetings occurred during this phase, where the researchers met with the entire site team at each site to facilitate the planning process. Planning included logistics, participants, evaluation, and role clarification.

Site team meeting 2 (STM2) was the brainstorming and initial planning session for the music care initiative. A strategic goal was determined by each site which included four components: a change word i.e. increase, reduce, enhance; a factor of isolation or loneliness (Tables 1 & 2 on pages 10-12); a specific initiative (i.e. Music Wonder, Music Care Plan) and a mapping to one of the 10 domains of music care delivery (Table 4 on page 62).

Prospective participants were identified at site team meeting 3 (STM3), by an interdisciplinary team of care providers. There were three ways that a prospective participant was identified for inclusion in the initiative: the resident had expressed feelings of isolation or loneliness, RAI data (standardized resident assessment tool used in LTC) indicated isolation or loneliness, or a care provider recommended the resident to the program based on their clinical judgement. In some cases, the logbook of family visits was consulted as an additional tool to gauge resident isolation.

During most music care initiatives, we have learned that a second set of training is typically required once the details of the initiative have been worked out in order to communicate with the entire staff goals, responsibilities, processes and timelines.

The **act and evaluate** phase occurred over a 7-9-week period. Pre-implementation data collection was conducted by the research assistant before the beginning of each initiative, and post-data collection occurred directly after. During the act and evaluate phase, each participant was engaged in music in an intentional way, determined by each site and the plan they made. Throughout the implementation period, observational data was collected by the site team and community volunteers. Of note, since this was a formal research study, the **act and evaluate** phases were superimposed. This deviates from the traditional PAR process, but is an integral component of the music care methodology, because care partners are always observing the effects of the music care they provide, in order to make adjustments so that the best care can be delivered.

Reflection of the results was facilitated by the research assistant at the fourth site team meeting (STM4). Results were presented in an objective manner, and the role of the site team was to make meaning of the results for their home and situation. Analysis process for each site is reported in the following section.

The reflection phase continued through the fifth and final site team meeting (STM5), where key stakeholders and community members were invited to join the conversation. Site team meeting five also acts as a **pivot** point, because the site team and the greater LTC community will be primed to look forward to the next cycle of music care delivery. The community can choose to pivot to the next **planning** phase, where modifications and adaptations to the current music care initiative will be made, and subsequently implemented for another cycle. Alternatively, the community can choose to **explore** and scope out a new music care initiative. Regardless of their choice, the cycle of music care delivery will continue to have positive effects in the LTC community through the cyclical evidence-based stepwise process.

EVALUATION

Composite Evaluation

Demographics were collected at each home in order to characterize the study sample. These included age, gender, and number of years living at the LTC home.

At each home, we used a validated tool to measure change in isolation or loneliness. In Participatory Action Research methodology, it is important for the site team members to design the evaluation process to meet their context-specific needs. Therefore, three different validated tools were chosen based on each site's preference and interest in the construct of either isolation or loneliness.

We used observation checklists to measure observable outcomes such as smiles and resident engagement. The observation checklists also provided a space for qualitative and anecdotal evidence to be collected. The checklists were designed by the site team at each long term care home in order to ensure that the included observables were important to each unique care context. However, there was some overlap on certain outcomes across all three homes, including smiling, singing, and engaging with the care partner in the context of a musical interaction.

The Resident Assessment Instrument (RAI) is a standardized data collection tool used in all long term care homes in Ontario. In the Partners pilot study, we collected participant scores from four of the scales within the RAI: cognitive, behavioural, social engagement, and depression. While music can have positive effects on cognition, we collected the cognitive scale from the RAI in order to describe the cognitive capacity of the study group. RAI data was collected before and during the Partners pilot study, in order to measure change. Due to the nature of RAI data collection, the post- RAI scores are not reported because they have not yet been collected or entered into the system in all cases. We predicted that we would see changed RAI scores in the behavioural, social engagement, and depression domains. Paired t-tests were used to compare pre- and mid- RAI scores.

At Fenelon Court

To track *process*, Fenelon Follies checklists were filled out at the conclusion of each music visit, with all participants (Appendix A). Each checklist contained indicators of positive or negative outcomes that could result from a music visit. Indicators were divided into four categories: physical responses, social responses, mood/emotional responses, and relational responses. Beside each indicator within each category was a check box, or in other words, an opportunity to check if the indicator had occurred during the visit. The visit leader was responsible for filling out the observation checklist. If a resident smiled during the music visit the physical response "smiling" would have a check mark beside it. In addition to the check boxes, each Fenelon Follies checklist provided a place for other comments, concerns, or meaningful moments to be recorded. Checklists were kept in a resident-specific folder within the recreation office until they were picked up by the research assistant for the analysis process.

Progress was measured by comparing pre- and post- loneliness scores on a research tool called the de Jong Gierveld Loneliness Scale. This tool was developed in 1999 by Jenny de Jong Gierveld and Theo van Tilburg in order to measure the construct of loneliness (Jong-Gierveld & Tilburg, 1999). In its original form, the de Jong Gierveld Loneliness Scale consisted of 11 'items', or phrases that the participant responds to (Jong-Gierveld & Tilburg, 1999). The scale was abbreviated to contain the six most sensitive and imperative items (Figure 10). These six items make up two constructs of loneliness: the "emotional

loneliness subscale" and the "social loneliness subscale". In the current investigation, we administered all six questions, and divided answers into the two subscales during the analysis process (Figure 11). This use of this scale was determined collectively by the research assistant and the site team. The site team was more interested in the construct of loneliness during planning meetings, so loneliness tools were suggested to the team by the research assistant. The site team determined that the de Jong Gierveld Loneliness Scale was an appropriate length and had accessible content for the participants, taking into consideration their subjective cognitive capacity.

The de Jong Gierveld Loneliness Scale is a validated tool, and is used all over the world, by many different researchers and government groups. It is important to note that the de Jong Gierveld Loneliness Scale measures subjective loneliness, because the participant provides their own answers (Gierveld & Tilburg, 2016).

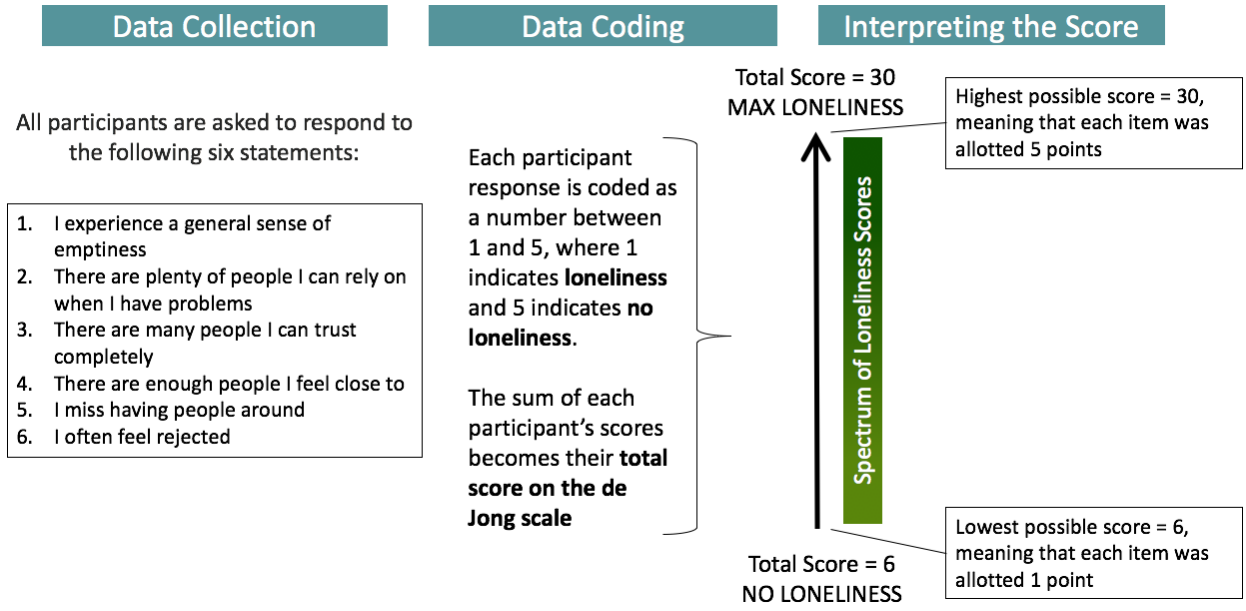


Figure 10: Analysis process of the de Jong Loneliness Scale

de Jong Gierveld Loneliness Scale: How It Works

The de Jong Gierveld Loneliness Scale consists of six statements (Figure 11) which are read to the participant, who responds with "yes", "no", or "sometimes". Responses are coded as a number, where 1 means that no loneliness is indicated by the item, and 5 means that a high degree of loneliness is present. Each participant's overall score on the loneliness scale is the summed total of their responses to each item. Since the lowest possible score on any given item is 1, the lowest possible score on the de Jong loneliness scale is 6. Similarly, since the highest possible score on any given item is 5, the highest possible score on the de Jong loneliness scale is 30. Most individuals will fall somewhere in between, with a higher score indicating a higher degree (or presence) of loneliness (Figure 10).

de Jong Gierveld Loneliness Sub-Scales

Emotional Loneliness Subscale	Social Loneliness Subscale
I experience a general sense of emptiness	There are plenty of people I can rely on when I have problems
I miss having people around	There are many people I can trust completely
I often feel rejected	There are enough people I feel close to

Figure 11: de Jong Gierveld Sub-Scales. Each box contains one 'item' from the de Jong Gierveld Loneliness Scale. This figure divides the items into the component subscales. It is important to note that during scale administration, these items are in a different order.

The six items that make up the de Jong Loneliness scale can be divided into two sub-scales, which each look at a different construct (or cause) of loneliness. Similar to the interpretation of the overall scores, subscale scores are equal to the summed total of the participant's scores on the items that belong to the scale (Figure 11). The minimum score is 3, and the maximum score is 15 for each sub-scale, where a higher score indicates a higher presence of loneliness. The data collection sheet used during pre- and post- administration of the de Jong Gierveld Loneliness Scale is in Appendix B.

Finally, we used RAI-MDS scores from the cognitive, behaviour, social engagement, and depression scales as a third measure of change. RAI scores are collected quarterly for each resident, meaning we were able to collect pre-, mid- and post- scores for each study participant. The cognitive, behavioural, social engagement and depression sub-scales are calculated by the RAI program from a collection of raw score values. They are recognized by regulating bodies and the government as a way to track within-person and group changes in LTC.

At Port Perry Place

To track *process,* Music Wonder checklists were posted above the bed of each Music Wonder participant (Appendix C). Each checklist contained indicators of positive or negative outcomes that could result from a Music Wonder visit. Indicators were divided into four categories: physical responses, social responses, mood/emotional responses, and relational responses. Beside each indicator within each category were seven boxes, which acted as seven opportunities to check off that indicator, if it had occurred during a Music Wonder visit, within that week (Figure 12). If a resident received a Music Wonder visit each day of the week, and they smiled at each of these Music Wonder visit, the physical response "smiling" would have seven check marks beside it.

☐☐☐☐☐☐☐ Smiling

Figure 12: Sample indicator from the Music Wonder checklist. Note that there is one box per day of the week; checklists were changed weekly by the RAI/education coordinator.

In addition to the check boxes, each Music Wonder checklist provided a place for other comments, concerns, or meaningful moments to be recorded. Checklists were distributed weekly by the RAI/Education Coordinator, and reviewed throughout the two-month Music Wonder evaluation process in order to identify and address any significant challenges in a timely manner. Checklists were kept in

the RAI/education coordinator's office until they were picked up by the research assistant for the analysis process.

Progress was measured by comparing pre- and post- social isolation scores on a research tool called the Duke Social Support Index (DSSI). This tool was developed in 1993 by Koenig and colleagues in order to measure the construct of isolation (Koenig *et al.,* 1993). In its original form, the Duke Social Support Index consists of ten 'items', or phrases that the participant responds to (Koenig *et al.,* 1993). These ten items make up two constructs of social isolation: the "social interaction subscale" and the "satisfaction with social support subscale". In the current investigation, we administered the first four questions, which make up the social interaction subscale (Figure 13). This use of this scale was determined collectively by the research assistant and the site team. The site team was more interested in the construct of isolation during planning meetings, so isolation and social support tools were suggested to the team by the research assistant. The site team determined that the Duke Social Support Index was an appropriate length and had accessible content for the participants, taking into consideration their subjective cognitive capacity.

The Duke Social Support Index is a validated tool, and is a component of the Geriatric Assessment Battery, used regularly in the United States. It is important to note that the Duke Social Support Index measures subjective isolation, because the participant provides their own answers (Koenig *et al.,* 1993).

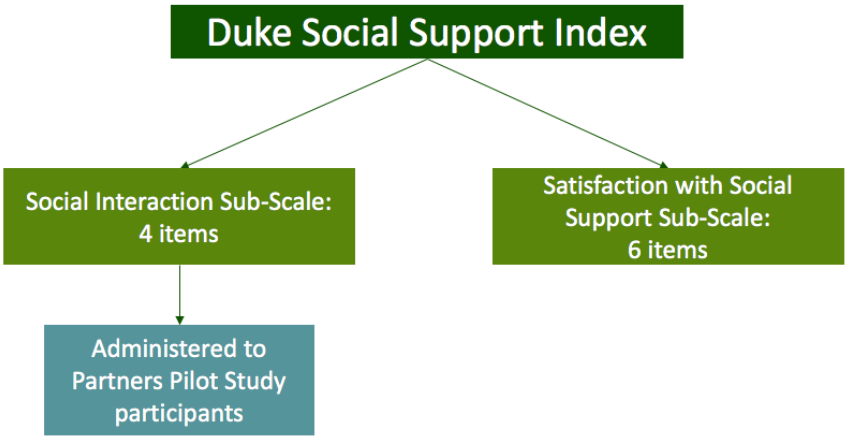


Figure 13: component parts of the Duke Social Support Index.

Duke Social Support Index: How It Works

The Duke Social Support Index consists of ten statements. For the purpose of this study, we administered the social interaction sub-scale, consisting of four statements (Figure 13). Items are read to the participant, who responds with a number (for example, the resident may feel close to 5 people, 5 would be the numerical response to item number 1) (Appendix D). Numerical responses are re-coded as a number between 1 and 3, where 1 means that no social support is present within that item, and 3 means that a high degree of social support is present. Each participant's overall score on the Duke Social Support Index scale is the summed total of their responses to each item. Since the lowest possible score on any given item is 1, the lowest possible score on the Duke Social Support Index is 4. Similarly, since the highest possible score on any given item is 3, the highest possible score on the Duke Social Support Index is 12. Most individuals will fall somewhere in between, with a higher score indicating a higher degree (or presence) of social support (Figure 14).

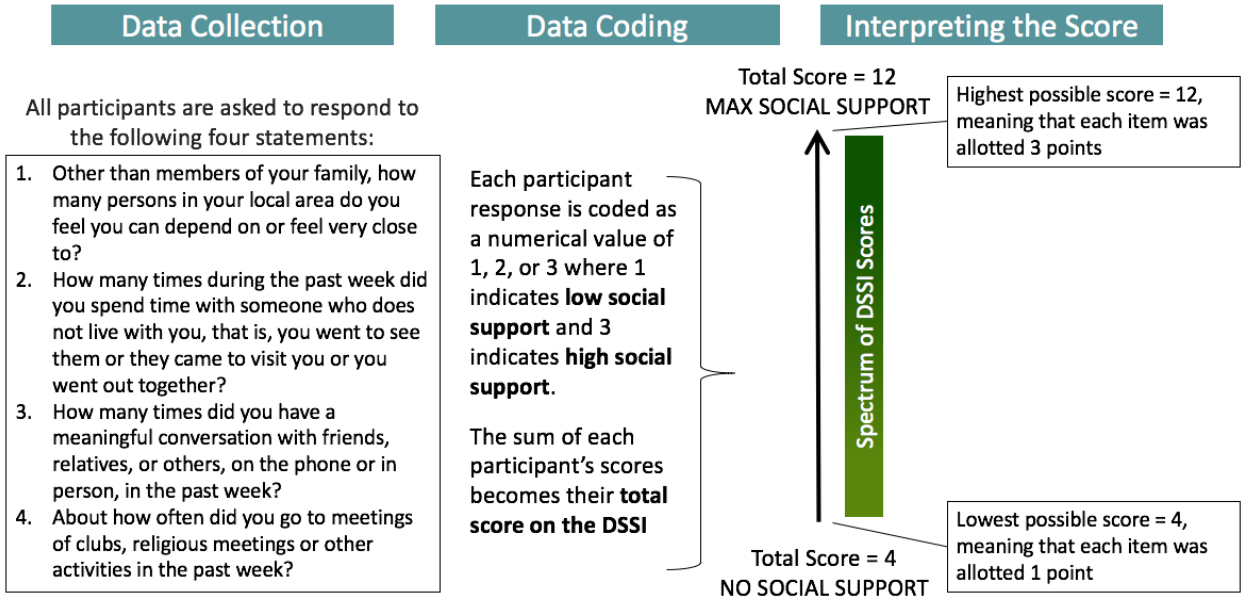


Figure 14: Analysis process of the Duke Social Support Index (DSSI)

Finally, we used RAI-MDS scores from the cognitive, behaviour, social engagement, and depression scales as a third measure of change. RAI scores are collected quarterly for each resident, meaning we were able to collect pre-, mid- and post- scores for each study participant. The cognitive, behavioural, social engagement and depression sub-scales are calculated by the RAI system from a collection of raw score values. They are recognized by regulating bodies and the government as a way to track within-person and group changes in LTC.

At Lakeview Manor

To track *process,* checklists were completed by care staff who delivered the care plans once per week (Appendix E). Each checklist contained indicators of positive or negative outcomes that could result from implementation of a music care plan. Indicators were divided into four categories: physical responses, social responses, mood/emotional responses, and relational responses. Beside each indicator within each category was a box, which could be checked off if that indicator had occurred in the context of- or resulting from- music care delivery, within that week (Figure 15).

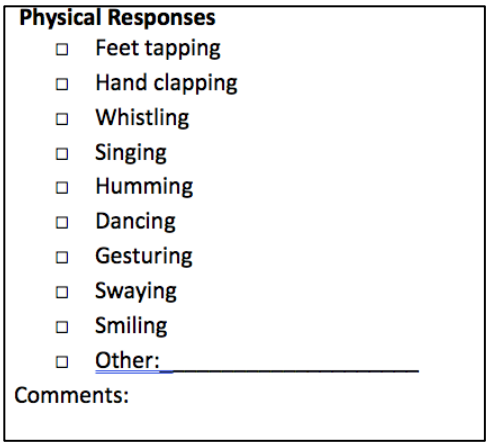


Figure 15: Sample indicators from the Music Care Plan checklist. This is the set of physical responses that could be checked off, if they were observed during the week.

In addition to the check boxes, each checklist provided a place for other comments, concerns, or meaningful moments to be recorded. Every second week, the Room 217 research assistant attended the checklists completion session with the care staff. The site team recognized her presence as important, since Room 217 is an independent organization from the Lakeview system. It was helpful to have a voice from an external context to remind staff of the importance of collecting "good data" in the context of the pilot study. One checklist was completed per participant, per week. Three different staff groups provided input, including nursing/PSW, activity and therapy. Checklists were compiled by the site team leader, and reviewed throughout the two-month study in order to identify and address any significant challenges in a timely manner. Checklists were kept by the site team leader until they were picked up by the research assistant for the analysis process.

Progress was measured by comparing pre- and post- social isolation scores on a research tool called the Friendship Scale. This tool was developed in 2006 by Hawthorn and colleagues in order to measure the construct of isolation in older adults (Hawthorne, 2006). Unlike many other validated scales that evaluate constructs like isolation, loneliness and depression, the Friendship Scale only contains six items in its original form. It is typical for a longer scale to be developed (for example containing 12-30 items) and then subsequently shortened. The Friendship Scale was developed specifically for older adults, which is one reason why it is a short scale to begin with. Although the Friendship is only 11 years old, preliminary analysis indicates that it is valid and reliable at measuring self-perceived social isolation. In the current investigation, the Friendship Scale was administered before and after the two months of Music Care Plan implementation. The use of this scale was determined collectively by the research assistant and the site team. The site team was more interested in the construct of isolation during planning meetings, so isolation tools were suggested to the team by the research assistant. The site team determined that the Friendship Scale was an appropriate length and had accessible content for the participants, taking into consideration their subjective cognitive capacity.

The Friendship Scale is a validated tool, and is used in a number of health care contexts. It is important to note that the Friendship Scale measures subjective social isolation, because the participant provides their own answers (Hawthorne, 2006).

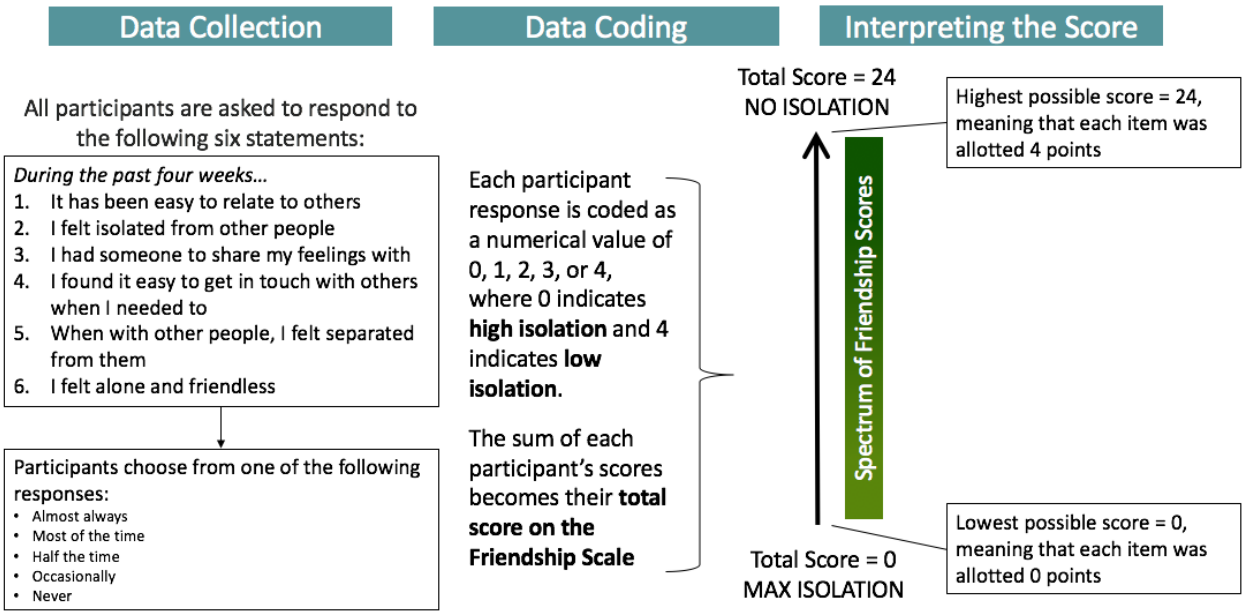


Figure 16: Analysis process of the Friendship Scale

The Friendship Scale: How It Works

The Friendship Scale consists of six statements. Each statement is read to the participant, who is provided with five potential response items (almost always, most of the time, half the time, occasionally, or never) (Appendix F). Responses are re-coded as a number between 0 and 4, where 0 means that the highest degree of isolation is present, and 4 means that there is no isolation indicated. It is important to note that each question has its own code system. For example, a response of "occasionally" to item 1 on the scale may be coded as a different number from a response of "occasionally on item 4. Each participant's overall score on the Friendship Scale is the summed total of their coded responses to each item. Since the lowest possible score on any given item is 0, the lowest possible score on the Friendship Scale is 0. Similarly, since the highest possible score on any given item is 4, the highest possible score on the Friendship Scale is 24. Most individuals will fall somewhere in between, with a higher score indicating a higher degree (or presence) of social support, or in other words a lack of isolation (Figure 16).

Finally, we used RAI-MDS scores from the cognitive, behaviour, social engagement, and depression scales as a third measure of change. RAI scores are collected quarterly for each resident, meaning we were able to collect pre-, mid- and post- scores for each study participant. The cognitive, behavioural, social engagement and depression sub-scales are calculated by the RAI system from a collection of raw score values. They are recognized by regulating bodies and the government as a way to track within-person and group changes in LTC.

RESULTS

Composite Results

Across the three sites, there were 45 participants who completed the Partners pilot study. The average age was 87.41 years (min 56 yrs, median 89 yrs, max 103 yrs). Thirty participants were female, which is 66.67% of the study sample. On average, participants have lived in the LTC home for 3.21 years (min 0.25 yrs, median 2.0 yrs, max 15.0 yrs). The average cognitive score for participants was 3.605 (min 0, median 3.0, max 6) as measured by the RAI, before the Partners pilot study.

We used three different validated tools across the three LTC homes, meaning that we cannot perform an aggregate analysis. Individual analyses of these tools are reported in the home-specific reporting sections.

Overall, across all three sites, the Partners pilot study resulted in 411 times a resident smiled, 284 times a resident was singing, and 381 happy moods. 391 conversations were sparked through the Partners pilot study, and 310 times, the resident actively engaged with a care partner through music (Figure 17).

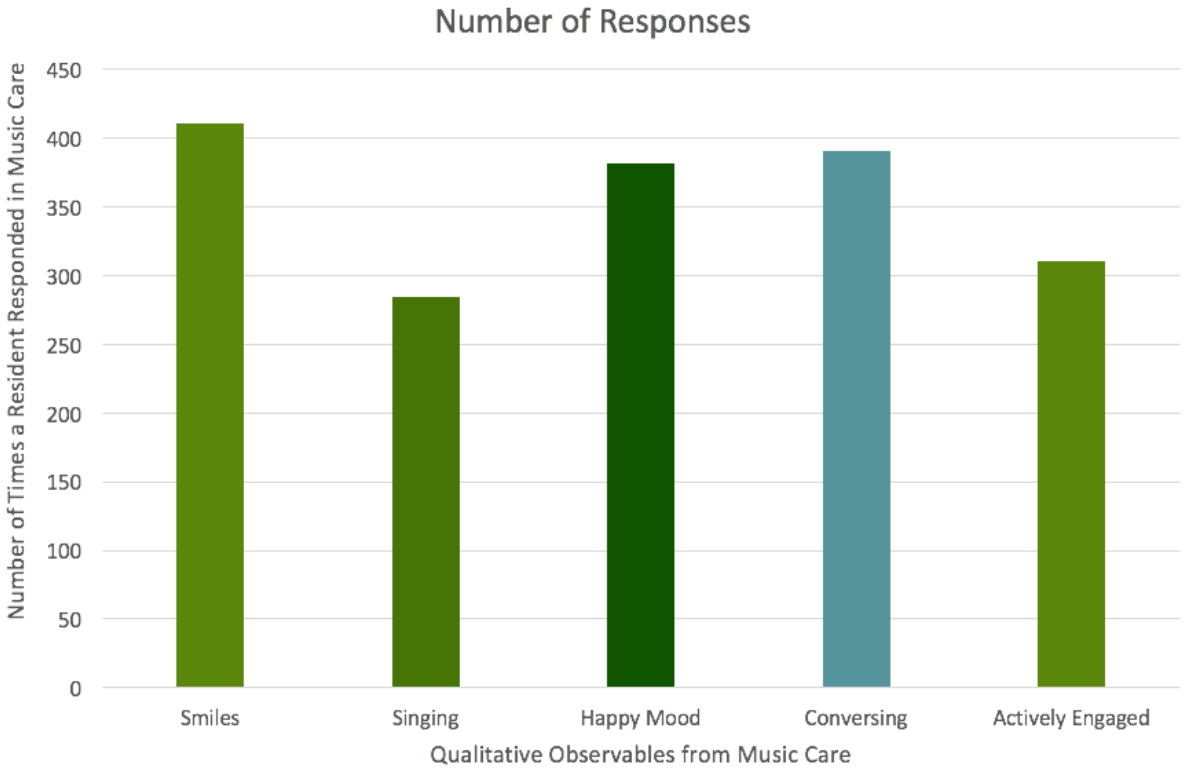


Figure 17: Total number of times each qualitative observable occurred during the Partners pilot study.

We pooled RAI scores from the three homes in order to calculate overall change on the behaviour, social engagement, and depression scales. On average, there was a decrease in responsive behaviours by 1.14 points, as measured by the RAI Behaviour scale ($t = 2.7264$, $p = 0.01092$). There was an average decrease in depressive symptoms by 0.629 points, with a trend towards significance ($t = 1.872$, $p = 0.0699$). We did not observe any significant change in social engagement scores (Figure 18).

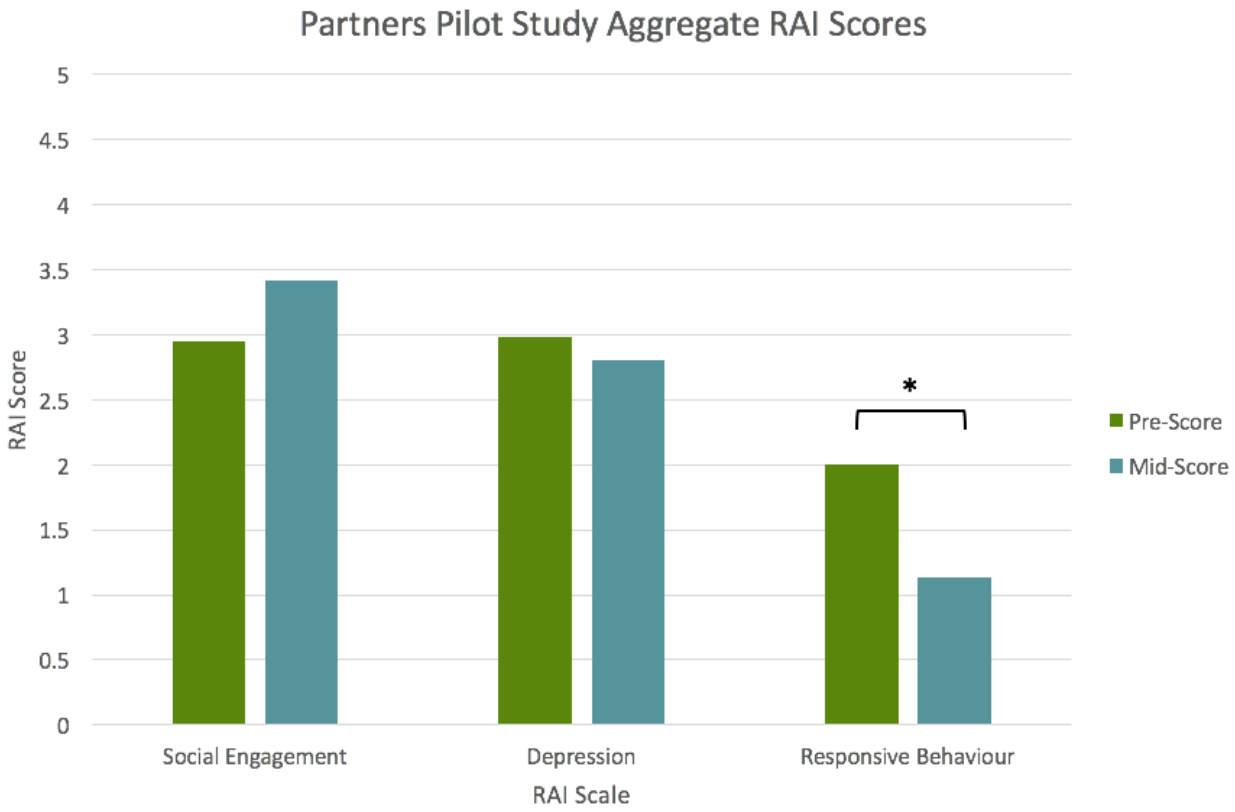


Figure 18: Average pre- and mid- study RAI scores across all three sites. The star indicates that a statistically significant change was observed for the Responsive Behaviour RAI scale.

Each site experienced various barriers and enablers to their music care initiative which have been identified in Table 3. Barriers and enablers are discussed in detail in the site-specific results below.

Music Care Initiative Enablers & Barriers	
Community	Adaptability
On-Site Music Therapist	Rollout
Musical Confidence	Integration of Music Care
Training	Person-Centred Approach
Leadership	Localized and replicable
Site Team	Staff Buy-in
Outbreak	System processes
Infrastructure	

Table 3:. Music Care Initiative Enablers and Barriers

At Fenelon Court

Music Care Initiative – Fenelon Follies

Materials: bells, drums and sticks, iPod, speakers, person-specific music folders
Timeline: two-month cycles culminating in a Fenelon Follies variety show
Personnel: The site team are the primary deliverers of music care, however involvement of primary care staff, volunteers and family members is highly suggested. Additionally, the presence of a music therapist is paramount to ensure the success of the initiative.

Description:
Each participant is engaged twice per week in a "music visit", in which a care partner engages the resident in a 10-20 minute visit, primarily through music. The musical focus of the visit varies between each participant; for example, one resident may sing a favourite song with a care partner. Another group of residents may be engaged in a group bell choir practice.

The music therapist acts as a consultant and suggests musical numbers or musical activities that would be of interest to each participant. The music therapist is the "Fenelon Follies Producer" as she is responsible for setting up the content for each participant's twice-weekly music visits. Each resident has a Fenelon Follies music folder, which contains lyrics, bell choir maps, drum fit songs, or any other tools needed for music care visits.

The two months of twice-weekly music visits culminates in a variety show, in which the residents who were part of the program perform their musical numbers for Fenelon Court residents, staff, family members, and community members.

Demographics

Twenty residents agreed to participate in the "Fenelon Follies" variety show. In addition to obtaining resident consent, all families were contacted and provided with a description of the music care initiative, as well as the scientific evaluation component of the study. As previously discussed, residents were chosen to participate based on self-reported, RAI reported, or care provider identified social isolation and/or loneliness. One resident decided after commencement of the study that she did not want to participate, and no further data was collected. The mean age of the study group was 88.6 years (min 75 yrs; median 89 yrs; max 105 yrs). Fourteen participants were female, which represents 74% of the total study group. The average length of stay at Fenelon Court was 2.6 years (min 0.5 yrs; median 1.5 yrs; max 7 yrs) within the cohort.

Music care delivery requires scrutiny of the care environment, and a whole-person understanding of the individuals who are receiving the care. In this investigation, it was important for the site team to characterize the study group, since the research investigators came from an external context. The site team listed the following as important characteristics of the study group:

- Living in LTC
- High prevalence of dementia

- Mostly women
- Provided consent
- Wide range of musical skill: from almost no experience to lots of experience
- Varied level of engagement within the home, pre-study

Fenelon Follies Music Visits

On average, music visits were 15 minutes in length. A total of 290 music visits occurred over the 9-week study timeline. Music visits ranged from one-to-one time in the resident's room, to large group sessions including the bell choir and the drum fit group.

Variety Show

The Fenelon Follies variety show was a success, with more than 40 family members, community members, and co-residents in attendance. Site team members expressed the need for a larger space to hold the next Fenelon Follies variety show, since attendance was so high, the dining area used for the show was overflowing.

Quantitative Results

Pre- and post- de Jong Gierveld Loneliness Scale scores were compared, to understand overall changes in loneliness across the study period. Scores range from 6, which indicates an absence of loneliness, to 30, indicating the most loneliness. At Fenelon Court, across the nine-week Fenelon Follies music care initiative, there was a significant decrease in loneliness scores for residents who participated. Loneliness on average **decreased by 3.5 points** ($p < 0.05$). This is very strong evidence to show that the Fenelon Follies music care initiative had a positive and measurable impact on the participating residents (Figure 19).

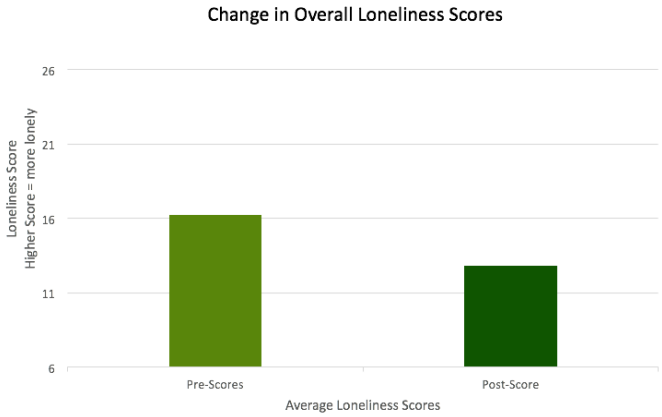


Figure 19: pre-study loneliness scores are shown in light green, and post-study loneliness scores shown in dark green. Note that these are group average scores. This means that *on average*, the loneliness scores changed by 3.5 points. However, this number may vary from individual to individual.

The two sub-scales within the de Jong Gierveld Loneliness Scale were also interpreted. Subscale scores range from 3 to 15, where three indicates the absence of loneliness, and 15 represents the maximal loneliness score.

Emotional Loneliness Sub-Scale

The emotional sub-scale captures loneliness associated with lack of a confidant, partner, or close friend with whom one can spend time and share intimate thoughts and feelings. At Fenelon Court, prior to the start of the Partners pilot study, the average emotional loneliness score was 9.9. After the study, the average score was reduced to 7.9. This represents a positive change (i.e. reduction in emotional loneliness) by a significant amount ($p < 0.05$) within the study group (Figure 20).

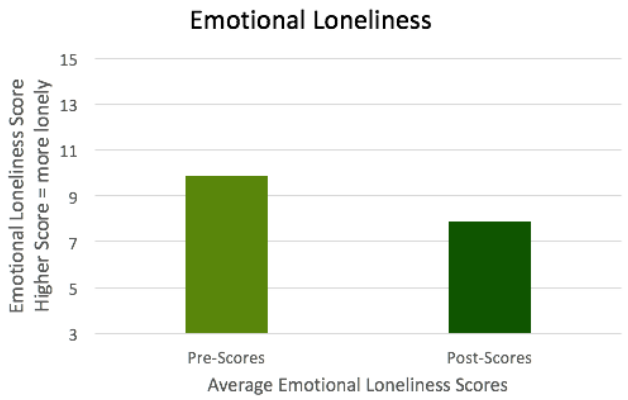


Figure 20: A 2-point change in the average score on the emotional loneliness sub-scale was observed.

Social Loneliness Sub-Scale

The social sub-scale is designed to measure loneliness due the objective size of one's social network. The pre-study social loneliness average score at Fenelon Court was 6.3, which decreased by 1.5 points across the study period to an average post-score of 4.8. This score also represented a statistically significant change ($p < 0.05$). It is important to note that both pre- and post- social loneliness subscale scores are very low. This is a testament to the recreation opportunities already available to residents at Fenelon Court, and to the sense of community that already exists at the home (Figure 21).

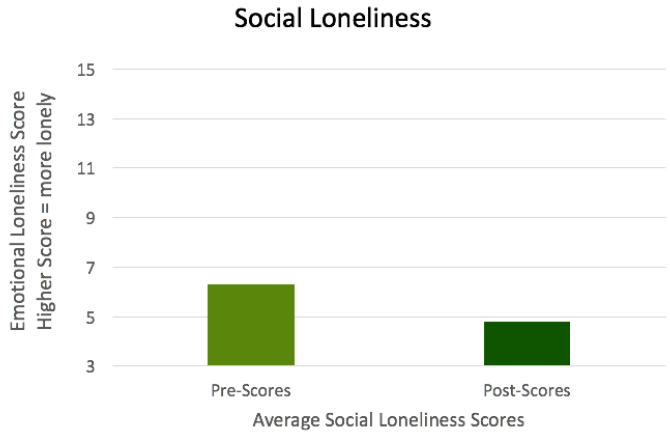


Figure 21: A 1.4-point change in the average score on the social loneliness sub-scale was observed.

Fenelon Court Enablers and Barriers

Community

Fenelon court has a strong sense of community. Site team members describe their working relationship with residents as family-like. The entire process of this study at Fenelon Court was strongly relational. This became apparent to the research assistant when she was invited to join an impromptu "family lunch" on one of her first visits to Fenelon Court – residents, staff members, and volunteers congregated in the family dining room for a hot meal.

The Partners Pilot Study and the Fenelon Follies music care initiative helped new residents to transition into the Fenelon Court community:

> "There is nobody who I would say is the same as when they started. For one new resident, he is not in our [study] but he was new when he first moved here and I think it has helped with his transition into the life of our home. Because he is immersed in [music visits], he was quickly immersed… he looks forward to coming down. It's given him social opportunities, something to look forward to… something to discuss at the [dining] table."

At Fenelon Court, volunteers are seamlessly integrated into the community. Five volunteers played a role in delivering music visits, and helped with the variety show. Two volunteers, a high school student and a master's student, consistently delivered music visits to specific residents. Their contributions were highly valued, and they developed strong relationships with the residents with whom they were musicking. Overall, volunteer-resident relationships are very strong:

> "You can't build love into [the structure of the building], the love comes from the people, the families and we still get family of residents who come back after the resident has passed away to volunteer. That means that the people are attached to the residents, they want to come and spend time with them, to volunteer."

Community also existed within the site team. The members were very supportive of each other, as was clear throughout the project and during the variety show. Perhaps most notably, the site team leader, Sharon Yeo, consistently helped to lead music visits throughout the nine-week study period. Sharon said, "I can't just ask people to do things that I wouldn't want to do myself. I think by leading this way [working on the floor] I don't miss anything and we are able to tweak things until we got it right". Sharon continued to explain that by understanding the challenges and success that occurred within the music visits, she was able to appreciate her colleague's needs, and the modifications required to make the project a success. This exemplifies the community within the site team, which probably had a profound impact on the execution of all music visits.

A tight-knit, family-like community always comes with some challenges. Most notably, Fenelon Court resides in a rural community, which means that profound connections exist between residents and all community members who visit the long term care home. This can create a challenging environment for residents who are dealing with loss. For example, if a particular resident's wife recently passed, the whole town seems to know about it. As a result, the resident is constantly reminded of their loss by the many visitors and co-residents who express their condolences. There have been many cases where the resident finds it difficult to cope with the loss due to constant reminders about it. It is especially problematic if the resident is also dealing with a cognitive condition or deterioration, like dementia.

On-Site Music Therapist

Fenelon Court currently employs an accredited music therapist for one half-day, every week. The presence of a music therapist was paramount for the success of the chosen music care project at

Fenelon Court. Before the implementation phase, the music therapist played an integral role in providing the framework for the musical visits to occur. She assisted with musical knowledge translation, and consulted with the recreation staff to determine appropriate musical numbers for the focal point of each resident's music visits. For example, the music therapist created an intuitive lead sheet for recreation staff to be able to lead the chime choir, without reading any musical notation. The chime choir leader said, "I am leading a chime choir. I have never done something like that in my entire life. Like last week I didn't have to look up, I knew where the notes were. I was able to just lead and it was amazing."

The site team referred to the music therapist as the "Fenelon Follies Director", as she was responsible for the majority of the back-end planning of the musical components of the visits and the variety show.

The site team and music therapist maintained a very healthy relationship throughout the study. The site team was comfortable asking the music therapist for guidance and support when they were unsure, and the music therapist ensured that the music-related tasks were always accessible to the self-proclaimed "non-musical" site team.

Development of Musical Confidence

The Partners pilot study has built music confidence in site team members, and volunteers alike. One team member stated "for the team that took the music care [training], they have confidence, they are singing, they are playing music." Another site team member stated "I don't care what other people think, I am just going to be here in the moment for this resident. I am no longer worried that I might sound like heck".

Consistently, site team members and other Fenelon Follies music visit leaders expressed praise and pride as the residents progressed through the nine weeks. They recognize that the residents progressively memorized larger sections of their music, and that that their engagement in the music contributed to the resident's enjoyment: "At first I was like there is no way I am singing with them, I said, I am awful, they might not remember the lyrics. I was worried about having to reteach them all the things I taught them the day before. And now, I will even ask Sharon, "do I have time to sing today?" and I hate it when she says I don't."

Training

The Partners pilot study opened up the doors to the integration of music care at Fenelon Court by introducing the "music care lens" to the home. The site team recognized the importance of training, and began to implement music care strategies in their regular care practices, even before the Fenelon Follies planning had occurred:

> "I shared a story, nothing to do with this project but we had a patient that was palliative. Very close to death, it was her birthday and we thought that we can't go in there with streamers and bells and whistles so we used the education we had just received and we thought we could instead hum and that the vibrations [would reach her] and put our hands on her. We would just softly hum Happy Birthday to her… We did a practice round in the hallway then we went inside, took a moment and placed our hands on her and hummed her Happy Birthday. And she actually passed away the next day but we felt that it was not only meaningful for us, meaningful for her… The staff around us saw us in a different light, they see [the recreation staff] as the fun people. It was really beneficial for all of the other staff to see us in that other light."

During the fourth site team meeting when the results were presented to the team, the room was buzzing with ideas and novel ways that music could be more fully incorporated into resident lives at Fenelon Court. The content of this discussion provides profound evidence of the team's mutual understanding of music as an approach to care. This discussion is summarized in the following section, Next Steps.

Leadership

During any research investigation, the leader manages individuals who make up the team, while simultaneously providing navigation for the overall team in the direction of the desired outcomes. In this case, the site team leader's role was to ensure that the music care team stayed on track with their musical visits, and had the support they needed to be successful. All residents who participated were offered music visits at least two times per week, for the entire nine weeks of the Partners pilot study. It was also not uncommon for participants to have more than two visits (i.e. 'bonus visits'). It is because of the incredible leadership that all of the music visits took place:

> "Sharon kind of laid it out and said look this is going to happen and this is how it will benefit the residents. Everyone tries to do things that benefit the residents but Sharon and her team found ways to go the extra mile, and to me that is what this program represents."

As well as leading the team through the logistics, planning, and ensuring that the visits occurred, Sharon also acted as a resource to her team on the floor when necessary, and with the details of visits:

> "She has been a great leader. A lot of it is her, she gets everyone to be in the mood to do it all. And if something goes wrong she is always able to find another way to smooth out any issues that arise. She is awesome; she makes everything move smoothly."

Finally, after the results were presented to the site team, one of the site team members approached the site team leader to ask, "What's next?" This comment speaks on behalf of the site team leader's positive relationship with members of her team. They are genuinely looking forward to, and working to start, the next music care initiative.

Outbreak

Fenelon Court was initially delayed at the onset of the study due to an outbreak. An outbreak in LTC means that there is a significant portion of residents who are sick from a seasonal flu or infection. The home is closed to family and visitors until the outbreak subsides. This prevented the music therapist from visiting the home for a number of weeks during the training and planning process. Additionally, certain site team members were absent during the pre-planning phase because they worked at multiple facilities, and therefore not able to be at Fenelon Court during the outbreak. While this posed some challenges for the group, the site team also recognized some unforeseen benefits. First, music care training took place during one of the outbreaks. The home was much quieter due to the outbreak and decreased presence of care providers and visitors alike, which allowed the "the team [to] receive a richer experience than if they were amongst everyone and everything going on".

Infrastructure

Another challenge was building the infrastructure of volunteers and care providers to complete the sheer volume of music visits required for this study. An average of three visits per resident per week were targeted during the planning process, however during the first two weeks of implementation this was reduced to two visits per week so that the project would remain manageable. The site team stuck rigidly to the two visits per week for each resident, and in many cases, residents received extra music visits when volunteers or family members were able to provide them.

Music Care Stories at Fenelon Court

During the nine-week Fenelon Follies music care initiative, there were 204 times a participant smiled during a visit. On 180 occasions, the resident left a music visit in a happy mood. Residents actively engaged with the music visit leader 246 times during the study. Finally, 255 conversations were sparked by music visits. The observable checklists provided the aforementioned summed observables, as well as the following participant case studies:

Case 1: "James"

James' big number for the Fenelon Follies is "Calendar Girl." Rehearsing it has become an important part of his daily life at Fenelon. This became especially clear on this one day.

James is known for being endlessly positive and upbeat, so it was a shock to see him so upset today. Pain in his foot had flared up so horribly that he was delirious with suffering. He was crying out for his parents, and screaming out memories of being in the war. His agony was heart-wrenching to staff, who stayed by his side as he wept. Eventually, a student took him outside to try to help him settle.

Then something remarkable happened. James started singing Calendar Girl. He started singing on his own, and then his care staff joined in. This song became a source of comfort for everyone, James and his care team, who were all so relieved to see his suffering pass. Eventually, through the singing, James settled down and fell asleep, his agony for the day finally over.

Turns out, rehearsing for the Fenelon Follies does more than just brighten up his days - it gives him tools to comfort himself in moments of struggle.

Case 2: "Preston"

"I can't wait to sing with Kennedy," Preston said today. Kennedy is the high school volunteer that Preston has been rehearsing his song with for Fenelon Follies. They have a wonderful connection. Staff notice that when Kennedy is there, Preston is extra-motivated to practice his song.

But she's not the only one he loves to sing with. Having a show to rehearse for gives a whole new purpose when he receives visitors. Preston has requested other lyric sheets so that he can practice his song with his family when they visit.

After Kennedy visited today, one staff member overheard Preston practicing his song in his room alone. "He sang robustly," said this staff member. This connection, and the music itself, gives shape to Preston's days, richness to his relationships, and purpose to his life at Fenelon Court.

Case 3: "Sheila"

Sheila's big number for the Fenelon Follies is a Highland Fling. It's a dance she's done years before, and she practicing to get it back in shape has been a journey. Some days, she's nervous to try it – "I haven't done this in years," she says. Turns out, Sheila doesn't really need anyone to teach her the dance moves – she knows them just fine, and has even taught staff how to do some of the Highland moves too!

Practicing her dance isn't just an opportunity to rehearse for the Follies – it's a chance to learn more about Sheila and spend quality time together. One day, after rehearsing the dance, we watched Highland dance competitions on YouTube, and she recounted her tales of her wild dancing days. On

days when Sheila is nervous to get back into the dancing, a little encouragement goes a long way. It's clear that dancing is such an important part of who Sheila is.

Case 4: "Olivia"

At first, Olivia refused to participate in the Follies chime group. But over time, her enthusiasm has become some of the strongest in the ensemble! Olivia shows up smiling and happy to be a part of the group. She wheels herself to the front of the room, ready to work. She is focused on the leader, playing her chime clearly and accurately when it is her turn.

The goal of a chime group isn't to make people follow the rules, or show up on time, or even play the best music possible. It's to create an experience where everyone matters, and where we are all a part of something meaningful. Seeing Olivia's attitude about this group transform is a hopeful sign. It shows that she truly feels valued.

Case 5: "Ian"

"There's something wrong with my voice," Ian told me today. He has been practicing a song for the Follies, and normally, he leaves his rehearsals happy and full of stories. He sings beautifully, and has recounted memories of his choir days. Singing reminds him of his family, and has shared that his mother had a beautiful singing voice.

Today, Ian is agitated about his voice. He is convinced he can't sing. So we spent some time together in my office, singing and reassuring him that he sounds great. Like many singers, Ian seems prone to feeling insecure about his performance. Anyone who's ever sung in public can probably relate to this! What's wonderful is that other residents and staff reassure him that he sounds wonderful. The whole community comes together to keep Ian singing. While some days may be challenging, the reward comes from working together and knowing he is a part of a bigger team that has his back!

At Port Perry Place

Music Care Initiative – Music Wonder

Materials: Music Wonder Resource Guide, travelling music note
Timeline: unlimited
Personnel: A strong site team is required, with representation from all stakeholder groups within the care community. The site team must lead by example through Music Wonder visits.
Skills: Music Care Training, Level 1

Description:

Music Wonder invites all care partners – including nurses, PSWs, recreation aides, family members, administration staff, and others – to engage in short bursts of musicking with residents. The Music Wonder Resource Guide provides a description of musicking, and some ideas for care partners to music with residents.

To ensure that regular visits are occurring, the "Music Wonder Music Note" is a physical music note that is passed between care partners, including staff, family members, and volunteers. When a care partner is passed the music note, they must engage in a short music visit with a resident before passing the note along.

Demographics

Twenty-four residents agreed to participate in the Music Wonder initiative. In addition to obtaining resident consent, all families were contacted and provided with a description of the music care initiative, as well as the scientific evaluation component of the study. As previously discussed, residents were chosen to participate based on RAI reported, or care provider identified social isolation and/or loneliness. Two residents decided after commencement of the study that they did not want to participate, and no further data was collected. One resident passed away during the study period, and one resident was removed from the initiative because he began to exude sexual behaviours during Music Wonder visits. The mean age of the study group was 87 years (min 56 yrs; median 89 yrs; max 96 yrs). Thirteen participants were female, which represents 65% of the total study group. The average length of stay at Port Perry Place was 3 years (min 0.5 yrs; median 1.5 yrs; max 14 yrs) within the cohort.

Music care delivery requires scrutiny of the care environment, and a whole-person understanding of the individuals who are receiving the care. In this investigation, it was important for the site team to characterize the study group, since the research investigators came from an external context. The site team listed the following as important characteristics of the study group:

- Isolated in rooms
- High prevalence of responsive behaviours
- Not participating in activities
- Willing participants, and families provided support
- Signs of depression
- Typically reserved

Music Wonder Visits

On average, music visits were 7 minutes in length. Music visits ranged from one-to-one time in the resident's room, to tub-room musicking, to musicking with a group of residents in common spaces.

Quantitative Results

Pre- and post- Duke Social Support Index scores were compared, to understand overall changes in social isolation across the study period. Scores range from 4, which indicates the lowest amount of social support, to 12, indicating the most social support. At Port Perry Place, across the seven-week music care initiative, there was a small increase in social interaction, as measured by the Duke Social Support Index.

Behaviours, as measured by the RAI, on average decreased by 1 point ($p < 0.05$). This means that across the Music Wonder initiative, responsive behaviours significantly decreased in participating residents (Figure 22). Additionally, depression scores as measured by the RAI decreased by 0.75 points, with a trend towards significance ($p = 0.15$). Due to the nature of this pilot study, these findings are quite profound (Figure 23).

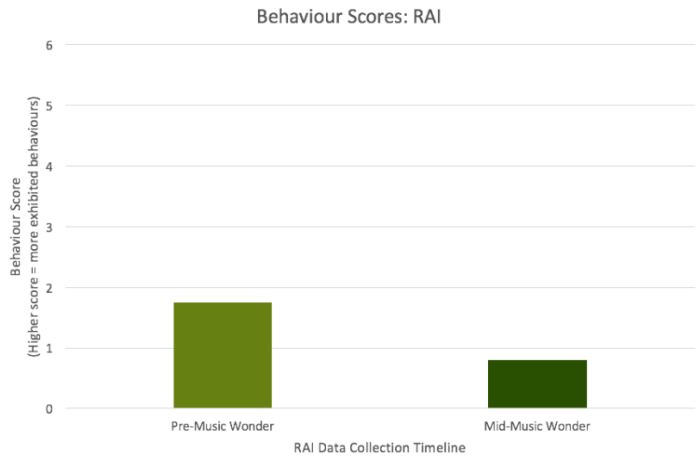


Figure 22: pre-study responsive behaviour scores are shown in light green, and post-study responsive behaviour scores shown in dark green. Note that these are group average scores. This means that *on average*, the responsive behaviour scores changed by 1 point, which is a statistically significant change. However, this number may vary from individual to individual.

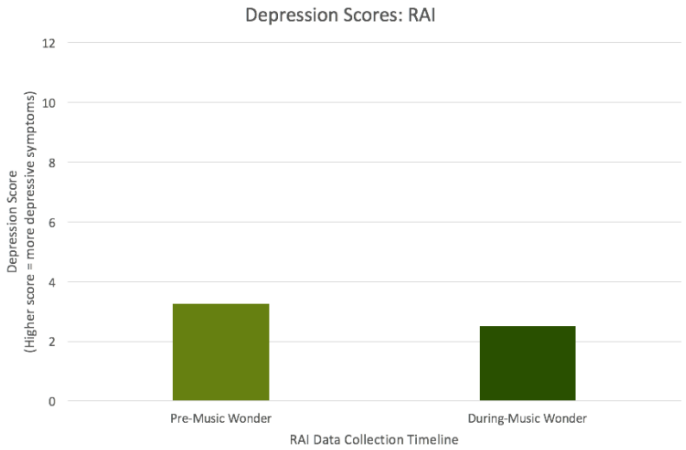


Figure 23: pre-study depression scores are shown in light green, and post-study depression scores are shown in dark green. Note that these are group average scores. This means that *on average*, the depression scores changed by 0.75 points, with a trend towards significance. However, this number may vary from individual to individual.

Port Perry Place Barriers and Enablers

Site Team Enthusiasm

From the very beginning, there was a tangible excitement surrounding the Music Wonder initiative at Port Perry Place. One site team member said, “I love music… when Music Care was offered here, I was very thrilled to be able to take the course!” The site team seemed to have an underlying understanding of the importance of music in care practices, prior to the beginning of the study. This enthusiasm carried the Music Wonder initiative through some unforeseen challenges, and played a role in its success.

This enthusiasm has always been about what music can do, and not about the type or amount of ‘quality’ within the music. Port Perry Place care providers have a profound understanding of the music care approach: “We are very non-judgemental when it comes to music, if it is fun and you are smiling and you look happy then whoever is listening to it is going to have the same response.” This liberal view of music as an accessible approach to care helped other staff members to engage in the process.

Overall, site team members did not need any convincing of the importance of music in care practices: “I did find, I was doing it more often when we were doing Music Wonder, people were waking up with a smile, and say “oh yeah hi!” and they would go on singing back to me.”

Perhaps the site team enthusiasm was due to the many ways in which Port Perry Place was already incorporating music into care practices: “Using music in the home for a sing-along, the ipod, personalized music just singing across the halls, and personally for me every morning I go into the dining rooms and I have a song and the residents just love it.” It is evident that Port Perry Place values music as a care practice. The Music Wonder initiative helped provide focus for the use of music, and increased the amount of intentionality associated with its implementation.

The site team also advocated for staff ideas to be incorporated into the Music Wonder initiative: “Staff came up with the idea of putting music in the bathtub. I mean some of our staff were doing that anyhow, they were playing their phones. But they could get caught and get in trouble, but now they have *permission* to do that. We have validation. Now it’s okay to be doing this and we are not sneaking behind anyone’s back and feeling you are going to get caught doing this. It is something you know is going to work, and it is something that you started.”

Staff Training

One of the first pieces of the process was a music care baseline training. The entire site team plus eleven other Port Perry Place staff members participated in the Music Care Training, where they learned how to intentionally incorporate music into their care practices. The site team then came up with the idea of the Music Wonder initiative, which involved the engagement of many other staff members, who did not receive the baseline Music Care Training.

The site team recognized the need to provide information and training to staff members, before the staff would be able to incorporate musicking into their daily routines, as expected by the Music Wonder initiative. Two training sessions were provided to staff members, at which all staff learned about the benefits of music in care, and some tangible examples of its use, that could be mimicked in their own setting. Additionally, the site team provided support throughout the implementation process.

The site team also recognizes the need for ongoing staff training: “I think going forward, to make this easier for everyone to get involved, we need to continue with the education, saying that yes we all have a task to do, but music can make our task much simpler.” This is a profound recognition, since ongoing training is an important part of all established care practices. It recognizes the parameters required for the integration of music care into daily routines at Port Perry Place.

Leadership of the RAI/Education Coordinator

Since the Partners pilot study was a formal research investigation, having the in-house RAI expert on the site team was instrumental to the success of the study. During the recruitment process, the RAI coordinator was able to cite applicable scores to inform the process of choosing residents. Additionally, due to her familiarity with the research process, she understood the importance of collecting clean data, and adhering to the strict research timeline. On the education side, this individual took on the role of conducting all of the staff training, in some cases, when it did not get done by other site team leaders.

Adaptability

Due to the nature of the Music Wonder initiative, home-wide buy-in was required. As is true in all systems settings, gaining staff engagement is critical to making any new initiative work. At Port Perry Place, staff engagement throughout Music Wonder was challenging. However, the site team continuously adapted practices in order to better fit the needs of staff members, and to ensure that the individuals *wanted* to be involved in the initiative: "For any project you have to make sure people want to do it. You need people to buy in, and people to get the buy in from the people selling it to them. You want to make the people say, 'oh this is wonderful' but when they see that you are enjoying it along with them they seem to think, 'well why not get on the bandwagon, this is fun, it seems daring, I never thought I could sing'".

One of the ways the site team was adaptive was through the amount of participation, in different musical capacities, of the site team. In other words, the site team was not just asking staff members to music with residents, they were exemplifying musicking in diverse ways. For example, by singing in the dining rooms, singing announcements over the PA system, engaging residents one-on-one in their rooms, and by encouraging the use of music in tub rooms.

In addition to exemplifying the Music Wonder program through their own musicking, the site team came up with a number of innovative strategies to engage staff more fully in the Music Wonder process. For example, during the three-week roll-out period, posters were hung on each home area in order to "stimulate curiosity" around the idea of using music to care for residents. Music Wonder checklists were printed on colour paper so they would capture staff attention, and pens were hung to accompany checklists, so that all care partners would have access to a writing utensil. Regarding the evaluation process, one care partner said, "I find with the Music Wonder it has made me think more because we had check sheets for a while, and I'm going in and I'm deliberately trying to do something. Whereas before I would just walk in a room anyhow, now I am more conscious of my singing."

Additionally, the site team leader created a Music Wonder Handbook in order to support staff in their musicking practices. The Music Wonder Handbook contained an explanation of the initiative, as well as applicable song lyrics and other musicking tips to assist care partners.

Overall, the site team did a great job at adapting the Music Wonder process in order to maximize staff buy-in and engagement.

Resident Inclusion on Site Team

One of the strongest components of Music Wonder was the voice of residents on the leadership team. Having two residents as an integral part of the site team truly made the team richer in terms of ideas, process, and implementation. It was a resident on the site team who came up with the name "Music Wonder", and the other resident on the site team participated in music visits with other residents on a few occasions. Site team leaders spoke of the importance of resident influence, not just for Music Wonder, but in all home practices.

Rollout and Implementation

Port Perry Place had a challenge rolling out the initiative, and it ended up taking a few weeks longer than expected: "Even though we had an idea, thinking about what it was going to look like, what we were going to do when we actually started working on it… It was slow getting that process started." There were a number of factors that caused this challenge. First, the Music Wonder initiative requires an

incredible amount of staff involvement. The higher the number of individuals, the more challenging it is to gather around one common goal. This is especially true when the large group is composed of a number of smaller working groups, such as at Port Perry Place: "As a PSW, I would like to see more PSW staff, more every day staff using [music] with their hands-on care." Second, the presence of the Ontario Ministry of Health and Long Term Care Inspection Team added pressure on the rollout process. As dictated by regulation and policy, the leadership team had to turn their attention to the ministry, which may have influenced the Music Wonder timeline. Each year, the ministry does a home inspection in each of the 627 LTC homes in Ontario to ensure LTC homes are complying with legislation and regulations to protect the home and residents' wellbeing. The inspection is unannounced. This will always be a limitation within the long term care setting, and important to keep in mind moving forward with future music care initiatives as it understandably impacts the focus of leadership.

Site Team Fluidity

Another challenge was the fluidity present within the site team. Many care partners at Port Perry Place attended some, but not all of the site team meetings; this made it challenging to focus around a core group of Music Wonder leaders. Additionally, it is difficult to assign tasks with accountability measures when the working group is not clearly laid out.

Music Care Stories at Port Perry Place

During the seven-week Music Wonder initiative, there were 175 times a participant smiled during a visit. On 172 occasions, the resident left a music visit in a happy mood. Residents sang during a Music Wonder visits 105 times, and expressed pleasure with the music visit 122 times. Finally, 111 conversations were sparked by music visits. The observation checklists provided the aforementioned summed observables, as well as the following participant case studies:

Case 1: "James"

James has been playing music his whole life. He loves to sing, and is a foundational member of the resident choir at Port Perry Place. James also plays the mouth organ, and the harmonica, and he is eager to educate anyone who will ask about the difference between the two! It was through the Music Wonder initiative that Port Perry staff found out the extent of James' musical talents, and the amount of enjoyment he feels from engaging with others through music. Upon finding out that he plays the mouth organ and harmonica, staff asked James' daughter to bring his precious instruments to his home at Port Perry Place. James now keeps them both in a special spot in his room.

It had been a long time since James had played his mouth organ or his harmonica, and it took some practice time before he was happy with the way he sounded. Weeks later, James plays harmonica solos with the resident choir, in between his singing verses. He plays the mouth organ when one of his friends from the community comes to visit the home.

The Music Wonder initiative has given James a purpose to associate with his love for music. He now shares music with other residents at Port Perry Place.

Case 2: "Sheila"

Sheila usually does not enjoy her time in the tub room. She is one of the residents who has to be convinced to come for a bath. Even then, she often resists bath time. It seems to cause Sheila a lot of stress.

One day, Kristen the PSW found out that Sheila really enjoys to listen to music. She asked Sheila's family to provide some of Sheila's favourite tunes, which were put on an iPod that is kept in the tub room in Sheila's home area. Now, Kristen has no problem during bath time with Sheila. Kristen says, "come on back here, we're just going to have a couple of songs, and I'm going get you changed while we listen to music!" Sheila immediately joins Kristen in the tub room, and they have a great conversation about Sheila's favourite songs and artists. Kristen says, "let's sing it together!" and the two concentrate on sharing a special moment together, facilitated by the music. Kristen is relieved that the music has lowered Sheila's anxiety today.

Case 3: "Manraj"

Manraj keeps to himself at Port Perry Place, and can usually be found in his room, gazing out of his window. He has a beautiful view of trees, and often, of sunshine. Through the Music Wonder initiative, Manraj has re-connected with the songs of his culture. He enjoys having the company of visitors in his room, and one activity staff in particular named Sarah has encouraged Manraj to explore and share the songs of his past.

"I never would have imagined the songs that he recalled, or how important they were to him," Sarah said. "When Music Wonder is around, you see wonders because he is happy and he celebrates through music."

Sarah and her colleagues are excited that Manraj is expressing himself through music – they have struggled to engage him in other, more traditional activities in the home. Their hope is that Manraj can continue to express his cultural roots through music, and in other contexts in his home at Port Perry Place.

Case 4: "Jean"

Jean has lived at Port Perry Place for four years now, and has had a number of different roommates over the years. Despite her incredibly positive nature, Jean does not get along with each and every roommate that she has lived with. "Family time is the most important time," says Jean. She loves it when her family comes to visit, and cherishes those moments.

In the bed, across from Jean is Hilda, who is equally kind and big hearted, but would prefer to have her own room. Understandably so, Jean and Hilda respect each other's differences, but sometimes disagree, which can be challenging for all four women who share room 202.

Jean is a participant in the Music Wonder initiative. One day, a care partner was in room 202, singing familiar Elvis songs with Jean. Since their beds are separated by less than two metres, Jean's closest roommate, Paula, joined in the singing. Next was Eleanor by the window, and finally, Hilda began to sing at the chorus. They all knew every single word to the Elvis Presley songs, which brought back youthful memories.

It was a very special moment in room 202, when all four ladies put their differences aside for a few musical moments. They continued to sing after the care partner had left, and could be heard down the hallway at the nurses' station, which caused many smiles from care staff, who were well versed in the individual differences of the ladies living in room 202.

At Lakeview Manor

Music Care Initiative – Music Care Plans

Materials: iPods, radios, Room 217 Pathways videos, other person-specific technology
Timeline: unlimited
Personnel: The site team plays an important role in coaching staff members and ensuring that all care partners have the tools to carry out the care plans. Additionally, a point person (selected member of the site team) is required to consult with care staff in order to create the care plans, and to implement them in the systemic care plan for each individual, within the home.

Description:
Music Care Plans involves the creation of person-specific care plans for staff to implement during the care of each individual who participates in the program.

Ultimately, Music Care Plans can be created for each resident shortly after they move into the long term care home. It is important that care staff have a period where they can get to know the individual, and their specific challenges, before the music care plan is created. After all, person specific long term care challenges cannot be identified until the resident has been settled within their new home setting.

The site team works with front line care staff to identify person-specific challenges, and musical solutions to these challenges. The music care interventions will be entered into each individual's care plan, to be carried out by front line care staff each day/week.

Demographics

Six residents agreed to participate in the Music Care Plans initiative. In addition to obtaining resident consent, all families were contacted and provided with a description of the music care initiative, as well as the scientific evaluation component of the study. As previously discussed, residents were chosen to participate based on the recommendations of the front-line care staff who regularly work on the Beaver River home area. One resident was removed from the study shortly after the beginning of the care plan implementation, due to illness. No further data was collected. The mean age of the study group was 84.4 years (min 57 yrs; median 90 yrs; max 94 yrs). Four participants were female, which represents 80% of the total study group. The average length of stay at Lakeview Manor was 6.4 years (min 0.25 yrs; median 4.0 yrs; max 15 yrs) within the cohort.

Music care delivery requires scrutiny of the care environment, and a whole-person understanding of the individuals who are receiving the care. In this investigation, it was important for the site team to characterize the study group, since the research investigators came from an external context. The site team listed the following as important characteristics of the study group:

- Varied cognitive state
- Different modes of transportation (used to get out of room)
- Single rooms, some shared washroom

- Different medical challenges
- Observed time in room is high
- Beaver River
- Quiet, not speaking about loneliness
- “In their shell”

Music Care Plans

Five unique Music Care Plans were created, one for each resident involved in the study. Care plans took on many shapes and forms, and were truly person-centred. The care staff recognized daily challenges that each resident faced, and determined intentional ways that music could be applied to minimize or eliminate these challenges. For example, one participant did not have a lot of cognitive stimulation during her day. Therefore, a music care plan was created that incorporated the Room 217 Pathways videos and other stimulating musical exercises (through the programming department) to address the challenge of cognitive stimulation. Since the nursing and PSW care staff set up the Pathways videos and programming staff completed music visits, this care plan crossed two departments within the home. While some care plans were completed by one department only (for example during physiotherapy, three times per week), most Music Care Plans bridged at least two departments.

Quantitative Results

Pre- and post- Friendship scores were compared, to understand overall changes in social isolation across the study period. Scores range from 0, which indicates the highest amount of social isolation, to 24, indicating the absence of social isolation. At Lakeview Manor, across the eight-week music care initiative, there was an average decrease in isolation by 4.25 points, as measured by the Friendship Scale, in the five study participants (Figure 24). This change was associated with a p-value of 0.1044, which is deemed statistically significant in the context of a small-sample pilot study (Lee, Whitehead, Jacques & Julious, 2014).

We also observed significant changes (in the context of a pilot study) on three of the four RAI scores that were collected. Behaviours, as measured by the RAI on average decreased by 2.2 points ($p = 0.1609$). This means that across the Music Care Plan implementation period, responsive behaviours decreased in participating residents (Figure 25). Social engagement scores increased by 1.6 points ($p = 0.07774$), and depression scores decreased by an average of 1.6 points ($p = 0.0774$) across the study period. Overall, these findings are quite profound for this pilot study with five participants.

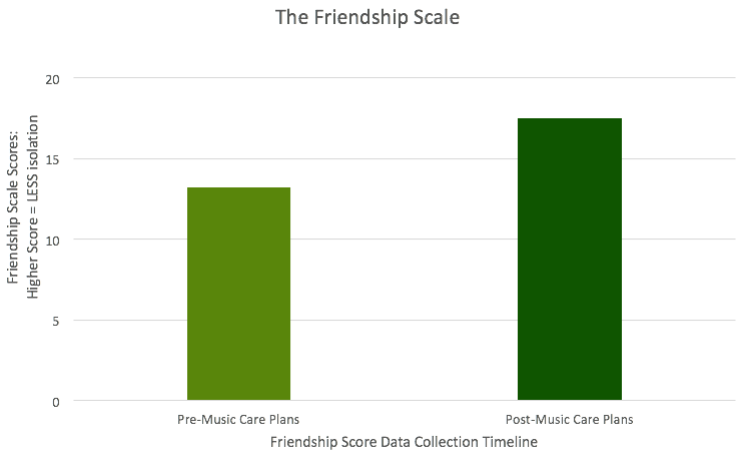


Figure 24: pre-study Friendship scores are shown in light green, and post-study Friendship scores shown in dark green. Note that these are group average scores. This means that *on average*, the Friendship scores increased by 4.25 points, which is a statistically significant change in a pilot study. However, this number may vary from individual to individual.

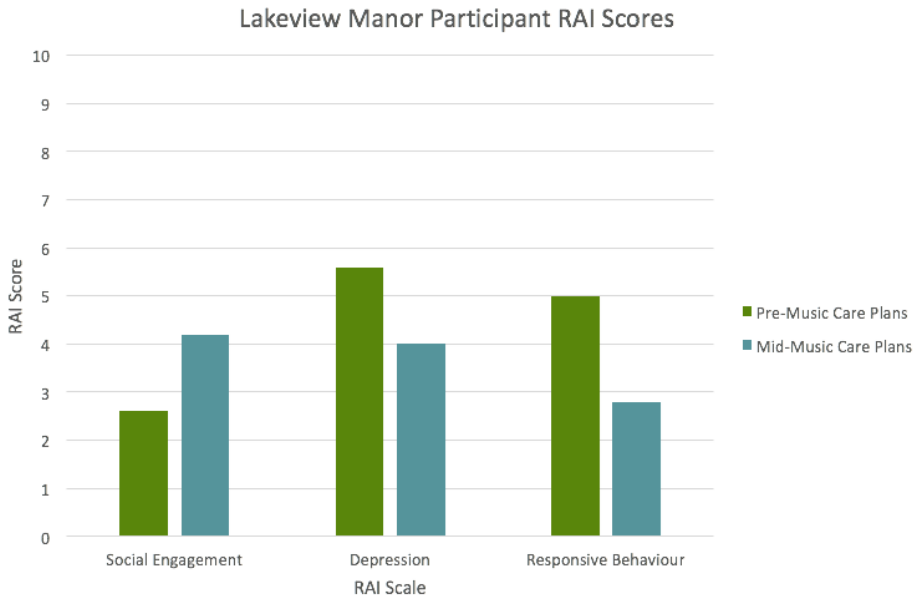


Figure 25: depicts the change in three RAI scales across the Music Care Plans initiative. Pre-study scores are shown in light green, and post-study scores are shown in blue. Note that these are group average scores. This means that *on average*, the scores changed by the depicted amount. However, this number may vary from individual to individual. All scales showed change in the desired direction. Higher social engagement scores indicates more engagement in home life; lower depression scores indicate deceased depressive symptoms; and lower responsive behaviours indicates a decreased amount of undesired behaviours.

Lakeview Manor Barriers and Enablers

Integration

Integration takes on two forms in the Music Care Plan initiative. First, staff groups became integrated within the site team, and through the process of implementing Music Care Plans on the floor. At Lakeview Manor, there was representation from a number of different groups on the site team, including recreation, care staff, therapy, volunteers, family members, and social work. These varying

perspectives provided ideas and strategies during planning to meet the needs and values of all care partners. Once the initiative was implemented, these same care groups worked together to complete the music care plans on a regular basis. Site team members often stepped in to another care partner's regular duty if they were needed for evaluation, training, or simply to have a moment to complete a music care plan.

Second, care plans were integrated into daily lives of residents. Since the care plans were person-centred, each plan fit seamlessly into the daily practice of the participants. Overall, this lead to very high participation and completion of the care plans throughout the study.

Person-Centred

One of the most profound aspects of the Music Care Plans initiative is that it is completely person-centred. From the creation of the care plan, to its implementation and evaluation, each one is personalized to meet the care needs of the specific resident. All staff groups came together for a think-tank meeting before the care plans were conceived. Since different care staff see residents in different contexts, by bringing all care staff groups together, the most effective care plans could be created for each resident. Despite the logistical challenges with this, it was an important factor that played into the success of the Music Care Plans.

Localized and Replicable

The site team recognized the inherent challenges in implementing a music care initiative that crossed the boarders of staff roles and responsibilities, and which was to be completely integrated into the existing care system at the home. As a result, the site team made the strategic decision to focus on a small number of residents in one home area. This was important for two reasons. First, it helped gain staff buy-in (discussed below) and second, to ensure that the process of implementation was sound, before it was rolled out to the entire home. By showing staff, families, residents, and management staff that the Music Care Plans initiative was viable in a small number of residents in one home area, the site team gathered valuable evidence and process-related information to aid in the home-wide roll-out of the program.

Staff Buy-In

Due to the nature of the Music Care Plans initiative, it was important to gain buy-in from the entire care staff on the Beaver River, the home area where the initiative was implemented. Since a Music Care Plan could be incorporated into any part of a resident's day, this meant that all types of care staff could be recruited to deliver a care plan to a certain resident. For example, during this Pilot study, staff from the therapy, recreation, nursing, and personal support worker (PSW) staff groups helped with music care plan delivery.

The site team recognized that buy-in could be a challenge, which is one of the reasons they chose to implement the initiative within one area of the home only. Although there was resistance from a number of care partners at the beginning, everyone was invested in the care plans as soon as they saw them in action, and observed their profound impact on the residents.

An interesting factor played into the process of gaining staff buy-in at Lakeview, which was an outbreak that occurred in the first two weeks of Music Care Plan implementation. One of the key players on the site team was forced to work on one home area only, for the duration of the outbreak. Due to the music care plans, she remained on Beaver River. During this time, she was able to devote a large portion of her

day to implementing the Music Care Plans, which modeled best practice to the other care staff on that home area. The site team firmly believes that the buy-in from staff would not have been so strong if the outbreak, and resulting focus of music care staff, had not occurred.

Leadership

Leadership has emerged as an important theme at all three sites of the Partners pilot study, but for different reasons. At Lakeview Manor, we learned that good leadership not tied to a certain position or level of authority at the home, it is completely dependent on the *person*. At Lakeview, the site team was headed by Melody Irwin, who is the home's social worker. She demonstrated innovative and strategic thinking when she compiled a site team comprised of all different care providers in the home. Together, this team was able to successfully implement the care plans, in other words, incorporate a new systems-level structure into the work days of the site team's *peers.* At Lakeview, peer-to-peer buy-in has been challenging to gain in the past. In contrast, the Music Care Plans have had a positive impact on all staff groups.

A new level of comradery has blossomed through the Music Care Plans. Colleagues who did not acknowledge each other or communicate to a high degree are now chatting in the hallways, and sharing music care success stories.

Weeks after the official study had finished, this comradery and understanding of the importance of music care still existed between site team members and other Lakeview staff. Recently, a recreation staff member was portering a resident back to the Beaver River home area after a program on the main floor. She was called over to another resident's room by a PSW, who seemed very excited about something that was happening in the resident's room: "the resident was singing, from her chest, and with happiness and pride, 'Home, home on the range!'" It was a magical moment for the resident and for the staff members who were involved. These two staff members, who prior to the Music Care Plans would pass each other in the hall, were now sharing a successful moment in the care that they had provided for this resident.

Finally, the site team demonstrated leadership in their ability to recognize the needs of their own system and their subsequent leveraging of systemic processes to meet these needs. For example, site team members received permission to purchase additional music care resources, as requested by front-line care staff involved in implementing Music Care Plans. Overall, Lakeview Manor used a diverse set of music care resources and practices. This re-highlights Lakeview's focus on person-centred music care practices.

Rollout and Implementation

Lakeview Manor initially had challenges with the implementation timeline, which took longer than planned or expected. Although Music Care Plans only involved five residents, rolling out the project included the involvement of the three major care staff groups (therapy, recreation and nursing/PSW), which ultimately adds extra steps to the process. Buy-in was challenging to achieve during the preliminary planning weeks, but took off once staff groups started to see the impact that the care plans were having on the residents.

System Processes

Another challenge was the perception that the site team did not have the authority to implement care plans and to enforce their completion by other care staff in the home. This perceived 'lack of power' was

a struggle for the site team at times, but in the end, the excellent leadership team came up with ways to navigate the system in a respectful and efficient way.

Music Care Stories at Lakeview Manor

During the eight-week Music Care Plans initiative, there were 22 times a resident was singing during the week. 35 times a resident smiled during music care, 29 times a resident appeared happy. 27 times, the resident actively engaged with the music care provider. The observable checklists provided the aforementioned summed observables, as well as the following participant case studies:

Case 1: "Marg"

Music can bring us to life in extraordinary ways. This is why it was so moving to watch the transformation that music made in Marg's life. Marg has been known to sleep through most of her days. She requires spoon-feeding at meal times, and has been identified as one of the residents most at risk of isolation.

Since her musical visits, staff have seen a remarkable transformation. Marg sustains more eye contact through music visits, which is unusual for her. She mouths words along to songs even though her verbal expression is otherwise limited. She plays the shaker, and seems happy to see her music partners.

But these effects aren't limited to her musical visits. Since music, she has started visiting more areas of the home during the day, and has been staying awake more during the day. She has even started feeding herself, which is a remarkable new shift. Simple music care visits are changing the overall quality of life for Marg. It's amazing to imagine what might happen if more residents like Marg had access to this wonderful experience.

Case 2: "Dana"

Dana has been living at Lakeview for 10 years. She rarely leaves her room. She will call out to people walking by the hallway. Staff have shared that it's challenging to deliver her care procedures.

Since musical visits, Dana has shown a transformation that has blown staff away. She has been attending events at the main hall, something she had never done in the past. Her mood seems less angry, and she seems generally more at ease. She has been requesting to attend Pathways music programming, and has participated in more residence life. Her care staff have discovered that simply using a bit of music during insulin shots provides just the right amount of distraction. The small changes in Dana's life from music are shifting her out of isolation and into relationship.

Case 3: "Anna"

Anna is 57 and confined to her bed. She rarely leaves her room, and regularly swears at care staff. She often says she is bored, and who could blame her?

Music care visits have revealed a new side of Anna. She laughs during music care times, and swears far less. She engages in the visits, talking and asking questions about the music. She doesn't say she's bored as often. One RPN says she sings during care times. She strikes up conversation with staff about music, and has even attended events in the main hall!

Anna's life has many challenges, but it seems that Anna is happier these days. The music care visits are making a noticeable impact in Anna's quality of life.

KEY LEARNINGS

Composite Takeaways

Overall, the Partners pilot study showed that implementing a music care initiative is feasible way to positively impact the resident experience in a LTC setting. Specifically, we know that strategically targeted music care initiatives can decrease isolation and loneliness, responsive behaviours, depressive symptoms, and increase social engagement in participating residents. For staff and the greater LTC home's community, music care training and music care initiatives can contribute to culture change by impacting the way that care providers approach their caring practices. The Integrated Model of Music Care (IMMC) is therefore an effective delivery framework for embedding music care in long term care day-to-day care practices.

Real-world factors must be accounted for when doing research and innovation in LTC settings. Depending on the site-specific context, these factors can act as enablers, barriers, and in some cases as both. From a research perspective, inherent person-related factors provide critical information to carry forward as LTC research is applied in other homes. At the same time, these same factors can act as significant challenges for the research team. For example, outbreaks are a factor that we learned can act as both a barrier and an enabler to music care delivery. At one site, outbreak delayed the research process, while at another site, an outbreak kick-started music care delivery by forcing key staff members to remain within one home area, for targeted and consistent implementation of music are. Other barriers and enablers include but are not limited to: shiftwork, high turnover rate of staff, leadership, and the site team. Through the Partners pilot study, Room 217 has developed an understanding of the different barriers and enablers. This knowledge can be carried forward to future Partners sites, and used in consultancy/coaching roles.

Despite the comprehensive and robust protocol, we did not anticipate the amount of support that the site team would require at each home. We attribute this need to person and context-related factors, and will need to account for this unforeseen requirement in future renditions of Partners in other LTC settings.

In each Partners pilot study site, we observed a 'ripple effect' that was associated with the implementation of music care. Many more residents and LTC community members benefited from the music care initiative than were officially enrolled in the program. This finding supports the use of music as a tool to change culture, since it can pervasively impact everyone who it surrounds. In the Partners pilot study, music care initiatives have helped residents transition to the LTC context, reach a new level of friendship with roommates, connect to their home community, and create a sense of meaning and purpose, to name a few.

The plan for and execution of the music care initiative can be a predictor of its success. We found that a comprehensive music care initiative could be challenging to integrate into the well-established systems of a LTC home. Therefore, the rollout process, which is the first part of the implementation process, was paramount to the success of the initiative. Staff training, gaining staff buy-in, and realistic goals were enablers to successful music care rollout, while power struggles inherent to systems was a barrier to effective music care rollout.

Finally, we learned how to guide a site team through the process of scoping, planning, initiating, evaluating, and reflecting on a music care initiative. We recognized the importance of setting up the

team to pivot to their research-informed next steps, independent of the Room 217 research team. Subsequently, we learned how to provide the site team with tools to carry out this process, so that music care integration could be a sustainable approach to care. In this way, we are contributing to culture change by kick-starting a perpetuating process of thoughtfully and intentionally incorporating music into care practices, through an evidenced-based integrated model of music care.

Site-Specific Takeaways

Music Care Plans at Lakeview Manor were quintessentially person-centred. Each participant's daily challenges were considered during the creation of his or her music care plan. This was a unique feature, since the other two sites took a more generalized approach. Music care plans were fully integrated into the systemic structures at Lakeview so that the pilot project can be replicated in other home areas in the future. Lakeview scrutinized their own implementation process, which allowed them to show proof of concept of the initiative, and will help the team to advocate for funding, resources, and staff time to implement Music Care Plans home-wide.

Port Perry Place values the resident voice, which was well-represented on the site team. Port Perry's philosophy of inclusion was evident in all components of the Music Wonder initiative: residents were on the site team, the initiative was structured in a home-wide and pervasive way, and all staff, families, and community members were invited to participate. In addition, the RAI/Education coordinator at the home provided RAI data that was exceptionally thorough, and supported the site team through the entire evaluation process.

Leadership stands out as an exceptional component of the Fenelon Follies initiative at Fenelon Court. Not only did the site team leader navigate within the home's system, she also consulted with the on-site music therapist. The site team leader used the music therapist's knowledge and expertise to inform the musical components of Fenelon Follies. The music therapist provided tools to the site team to make music accessible to all.

KEY COMPONENTS OF PARTNERS MUSIC CARE INTEGRATION

One of the outcomes of the Partners pilot study was identifying and defining four key areas of the Partners Music Care Integration program: roles and deliverables of each of the Partners, profile of on-site leadership, aspects of music care education, the conceptual framework and intentional operating process of the IMMC.

Partners Roles and Deliverables

In any partnership, there is an arrangement amongst entities, to cooperate in order to advance mutual interests. There are three essential entities who form partnership in the Partners Music Care Program: the researchers, the LTC community, and the funding partner. Each partner has a role to play with important deliverables.

The researcher, in this case, the Room 217 Foundation, acted as primary investigator, setting up the research and data protocols, acting as consultant and coach within the process. Key deliverables included establishing and facilitating a process, communicating with the site team leader, advising on evaluation and tools, collecting and analyzing data, and reporting. The LTC community provided a competent site team leader who had decision-making authority and oversight of the music care initiative. Key deliverables included organizing a representational site team, recruiting resident participants, providing meeting hospitality, facilitating education, and developing a plan of action. Specifically, the plan of action included rollout, implementation, tracking evaluation, trouble shooting on site, and acting as liaison between LTC community and all other stakeholders. The funding partner, in this case, the Ontario Trillium Foundation, was the primary social impact investor in the pilot study. Key deliverables included a letter of agreement, a reporting structure, seed grant in-servicing, and dollars.

On-site Leadership

Leadership is one of the most important variables in the integrated model of music care. Without it, a great idea can dissipate into thin air. A music care initiative requires thinking outside the box, and a strong leader who can identify the path to a new frontier. This is essential to sustainable Partners music care integration. The pilot study demonstrated that the on-site Partners team leader needs to show competencies in the following areas: results-oriented, relational, communication and coaching, innovator, resident-focused, and problem-solver.

The site team leader establishes a representational site team. A site team is a group of 7-10 people who are passionate about advancing music care at their LTC home and who have a demonstrated record of commitment. Ideally, care partners on the site team are representational of the various persons who live, work and are connecting to the LTC community, including the RAI coordinator, recreation staff, care staff such as a PSW and nurse, family members, residents, volunteers and co-op students.

Music Care Education

Training is the foundational component of the IMMC. Understanding that music in care can have both beneficial and adverse effects is essential to responsible music care delivery. Music Care Training, Level 1, is a baseline training for the site team and other community members. It increases their confidence in using music through both theory and practice, and offers tangible strategies for music care.

Staff buy-in is enhanced when they are offered training on the music care initiative. It is recommended that the site team develops an in-service for care partners prior to initiating a music care initiative.

Having a music care expert on staff like a music therapist will increase a site team's ability to learn about music care evidence-based practices, as well as provide musical expertise.

IMMC – Conceptual Framework + Intentional Operating Process = Sustainability

The Partners program is based on the conceptual framework of the IMMC (pages 60-62) that has an intentional operating process (page 24). In this way, Partners can become an integrated and sustainable approach to care within a LTC community, providing a viable adjunct and alternative to traditional and pharmacological means.

The initial set-up of a Partners program includes expert consulting/coaching, music care training, music care resources and a guided implementation of a music care initiative that cycles through the 6-step process. Based on the Partners pilot study, the initial cost of the Partners program for each LTC home is $21,500. By investing upfront, a LTC home will be equipped with the knowledge and tools to integrate a music care approach into the LTC community and into a resident-centred approach within a sustainable process.

NEXT STEPS

As a result of the Partners pilot study, Room 217 has identified four measurable next steps in order to grow the Partners program.

1. Scaling – While the Partners program is shovel-ready, scaling Partners into 15-20 more LTC homes in urban settings with more culturally and age diverse populations may provide additional insight into the integrated model of music care.
2. Follow up – Determine what, if any, follow up is needed in "Music Care Partners-designated" LTC homes by implementing 6-month check-ins over a 2-3 year period within the 3 pilot sites.
3. Social Return on Investment (SROI) – As a social enterprise that seeks to use music to leverage meaningful change in healthcare, Room 217 needs to conduct an SROI that will valuate outcomes and services of the Partners program. Ultimately, the SROI will help the public to understand the implications of investing in music care in a changing healthcare system.
4. IMMC Change Wheel – The Partners pilot study inspired a new component of the IMMC to include a "Change Wheel" which would provide a more in-depth description of challenges like isolation and loneliness that LTC residents face with evidence-based music care strategies and corresponding domains. Developing a Change Wheel will become an important internal tool as an inventory for music care initiatives and interventions to provide resident-centred music solutions.

INTEGRATED MODEL OF MUSIC CARE

Music Care

Music is a fascinating tool to use in care settings, because of its diverse applications. From a person-centred point of view, music impacts all human dimensions – biological, emotional, social, cognitive, and spiritual (Figure 26). Music can, therefore, be applied in care practices that address any of these dimensions. Music interventions must be targeted and intentional. The music practice used to improve a biological human challenge will be very different from a musical practice used to improve spiritual wellbeing.

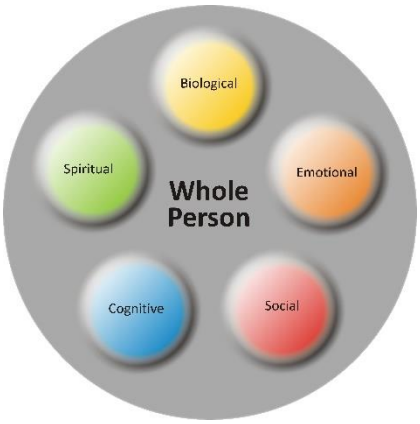


Figure 26: Dimensions of whole-person care.

Music care is not a specific practice, rather a paradigm within which music is inherently understood to be part of life, playing an integral role in all aspects of caregiving and care settings. Music care is intended to be relational and to improve quality of life and care, thus contributing to overall culture change in health care. The goal of music care is to integrate and assimilate music into the care environment as a primary approach to whole person care.

The Model

The integrated model of music care (IMMC) is a research-informed, best-practice, prescriptive tool to systematically determine best musical solutions to address a care-related problem or personal challenge. The music care integration model (Figure 27) is based on a four part construct, beginning with education.

The foundation of the IMMC is the **informed** use of music, understanding that music can have both beneficial and adverse effects on a person's wellbeing. Training a site team comprised of representative care partners who are motivated to lead in the music care approach within their care context gives them confidence and skill to use music in some capacity, regardless of their musical training.

Building on that knowledge, care partners determine a purposeful **intention** to use music to make a change, such as reducing time resident spends alone by using a music care initiative or intervention in a specific music care domain. A plan is developed using a music care initiative or intervention. A music care *initiative* is a creative solution implemented by care partners such as a bell choir, using personalized playlists, or hiring a specialist. A music care *intervention* is a clinical, evidence-based practice using sound or music delivered by a specialist such as a music therapist, harp therapist, or a speech pathologist.

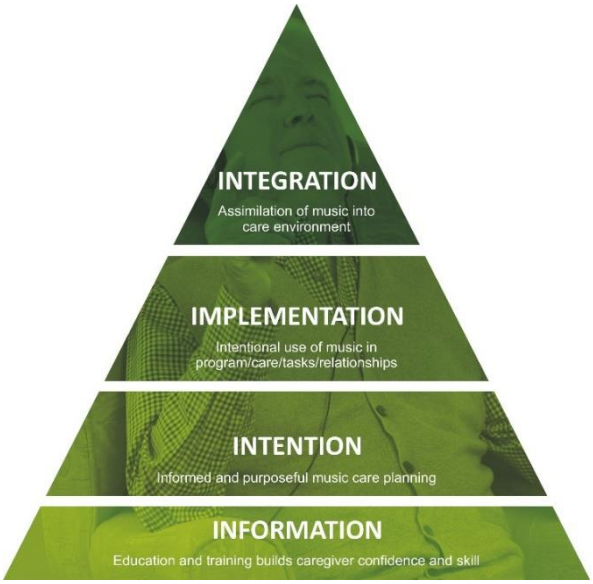


Figure 27: The Integrated Model of Music Care (IMMC)

Initiatives and interventions are **implemented** through a measurable program, care task, or therapeutic relationship supervised by the site team. Changes are tracked by both process and progress evaluation tools.

Music care **integration** happens when music is assimilated into the care environment as a means of change. Integration occurs when all care providers see music as a viable option to address human challenges and are able to follow a process of intentionally introducing music into the care setting. Ensuring that music becomes a part of people's lives in healthcare contexts can be a lofty goal, but can happen with a thoughtful process.

Variables of IMMC

The IMMC addresses the reality of doing music situated in person-centered care and accounts for four variables: the health care setting, the type of care, leadership, and the dynamic nature of music (Figure 28). By health care setting, we mean the context of care such as long term care, hospice, hospital, home, assisted living, childcare, and community living housing. By type of care, we mean specialized care focus and provisions such as medicinal care, spiritual care, palliative care, cognitive behavioural therapy, dementia care, activities of daily living care, and rehabilitative care. By leadership, we mean decision making authority, vision and passion for music care, communication skills, project management skills, and ability to empower a team. By the dynamic nature of music, we mean the ways in which music can be expressed, made, interpreted, and delivered as care.

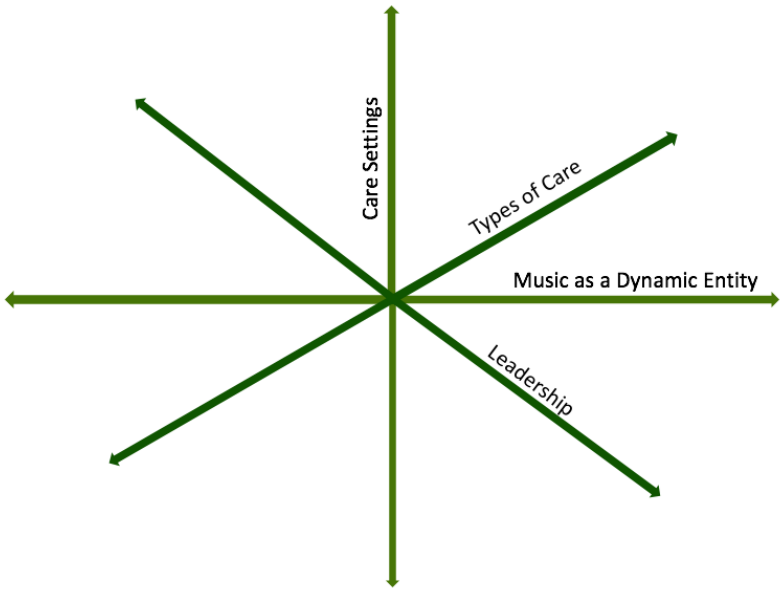


Figure 28: The variables of the IMMC.

Recognizing the variables that are controlled for within the IMMC is an important process since the model can be applied to a wide variety of caring practices.

Music Care Delivery Framework

While the faces of music care may be variable, they are contained within several common delivery platforms. The 10 domains of music care in Table 4 shows the key delivery activity in a particular domain. Examples of initiatives and interventions are given in each domain.

Table 4: The Ten Domains of Music Care Delivery

Domain	Key delivery activity	Examples of Initiatives & Interventions
Community	Accessing music performance between healthcare site and community-at-large	School groups, community bands, church choirs coming in OR residents/patients going out to symphony concert, fiddle club, musical theatre
Specialties	Performing therapeutically-intended music by practitioners with certified training	Harp Therapist, Music Thanatologist, Bedside Singers, Music Can Heal, Health Arts Society
Music Therapy	Providing treatment using music within a therapeutic relationship as an accredited scope of practice	Client populations: mental health, rehabilitation, palliative, autism
Musicking	Engaging informally and spontaneously with music	Playing instruments, singing, dancing
Programming	Integrating music formally in programs	Sing-along, listening groups, music bingo, music appreciation, Pathways Singing Program, Java Music Club
Technology	Incorporating technology to deliver music for a care-related goal	iPod programming, bedside music terminals
Sound Environment	Bringing intentionality to sounds made in the care environment	Recording of Tibetan bowls in prayer room, sounds to accompany labyrinth experience, virtual music instruments
Music Medicine	Administering prescriptive music-based interventions for medically related outcomes	Rhythmic Auditory Stimulation, Melodic Intonation Therapy
Training	Training to integrate music into regular care practice	MCCP, NMT, Music Therapy Continuing Education, In-services, workshops
Research	Investing in evidence-based research using music and music strategies to enhance care	Music and Health Research Collaboratory, McMaster Institute for Music and the Mind, Conrad Centre for Music Therapy

The music care delivery framework is an important part of the IMMC because it clarifies terms, it maps music uses, and it optimizes potential areas of consideration for music care integration.

REFERENCES

Bailey, L. M. (1986). Music therapy in pain management. Journal of Pain and Symptom Management, 1(1), 25-28.

Bernatzky, G., Presch, M., Anderson, M., & Panksepp, J. (2011). Emotional foundations of music as a non-pharmacological pain management tool in modern medicine. Neuroscience & Biobehavioral Reviews, 35(9), 1989-1999.

Cattan, M., White, M., Bond, J., & Learmouth, A. (2005). Preventing social isolation and loneliness among older people: a systematic review of health promotion interventions. *Ageing and Society*, *25*(01), 41–67. http://doi.org/10.1017/S0144686X04002594

Coffman, D. D. (2002). Music and quality of life in older adults. Psychomusicology, 18(1–2), 76–88.

Dillon, P. (2008). Reconnaissance as an unconsidered component of Action Research. *… : Action Learning and Action Research Journal*.

Ferrer, A.J., 2007. The effect of live music on decreasing anxiety in patients undergoing chemotherapy treatment. J Music Ther 44, 242-255.

Emerson, K., Boggero, I., Ostir, G., & Jayawardhana, J. (2017). Pain as a Risk Factor for Loneliness Among Older Adults. *Journal of Aging and Health*, 898264317721348. http://doi.org/10.1177/0898264317721348

Foster, B, Berends, A, Pearson S (2016). A framework for Delivering Music in Canadian Healthcare Settings (Part 3 of 3). Music & Medicine 8(4) 199-206.

Gierveld, J. D. J., & Tilburg, T. V. (2016). A 6-Item Scale for Overall, Emotional, and Social Loneliness. *Research on Aging*, *28*(5), 582–598. http://doi.org/10.1017/S0144686X04002107

Grenade, L., Boldy, D. (2008). Social isolation and loneliness among older people: Issues and future challenges in community and residential settings. Australian Health Review, 32:3 468-478.

Grocke, D., Bloch, S., & Castle, D. (2009). The effect of group music therapy on quality of life for participants living with a severe and enduring mental illness. Journal of Music Therapy, 46(2), 90-104. Retrieved from http://search.proquest.com/docview/223564168?accountid=14771

Gutgsell, K.J., Schluchter, M., Margevicius, S., DeGolia, P.A., McLaughlin, B., Harris, M., Mecklenburg, J., Wiencek, C., 2013. Music therapy reduces pain in palliative care patients: a randomized controlled trial. J Pain Symptom Manage 45, 822-831.

Hanser, S.B., Bauer-Wu, S., Kubicek, L., Healey, M., Manola, J., Hernandez, M., Bunnell, C., 2006. Effects of a music therapy intervention on quality of life and distress in women with metastatic breast cancer. J Soc Integr Oncol 4, 116-124.

Hawthorne, G. (2006). Measuring social isolation in older adults: Development and initial validation of the Friendship Scale. Social Indicators Research, 77, 521-548.

Hays, T., Michiello, V. (2005). The contribution of music to quality of life in older people – an Australian qualitative study. Ageing and Society, (25) 261-278.

Hilliard, Russell E. (2003). The effects of music therapy on the quality and length of life of people diagnosed with terminal cancer. Journal of Music Therapy, 40 (2) 113-137.

Jong-Gierveld, J., & Tilburg, T. G. (1999). Manual of the Loneliness Scale 1999.

Kane, R. A. (2001). Long-term care and a good quality of life: bringing them closer together. *The Gerontologist*, *41*(3), 293–304.

Kar-Purkayastha, I. (2010). Wakley Prize Essay. *The Lancet*, *376*(9758), 2114–2115. http://doi.org/10.1016/S0140-6736(10)62190-3

Koenig HG, Weslund RE, George LK, Hughes DC, Blazer DG, Hybels C. Abbreviating the Duke Social Support Index for use in chronically ill elderly individuals. Psychosomatics 1993;34:61-69.

Li, X.M., Yan, H., Zhou, K.N., Dang, S.N., Wang, D.L., Zhang, Y.P., 2011. Effects of music therapy on pain among female breast cancer patients after radical mastectomy: results from a randomized controlled trial. Breast Cancer Res Treat 128, 411-419.

Low, L. F., Baker, J. R., Jeon, Y. H., & Camp, C. (2013). Study protocol: translating and implementing psychosocial interventions in aged home care the lifestyle engagement activity program (LEAP) for life. *Bmc …*.

Nelson, M, Foster, B, Pearson, S, Berends, A, Ridgway, J, Lyons, R, Bartel L (2016). Optimizing music in complex rehabilitation and continuing care: A community site facility study. Music and Medicine, 8 (3) 128-137.

Ontario Trilium Foundation. Why do we invest in connected people? Retrieved Jan 9 - http://www.otf.ca/sites/default/files/connected_people_story.pdf

Siedliecki, S. L., & Good, M. (2006). Effect of music on power, pain, depression and disability. Journal of advanced nursing, 54(5), 553-562.

Sjöberg, M., Beck, I., Rasmussen, B. H., & Edberg, A.-K. (2017). Being disconnected from life: meanings of existential loneliness as narrated by frail older people. *Aging & Mental Health*, *0*(0), 1–8. http://doi.org/10.1080/13607863.2017.1348481

Slettebo, A. (2008). Safe, but lonely living in a nursing home. Nordic Journal of Nursing, 87:28, 22-25.

Thaut, M. H., Gardiner, J. C., Holmberg, D., Horwitz, J., Kent, L., Andrews, G., ... & McIntosh, G. R. (2009). Neurologic music therapy improves executive function and emotional adjustment in traumatic brain injury rehabilitation. Annals of the New York Academy of Sciences, 1169(1), 406-416.

Thaut, M. H., & Hoemberg, V. (Eds.). (2014). Handbook of neurologic music therapy. Oxford University Press (UK).

Theurer, K., Wister, A., Sixsmith, A., Chaudhury, H., & Lovegreen, L. (2012). The Development and Evaluation of Mutual Support Groups in Long-Term Care Homes. *Journal of Applied Gerontology*, *33*(4), 387–415. http://doi.org/10.1086/406755

Thomas, W. H. (1996). Life worth living: How someone you love can still enjoy life in a nursing home – The Eden Alternative in action. St. Louis: Vanderwyk & Burnham.

van der Vleuten, M., Visser, A., & Meeuwesen, L. (2012). The contribution of intimate live music performances to the quality of life for persons with dementia. Patient Education and Counseling, 89(3), 484-488.

Walter, M. (2010). Social Research Methods. Oxford University Press, USA.

APPENDIX

Appendix A: Fenelon Court Checklist

Music Care Checklist

Resident: _____ Date:_____

Please check any of the following that you have observed during musical encounters:

Physical Responses □ Feet tapping □ Hand clapping □ Whistling □ Singing □ Humming □ Dancing □ Gesturing □ Swaying □ Smiling □ Other:_____ Comments:	**Mood/Emotional Responses** □ Appropriate emotional response (e.g. laughing, smiling, crying, excited, sad etc.) □ Mood _____ □ Appears happy □ Appears sad □ Appears peaceful/calm □ Absence of facial expressions of pain □ Other:_____ Comments:
Social Responses □ Participating in conversations □ Increased participation in main hall events □ Increased attendance at home events □ Shows positive facial responses and recognition of staff who deliver music care Comments:	**Relational Responses** □ Actively engages with the Music Helpers □ Decreased resistance at care time □ Negative statements □ Exit Seeking □ Repetitive Questions □ Other:_____ Comments:

How did _____ [name of resident] show participation today?

_____

Notes:_____

_____-

_____

_____

Appendix B: de Jong Gierveld Data Collection Sheets

De Jong Gierveld Loneliness Scale

Participant Name _____ PRE/POST [circle]

Date_____

1. I experience a general sense of emptiness
   - ☐ YES!
   - ☐ Yes.
   - ☐ Sometimes
   - ☐ No.
   - ☐ NO!
2. There are plenty of people I can rely on when I have problems
   - ☐ YES!
   - ☐ Yes.
   - ☐ Sometimes
   - ☐ No.
   - ☐ NO!
3. There are many people I can trust completely
   - ☐ YES!
   - ☐ Yes.
   - ☐ Sometimes
   - ☐ No.
   - ☐ NO!
4. There are enough people I feel close to
   - ☐ YES!
   - ☐ Yes.
   - ☐ Sometimes
   - ☐ No.
   - ☐ NO!
5. I miss having people around me
   - ☐ YES!
   - ☐ Yes.
   - ☐ Sometimes
   - ☐ No.
   - ☐ NO!
6. I often feel rejected
   - ☐ YES!
   - ☐ Yes.
   - ☐ Sometimes
   - ☐ No.
   - ☐ NO!

Data collection notes:

Appendix C: Port Perry Place Checklist

Music Wonder Checklist – All Staff Please Participate!

Resident Name:_____ Week of: _____

2. Please check any of the following that you have observed during waking hours

Physical Responses	**Mood/Emotional Responses**
□□□□□□□ Tapping hands and/or feet □□□□□□□ Hand clapping □□□□□□□ Whistling □□□□□□□ Singing □□□□□□□ Humming □□□□□□□ Dancing □□□□□□□ Gesturing □□□□□□□ Swaying □□□□□□□ Smiling □□□□□□□ Other:_____ Comments:	□□□□□□□ Appropriate emotional response (e.g. laughing, smiling, crying, excited, sad etc.) □□□□□□□ Mood _____ □□□□□□□ Appears happy □□□□□□□ Happy crying □□□□□□□ Sad crying □□□□□□□ Appears sad □□□□□□□ Appears peaceful/calm □□□□□□□ Appears excited □□□□□□□ Appears tired □□□□□□□ Appears frustrated □□□□□□□ Appears withdrawn □□□□□□□ Other:_____ Comments:
Social Responses	**Relational Responses**
□□□□□□□ Increased time spent outside of room □□□□□□□ Participating in conversations □□□□□□□ Increased participation within regular programming □□□□□□□ Appears interested during interactions □□□□□□□ Talking to roommates/table mates □□□□□□□ Eating better □□□□□□□ Memory recall, reminiscence □□□□□□□ Other:_____ Comments:	□□□□□□□ Expresses pleasure in the visit/interaction □□□□□□□ Agrees to meet again □□□□□□□ Actively engages with the Music Wonder leaders □□□□□□□ Decreased resistance at bath time and other care times □□□□□□□ Lights up when I walk in the room □□□□□□□ Refusal to participate □□□□□□□ Other:_____ Comments:

Other Comments, music wonder interests, or favourite songs:

_____

_____

_____

Appendix D : Duke Social Support Index Data Collection Sheets

Duke Social Support Index: Social Interaction Sub-Scale

Participant Name _____ PRE/POST [circle]

Date_____

1. Other than members of your family, how many persons in your local area do you feel you can depend on or feel very close to?

2. How many times during the past week did you spend time with someone who does not live with you, that is, you went to see them or they came to visit you or you went out together?

3. How many times did you have a meaningful conversation with friends, relatives or others, on the phone or in person, in the past week?

4. About how often did you go to meetings of clubs, religious meetings, or other groups that you belong to in the past week?

Data Collection Notes:

Appendix E: Lakeview Manor Checklist

Music Care Checklist

Resident Name: _____ Date:_____

Please check any of the following that you have observed during waking hours in the past week.

Physical Responses □ Feet tapping □ Hand clapping □ Whistling □ Singing □ Humming □ Dancing □ Gesturing □ Swaying □ Smiling □ Other:_____ Comments:	**Mood/Emotional Responses** □ Appropriate emotional response (e.g. laughing, smiling, crying, excited, sad etc.) □ Mood _____ □ Appears happy □ Appears sad □ Appears peaceful/calm □ Other:_____ Comments:
Social Responses □ Increased time spent outside of own room □ Participating in conversations □ Increased participation in main hall events □ Increased participation in unit events □ Appears interested in Music Care visits □ Shows positive facial responses and recognition of staff who deliver music care Comments:	**Relational Responses** □ Actively engages with the Music Care providers □ Decreased resistance at care times □ Increased food intake □ Other:_____ Comments:

Notes:_____
_____

Appendix F: The Friendship Scale Data Collection Sheets

The Friendship Scale

Participant Name _____ PRE/POST [circle]

Date_____

During the past four weeks:

1. It has been easy to relate to others:
   - ☐ Almost always
   - ☐ Most of the time
   - ☐ About half the time
   - ☐ Occasionally
   - ☐ Not at all
2. I felt isolated from other people:
   - ☐ Almost always
   - ☐ Most of the time
   - ☐ About half the time
   - ☐ Occasionally
   - ☐ Not at all
3. I had someone to share my feelings with:
   - ☐ Almost always
   - ☐ Most of the time
   - ☐ About half the time
   - ☐ Occasionally
   - ☐ Not at all
4. I found it easy to get in touch with others when I needed to:
   - ☐ Almost always
   - ☐ Most of the time
   - ☐ About half the time
   - ☐ Occasionally
   - ☐ Not at all
5. When with other people, I felt separate from them:
   - ☐ Almost always
   - ☐ Most of the time
   - ☐ About half the time
   - ☐ Occasionally
   - ☐ Not at all
   - ☐ I felt alone and friendless:Almost always
   - ☐ Most of the time
   - ☐ About half the time
   - ☐ Occasionally
   - ☐ Not at all

Data collection notes:

Music Care Partners

INTEGRATING MUSIC CARE HANDBOOK

MUSIC CARE PARTNERS HANDBOOK

In this handbook, the IMMC will be operationalized through meeting Leo, and his care partners at Cedar Acres. Learning about Leo and his LTC community demonstrates how the IMMC process unfolds. Also included in this section are a set of tools that can be used in your LTC community to integrate music into your care practices. This handbook is designed in order to assist site teams in producing new, successful music care initiatives. For music care interventions that go beyond your LTC home's scope of practice, you may need to access trained music care specialists or knowledgeable organizations such as Room 217 who can act as resources and consultants during your music care integration process.

Step 1: Information

Leo is a resident at Cedar Acres LTC home. Born in New York, he moved to Toronto as a young married man and worked 40 years for a telephone company, before retiring to the country with his wife. Leo has two sons, three grandchildren, and one great-granddaughter. Ten years ago, his wife passed away, and not long after, Leo had a stroke. This stroke left him with paralysis on his left side and moderate aphasia. Together with his sons, they decided that he move into LTC.

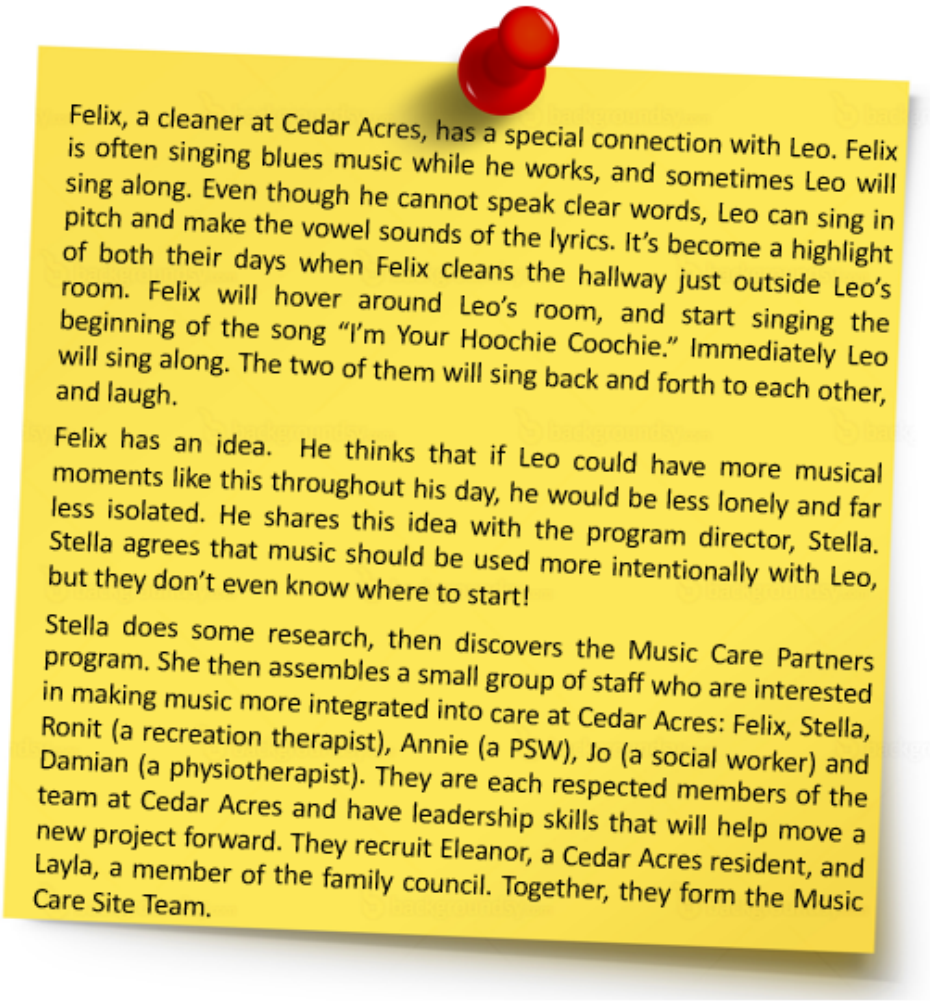
Leo loves travelling - his favourite experience was taking the train with his wife across the Rockies for their 30th wedding anniversary. He is an avid newspaper reader (his favourites are the Toronto Star and the New York Times). He was a competitive tennis player for most of his life, and still enjoys watching tennis on TV. He plays the mouth organ, and one of his sons still has his collection of blues vinyl records.

Because of his need for a wheelchair and his verbal challenges, Leo is isolated and lonely at Cedar Acres. He doesn't socialize much with other residents, and does not leave his room unless someone moves him. His sons live five hours away and while they take turns visiting, the most Leo sees family is once a month.

Explore

- Reconnaissance
- Build site team (ST)
- Define the challenge
- STM1

The IMMC is a person-centred model, and therefore first considers all of the characteristics and needs of the person who is receiving the care. A plethora of human characteristics and challenges will be gathered, and from them, one specific challenge that the individual is experiencing will be chosen. It is essential that the site team determine if there is evidence that this challenge can be effectively addressed by music care. The chosen challenge will be the focus of the music care delivery, and continue through the rest of the music care model. It is possible that an individual could have two challenges addressed by music care; however, the model must be used sequentially in this case, since it can only process one challenge at a time. This component of the model essentially takes a 'snapshot' of the care receiver, in this case Leo. Leo is lonely.



Felix, a cleaner at Cedar Acres, has a special connection with Leo. Felix is often singing blues music while he works, and sometimes Leo will sing along. Even though he cannot speak clear words, Leo can sing in pitch and make the vowel sounds of the lyrics. It's become a highlight of both their days when Felix cleans the hallway just outside Leo's room. Felix will hover around Leo's room, and start singing the beginning of the song "I'm Your Hoochie Coochie." Immediately Leo will sing along. The two of them will sing back and forth to each other, and laugh.

Felix has an idea. He thinks that if Leo could have more musical moments like this throughout his day, he would be less lonely and far less isolated. He shares this idea with the program director, Stella. Stella agrees that music should be used more intentionally with Leo, but they don't even know where to start!

Stella does some research, then discovers the Music Care Partners program. She then assembles a small group of staff who are interested in making music more integrated into care at Cedar Acres: Felix, Stella, Ronit (a recreation therapist), Annie (a PSW), Jo (a social worker) and Damian (a physiotherapist). They are each respected members of the team at Cedar Acres and have leadership skills that will help move a new project forward. They recruit Eleanor, a Cedar Acres resident, and Layla, a member of the family council. Together, they form the Music Care Site Team.

The IMMC takes place in a context of care, in Leo's case, a LTC home. Care partners in the home who desire to see music used as an approach to care gather together. They become the site team, a representative group of administration, staff, volunteers, family members, and residents. The site team gathers initially to discuss a community challenge, like Leo's loneliness. They learn more about the challenge and explore the music care research literature to determine whether music is a viable solution for the challenge. In Leo's case, they learn that music may be a suitable solution for Leo's loneliness and perhaps for other residents who experience isolation and loneliness at Cedar Acres.

Key Questions

1. What is the challenge a resident is facing?
2. What evidence is there to support music as a solution to address this challenge?
3. With some training, can staff use music to address this need OR is a music care expert needed?

Tool 1.1 Self-Reconnaissance Scoping Tool

Before you can solve a problem, you must understand it. It is important for stakeholders to situate themselves within the community, and around the topic of interest. **The self-reconnaissance scoping tool** provides a structure for *individuals* to understand their own personal insights and lived experiences in regards to the chosen challenge.

How It Works:
Each stakeholder (or site team member) can fill out their own chart, or one chart can be completed by the site team during a team meeting. Steps:

- Begin by writing the challenge in the center of the chart.
- Next, jot down as many ideas, facts, or lived experiences within the appropriate section of the diagram:
    - **Personal Insights**: what are your personal insights about the challenge?
    - **Contextual Factors**: what elements within the community environment plays a role in the challenge?
    - **Evidence of the Challenge**: what evidence (scientific, anecdotal, administrative, or otherwise), exists to show that this challenge is imminent?

Challenge_____

Personal Insights	Evidence	Contextual Factors

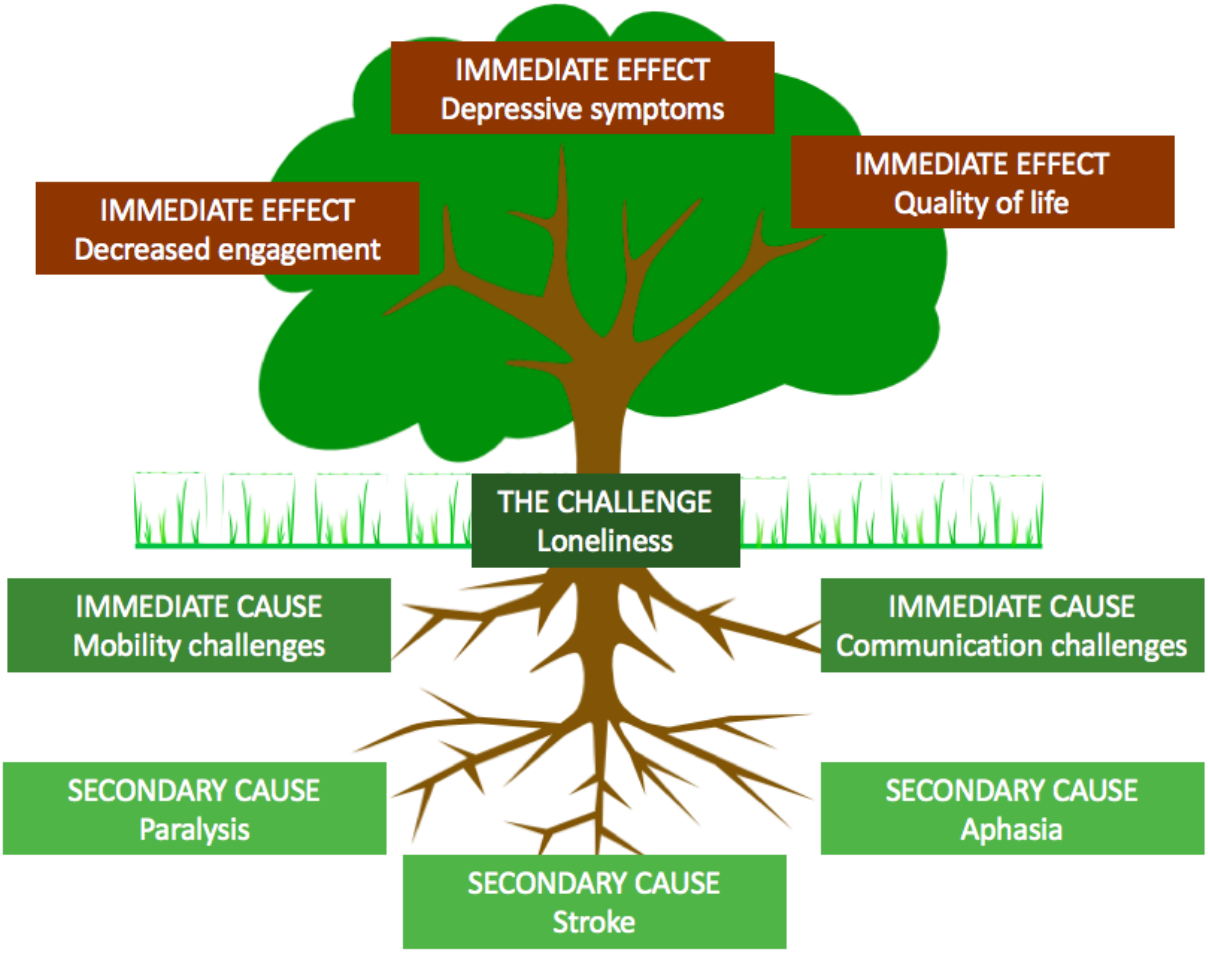
1.2 "Problem Tree" Scoping Tool

The purpose of the Problem Tree Scoping Tool is to facilitate discussion about the chosen topic, and its specific causes and effects, in your context. Creating a "Problem Tree" for your chosen challenge will help concretely define the problem within your working group (Chevalier & Buckles, 2013).

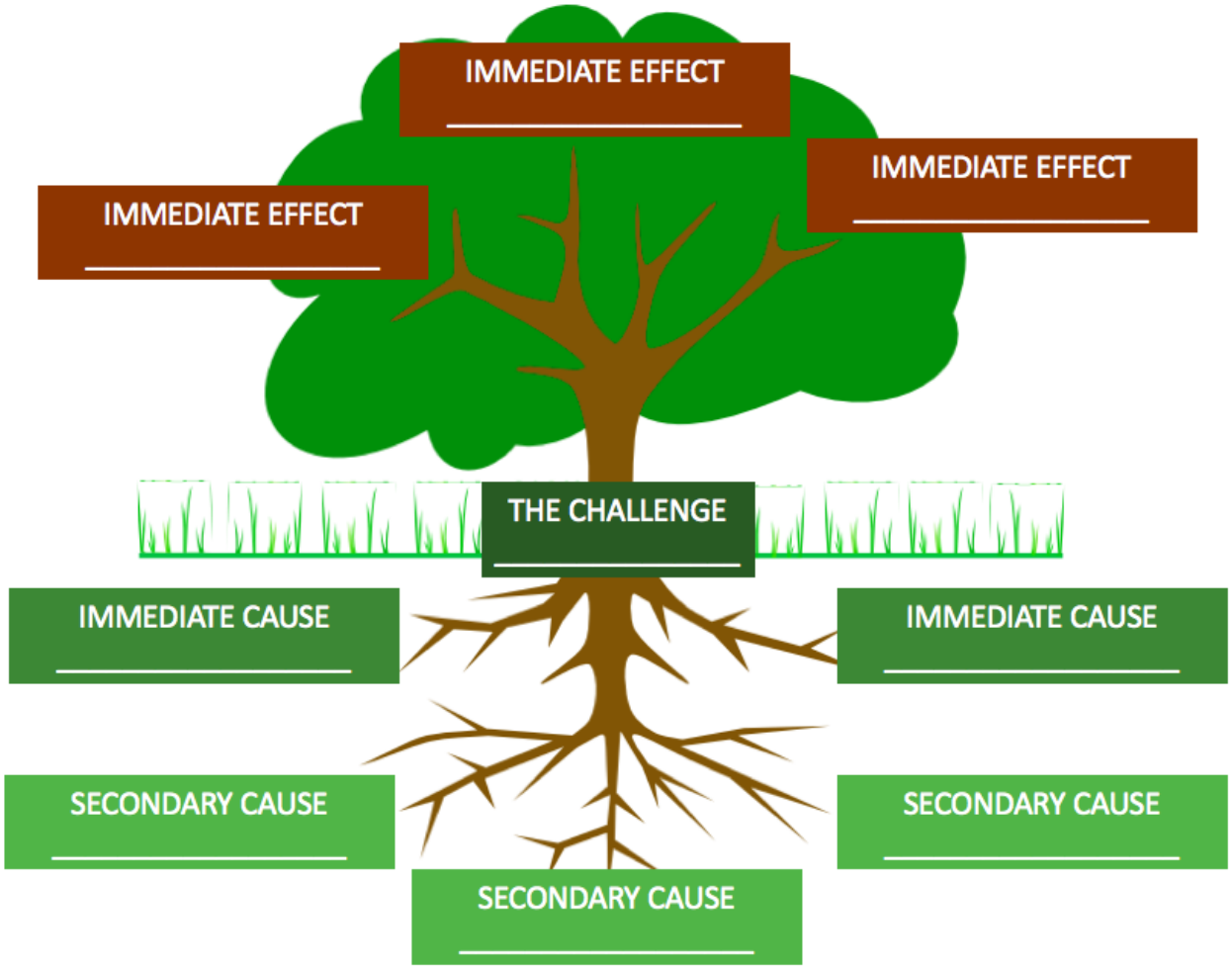
How It Works
The tree is created by starting at the trunk, which represents the problem. The tree is built outwards from the problem. Steps:

- Begin by determining exactly what the challenge is, by defining it in one or two words.
- Next, agree upon two or three *immediate causes* and two or three *immediate effects* of the challenge.

Example: Leo's Problem Tree



Your Problem Tree



Problem Tree adapted from: Chevalier & Buckles, 2013.

1.3 Leadership Checklist

The site team leader has a lot of responsibility throughout the process of implementing a music care initiative. The purpose of the Leadership Checklist is to highlight the qualities necessary for site team leaders to possess, in order to maximize the impact of the music care intervention. These qualities are research-informed by the Partners pilot study and other Room 217 tools.

Site Team Leader Competency Checklist

Result-Oriented
- ☐ delivers individual, team and overall objectives with energy and determination
- ☐ contributes to long term organization goals and priorities

Relational
- ☐ builds trust with care partners: staff, family, volunteers, residents
- ☐ listens and is sensitive to the needs of others
- ☐ open to ideas
- ☐ develops solutions by nurturing and creating relationships with LTC community
- ☐ adapts to a wide range of situations
- ☐ can focus on objectives and relationships when under pressure
- ☐ good at selecting the right people to work on team

Communicator and Coach
- ☐ communicates vision clearly
- ☐ enthuses and energizes people
- ☐ knows team members' strengths and weaknesses
- ☐ encourages initiative and accountability for objectives
- ☐ invests in coaching others, knows who to support and challenge

Innovator
- ☐ experiments with new approaches
- ☐ values research, and best practices
- ☐ responds flexibly to change
- ☐ reviews how things are done for continuous improvement

Resident-focused
- ☐ anticipates needs and reacts with empathy
- ☐ relates respectfully in all interactions

Lifetime Learner
- ☐ keeps up-to-date and shares knowledge with others
- ☐ encourages others to learn, develop

Problem Solver
- ☐ sees problems as opportunities
- ☐ explores causes of problems systematically and thoroughly
- ☐ generates solutions, weighing advantages and disadvantage of options

1.4 Site Team Formation Tool

This tool can be used to ensure that the site team has representation from all stakeholder groups within your community. Since music care is a new and developing approach to care, integration will be more successful if all working groups are on board. Think critically about the members who you approach to help solve the problem through music and sound. Why might these individuals be invested in the problem?

How It Works:
The template below can be used to plan your team. By listing out the key players, their roles, and the reason they will be invested in the site team/challenge can reveal any gaps that may exist. Steps:

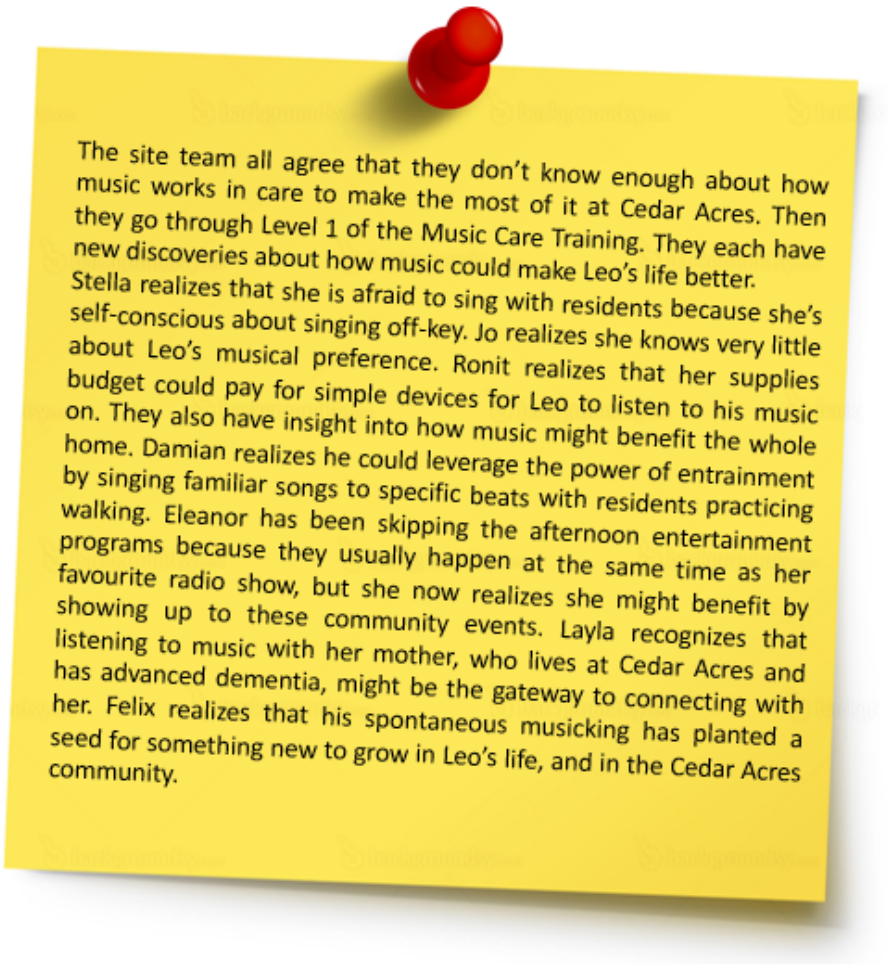
- Create a working list of colleagues, community members, volunteers, family members, and residents who may be a good fit for the team.
- Ultimately, you know your context and the key players within it who need to be recruited to the team.

Example: Cedar Acres Site Team

Name	Role	Reason Why	Notes
Stella	Program Director	Motivator	Site team leader
Felix	Cleaner	Special relationship with Leo	Loves blues
Ronit	Rec Therapist	RAI-MDS expertise	Has grade 8 piano
Annie	PSW	Lea's front line caregiver	
Joe	Social Worker	Leadership skills	
Damian	Physiotherapist	Interested in music	Has heard of NMT
Eleanor	Resident	Interested in music	
Layla	Family council	Community connections	Member of choral society

Your Site Team

Name	Role	Reason Why	Notes



Train

- Music Care Training

Being informed about the effects of music on a person's health and wellbeing is the bedrock of the IMMC. Because music can have both beneficial and adverse effects, a baseline understanding of sound and musical effects, musical elements, insights and experiences as well as music care strategies and resources, provide a foundation for integrating music into care practice. The site team plus other care partners can be trained to integrate music into regular practice. It is important to note that there are situations that call for expertise beyond the capacity of care partners. In that case, specialized music care professionals or specialized training may be required.

Key Questions

1. What is the challenge a resident is facing?
2. What evidence is there to support music as a solution to address this challenge?
3. With some training, can staff use music to address this need OR is a music care expert needed?

1.5 Types of Training for Music Care Initiatives

Often, training is a key component of the successful implementation of a music care initiative.

Training can include but is not limited to:

1) **Music Care Training** – to equip team members with the tools needed to design and implement an effective music care initiative
2) **Initiative-based training** – to orient other community members about the music care initiative, and to prepare them for components of implementation that they are involved with
3) **Other training in music and health** – for example, care providers may be interested in more specific training in music and health sciences, such as Neurologic Music Therapy training.
4) **Leadership training** – internal (i.e. within-house) or external leadership training may be of interest to site team leaders or members
5) **Participatory Action Research training** – for individuals interested in improving PAR skills, there are many courses available through different universities that teach the basics and complexities of the methodology.

Use the chart below to assess the training needs of your site team.

Type of Training	Not Complete	In the Works	Complete	Notes
Music Care Training				
Initiative-based training				
Other training in music and health				
Leadership training				
Participatory Action Research Training				

Step 2: Intention

Plan

- STM2
- STM3

Together, the site team makes a music care plan for Leo. They decide that they want Leo to be engaged in music at least twice a day. Three possible approaches can be used: singing with Leo to a song he knows, much like Felix does; listening with Leo to one of his beloved records; and making music with other residents. Jo receives the full album collection from Leo's sons, and Ronit downloads digital versions of these albums onto the home's tablet. Layla donates her mother's old turntable for Leo to have in his room. A team of other staff and volunteers are informed of the plan, and taught the songs and shown the record collection. Stella makes lyric sheets of some songs that can be sung with Leo. Eleanor organizes a weekly music listening group in the common area, for all residents to attend, which Damian and Felix agree to porter Leo to. The site team links this initiative to one of the ten music care delivery domains.

Once the challenge is chosen, and a baseline music care training is delivered, music care initiatives or interventions (MCIs) are matched with the chosen challenge. This component of the IMMC determines what change is to be made to the challenge by what initiative or intervention in what music care delivery domain. In Leo's case, the site team wanted to reduce his loneliness by making a music care plan for Leo through the musicking domain. The site team will determine a strategic goal for the music care initiative or intervention. In this case, Leo's strategic goal was: *to reduce the amount of time Leo spends alone in his room using an intentional music care plan through the musicking domain.*
Once the strategic goal is set, the site team begins to plan for implementation. This requires several meetings. Specific action steps will be required by members of the care team. Criteria for recruitment needs to be determined as well as timelines for all aspects of the MCI. Evaluation tools are discussed. Using already existing evaluation methods i.e. RAI-MDS at Cedar Acres make the process more integrated. However, creating a checklist, and using validated tools are considered. Both qualitative and quantitative methods are included to give more comprehensive feedback on the change made.

2.1 Strategic Goal Planning Tool

It is important to determine a strategic goal of every music care initiative or intervention so that the site team can determine when goals are accomplished, and benchmark progress. Set a strategic goal by choosing the following:

1. What measure of change do you want? (i.e. increase, reduce, cultivate, improve, etc.)
2. What challenge is being addressed? (i.e. loneliness, gait, attention, sociability, depression, etc.)
3. What music care initiative or intervention is being used? (this may be uniquely created, hired in or used from the Music Care Inventory from Appendix C)
4. In what music care delivery domain does this initiative or intervention fit? (i.e. musicking, music medicine, technology, etc.)

The goal of Leo's music care initiative is…

To (1) reduce (2) amount of time Leo spends alone in his room using (3) an intentional music care plan

through the (4) musicking domain of music care.

Your Strategic Goal

The goal of our music care initiative or intervention is…
to _____(change word) the _____ (challenge) using _____ (initiative or intervention) through the _____ (music care domain)
…domain of music care

2.2 Ten Domains Mapping Tool

During the planning process, it can be helpful to map out the site team's initiative ideas onto the 10 Domains of Music Care. Understanding where each music care initiatives fits within the domains delivery contributes to the planning process by clarifying the action steps needed for implementation.

How It Works:
Each site was provided with a large 10 Domains of Music Care chart. We suggest using the large chart for this tool, however the smaller version attached below will work as well.

- During a planning meeting, ask the site team members to discuss potential music care initiatives that will address the chosen challenge
- As the brainstorming session proceeds, place each music care initiative idea into the appropriate domain of music care delivery
- If using the large 10 domains chart, sticky notes can be effectively used to map the different ideas; if using the chart below, simply write the idea onto the page

10 Domains Planning Tool

Domain	Key Delivery Activity	Initiative Ideas:
Community	Accessing music performance between healthcare site and community-at-large	
Specialties	Performing therapeutically-intended music by practitioners with certified training	
Music Therapy	Providing treatment using music within a therapeutic relationship as an accredited scope of practice	
Musicking	Engaging informally and spontaneously with music	
Programming	Integrating music formally in programs	
Technology	Incorporating technology to deliver music for a care-related goal	
Sound Environment	Bringing intentionality to sounds made in the care environment	
Music Medicine	Administering prescriptive music-based interventions for medically related outcomes	
Training	Training to integrate music into regular care practice	
Research	Investing in evidence-based research using music and music strategies to enhance care	

2.3 Implementation Planning Tool

How It Works:
The implementation tool assists the site team in creating a set of actionable steps to be accomplished for the initiative to take place. Steps:

- List all the action steps that must take place for implementation of the initiative.
- As a team, identify who will take responsibility for what, as well as a specific timeline for each action step.

Example: Cedar Acres Plan of Action

Action	Responsibility	Timeline
1. Recruit Leo to participate	Ronit & Annie	Completed during Cedar Acres staff education
2. Informed Consent (if needed)	Stella	Before June 1st
3. Preparing Materials • Finalize Observable Checklist	Stella, with feedback from site team	Finalized May 3rd
4. Preparation for implementation • Distribute Music Care Resource Kits • Staff Education • Staff Buy-In/Incentive	Stella & Ronit Ronit & Damian Stella	 May 15th
5. Evaluation - Pre	Ronit	Mo/Tu/Th/Fr Week of May 22nd
6. Implementation • Initiative • Observation Checklist	ALL STAFF and ST Care Deliverers	Begins June 1st Weekly, beginning 1 week before implementation
7. Random Interviews	Stella	June and July
8. Evaluation - Post	Stella	July 31st
9. Reflect	Site Team	August 15th
10. Pivot Meeting	Site Team	September 3rd

Your Site's Plan of Action

Action	Responsibility	Timeline
1.		
2.		
3.		
4.		
5.		
6.		

Step 3: Implementation

In order to make sure this plan actually works, the site team creates a checklist that will be kept on Leo's door for every time someone goes and visits. Felix volunteers to be the person who verifies that at least two visits have been made per day. He checks the list at his lunch break and on his afternoon break; if no one has visited Leo yet, it is agreed that he can ask someone on the team to make a musical visit. Once a week, Stella conducts interviews with Leo's care staff to see if they notice a change in his mood and isolation.

Quickly, staff discover how easy it is to connect with Leo through music. A bit of singing with him changes his whole mood. Some staff were nervous at first to go sing with Leo, but Felix gave them some encouragement, and once they see him smile and sing, they are thrilled to visit. Eleanor encounters some challenges coordinating a time to run a listening group, but gets support from the recreation staff to make sure it's on the calendar and that people know to porter residents. Leo gets out of his room more as a result of this group. One high school volunteer has started visiting him once a week to listen to one of his old blues albums, and has become a fan of some of these tunes. One week, she even brings a record of her own that she wants to listen to with Leo.

Act & Evaluate

- Music visits
- Collect data
- Fenelon Follies variety show
- Coaching

And so Leo's musicking begins. With an informed and intentional effort to use music to address Leo's isolation and loneliness, music becomes integrated into his daily life and into the interactions of his care partners. With each interaction, care partners observe Leo's responses and notate them on a checklist. The effect of music on Leo is immediate and contagious, so much so that other care partners wanted to be involved. Implementing music care and evaluating the effects need to be simultaneous in order to make any necessary adjustments to Leo's musical "doses". Music care is dynamic and needs to flex with the mood, preferences, and effects on each resident.

Key Questions

1. Evaluation tools are in place for the MCI to begin.
2. Staff training for specific MCI and all involved including procedures, evaluative processes etc. has been completed. What is the challenge a resident is facing?
3. All resources and tools are at hand for the MCI to begin.
4. The designated leader has a process with staff for tacking progress.

Designing Evaluations

Evaluation is a key component of participatory action research, because it allows for the interpretation of your project by key stakeholders, such as residents, families, care staff, and administration. We suggest the parallel use of two different evaluative tools:

3.1 Validated Tools

A "validated tool" is an evaluation method that is recognized by researchers and health care professionals all over the world. In your future music care initiatives, it is important to use a validated tool so that people outside of your direct context can make meaning from your results. Validated tools are often easy to administer after a small amount of training. It is important to strictly follow the instructions when using validated tools, to ensure you are collecting clean data. Depending on the context, it is sometimes helpful to have an objective, external individual administering the tool in your setting. The external administrator does not have any preconceptions about the participants that may bias the results. Additionally, when the post-tests are completed, this same external administrator will not have been heavily involved in the project process. Once again, this helps to ensure objectivity of answers.

Validated tools are usually available free of charge on the internet, and are accompanied by an instruction manual. Validated tools require statistical processing and analysis. A researcher from an organization like Room 217, or an educational institution would be able to consult on the statistical process, if you require. Table H1 outlines a set of validated tools that can be used to evaluate loneliness and social isolation:

Table H1: Validated tools for Isolation and Loneliness

Validated Tools	Measures	Population Use
Emotional/Social Loneliness Inventory (ESLI)	Measures emotional loneliness, social loneliness, emotional isolation, and social isolation. Likert scale (0-3). 15 two-part questions; first 8 measure emotional isolation and loneliness, 9-15 measure social isolation and loneliness.	High school students and adults of all ages
The Friendship Scale	6 items (one for each 'dimension' of social isolation, as determined by a systematic review of the literature)	Older adults (N = 829), individuals with back pain
UCLA Loneliness Scale	Measures "global or general loneliness that is unidimensional in structure" (contrast with ESLI which considers two dimensions). 20 questions total.	Adults
UCLA Loneliness Scale – shortened/revised	Measures "global or general loneliness that is unidimensional in structure" (contrast with ESLI which considers two dimensions). 10 questions total.	Adults
Loneliness Deprivation Scale	Measures "the intensity of deprivation feelings concerning relationships with others". 9 item scale, unidimensional construct of loneliness	Adult population
Jong Gierveld Scale	Specifically developed to measure LONELINESS in old age. Two dimensional framework. 6 questions total, 3 for emotional loneliness and 3 for social loneliness	
Berkman-Syme Social Network Index	Measures # of social ties, and relative importance.	Adult population (age 30 onwards)
Duke Social Support Index (DSSI)	35 items; measure "multiple dimensions of social support"	Most frequently used in studies of seniors/longitudinal studies of aging
Duke Social Support Index (DSSI) – abbreviated	Two versions: 20 item and 10 item	Validated for seniors
RAI-MDS Index of Social Engagement	Describes resident's sense of initiative and social involvement within LTC home. 6 item scale.	LTC population

3.2 Observation Checklists

The observation checklist is a very accessible tool for team members, family members, and community members to interpret the effectiveness of the music care initiative right away, with little to no processing. The purpose of the observational checklist is just that – to provide benchmarks along the way to gauge process and progress. Additionally, observational checklists provide a regular reminder to music care givers of the outcomes of interest, and an opportunity to stay engaged in the purposeful delivery of music care.

Checklists should contain both positive and negative outcome options, and sufficient space for comments. It may be helpful to return to tools such as Problem Tree and other planning documents to inform the content of the observational checklists. Overall, checklists are completely context specific, and driven by the desired outcomes of the team. It is up to the team to determine how meaning is made, and use this to determine the content of the checklist.

How It Works:

- The site team must determine *who* is responsible for filling out checklists, and *what* the timeframe is for completion
- Then, the site team can design an 8.5 by 11-inch checklist, to meet the needs of their initiative
- We suggest keeping the checklist simple, and including no more than 10 'indicators'

Sample Observation Checklists follow.

Music Care Checklist Sample 1

Date: _____
Music Care Deliverer: _____
Resident: _____

Describe the music care interaction:

_____

_____

_____

_____

_____

_____

Music Care Checklist Sample 2

Resident: _____ Date:_____

Please check any of the following that you have observed during musical encounters:

Physical Responses	**Mood/Emotional Responses**
☐ Feet tapping ☐ Hand clapping ☐ Whistling ☐ Singing ☐ Humming ☐ Dancing ☐ Gesturing ☐ Swaying ☐ Smiling ☐ Other:_____ Comments:	☐ Appropriate emotional response (e.g. laughing, smiling, crying, excited, sad etc.) ☐ Mood _____ ☐ Appears happy ☐ Appears sad ☐ Appears peaceful/calm ☐ Absence of facial expressions of pain ☐ Other:_____ Comments:
Social Responses	**Relational Responses**
☐ Participating in conversations ☐ Increased participation in main hall events ☐ Increased attendance at home events ☐ Shows positive facial responses and recognition of staff who deliver music care Comments:	☐ Actively engages with the Music Helpers ☐ Decreased resistance at care time ☐ Negative statements ☐ Exit Seeking ☐ Repetitive Questions ☐ Other:_____ Comments:

How did _____ [name of resident] show participation today?

_____

Notes:_____

_____

Music Care Checklist Sample 3

Date: _____
Music Care Deliverer: _____
Resident: _____

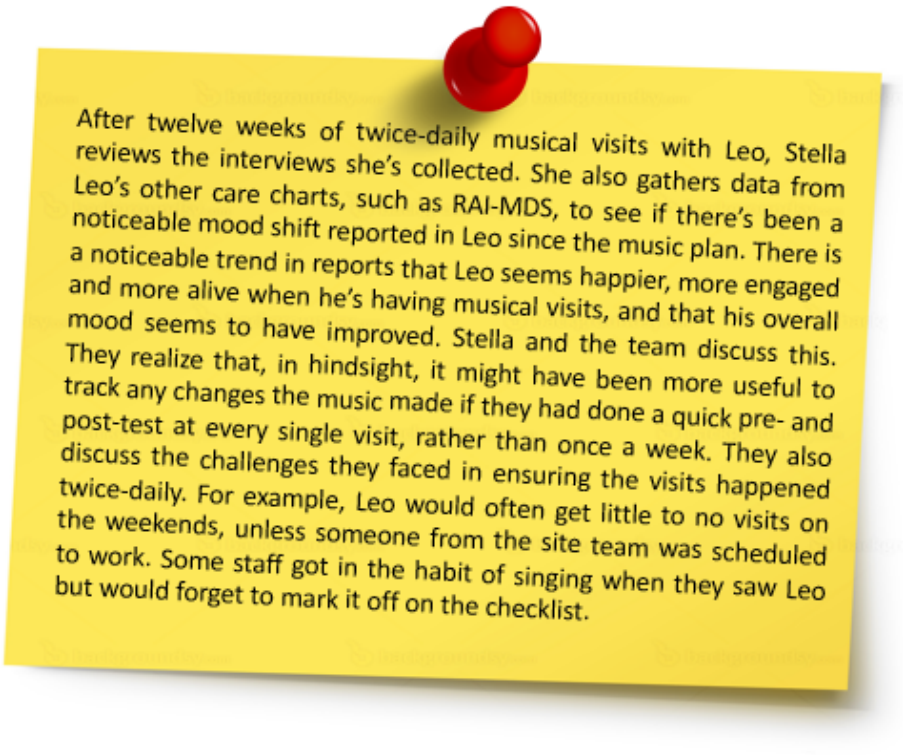
Please check off any of the following that were observed during music care delivery:

☐ Smiling	☐ Engaging
☐ Laughing	☐ _____
☐ Singing	☐ _____
☐ Conversing	☐ _____

Notes:

_____

_____



Reflect

- STM4
- Make meaning from results

Once the MCI implementation is complete, all data is collected and analyzed. The site team meets to review the results and reflect upon them. First, the team will characterize the resident or group of residents who were involved in the MCI, including age, gender, and number of years at Cedar Acres. A review of both quantitative results and qualitative results is important to see whether change occurred. Time is given to making meaning of the results. Storytelling about meaningful moments in the process is included as well as initial discussion about next steps.

Key Questions

1. What are the characteristics/demographics of the MCI participants?
2. What were the quantitative results of the data collection?
3. What were some of the meaningful moments in the MCI? (qualitative results)
4. What next steps will we take?

Step 4: Integration

Overall, the site team knew first-hand that this music care plan was making an enormous difference in Leo's quality of life. They all agreed that if such a change was possible for Leo, they could create individualized music care plans for other residents too. Music could possibly become an approach that meets a variety of challenges at Cedar Acres.

Pivot

- STM5
- Determine next steps

After several weeks, the site team meets again to determine which direction music care will take. The site team could start the cycle again and EXPLORE a new community goal through music care i.e. improve gait, decrease depression, strengthen attention and memory. Or the site team may return to PLAN another rendition of the same MCI. In the case of Leo, the site chose the latter and created individualized music care plans for other residents at Cedar Acres. Whichever direction is taken, the IMMC methodology will be used for music care integration. The site team will provide leadership throughout the process.

Key Questions

1. Which direction will music care take, EXPLORE or PLAN?
   If EXPLORE, go to page 6 and begin the cycle again with another challenge.
   If PLAN, go to page 13 and begin the cycle again by developing a fresh plan of action.

Box 145, Port Perry, ON L9L 1A2 T.905.852.2499 www.room217.ca
Room 217 Foundation is a registered Canadian Charity #85728 5092 RR0001