

MUSIC MATTERS

OPTIMIZING MUSIC IN
COMPLEX CARE AND
REHABILITATION



PROJECT REPORT: APRIL 2015

ACKNOWLEDGEMENTS

Funding for this project was provided by generous donors from the Bridgepoint Foundation, the Music and Health Research Collaboratory, and the Room 217 Foundation.

Study participants included Bridgepoint Hospital patients, staff and volunteers as well as members of the community-at-large.

RESEARCH TEAM

- Dr. Michelle Nelson, Research Scientist, Bridgepoint Collaboratory for Research and Innovation
- Bev Foster, Executive Director, Room 217 Foundation
- Dr. Lee Bartel, Acting Director, Music and Health Research Collaboratory, University of Toronto
- Aimee Berends, Research Assistant, Room 217 Foundation
- Dr. Renee Lyons, Research Scientist, Bridgepoint Collaboratory for Research and Innovation
- Sarah Pearson, Program Development Coordinator, Room 217 Foundation
- Jennifer Ridgeway, Recreational Therapist, Bridgepoint Active Healthcare
- Ian Sinclair, Vice President Operations, Bridgepoint Active Healthcare



ABOUT BRIDGEPOINT COLLABORATORY FOR RESEARCH AND INNOVATION

Bridgepoint Active Healthcare and its Research Collaboratory focus on individuals with complex, multiple health conditions. We know from research this population has some of the highest users of healthcare services, and yet, we know little about the population and how health services can be re-engineered to be more effective. The Collaboratory has six scientists, two postdocs, and several research affiliates and has completed more than 15 research projects on complex chronic conditions.



ABOUT UNIVERSITY OF TORONTO MUSIC AND HEALTH RESEARCH COLLABORATORY (MaHRC)

The Music and Health Research Collaboratory, based at the Faculty of Music, University of Toronto, is a synergistic and collaborative set of researcher groups exploring connections of sound to the human experience of health. The focus of MaHRC is on music (sound) and health broadly defined by five overlapping and inter-related spheres: (1) Therapy and Medicine, (2) Body, Brain, Mind, (3) Society and Culture, and (4) Music in Human Development; (5) Science and Health of Performance.



ABOUT THE ROOM 217 FOUNDATION

The Room 217 Foundation is a not-for-profit corporation and registered Canadian charity 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.

FOREWORD

The aging of the population together with advances in medicine and public health mean that people are living longer, but with chronic health conditions. A growing portion of the population also has multiple chronic conditions, which require new thinking and new approaches in terms of clinical care and health systems reform. Complex chronic conditions involve both multiple health conditions and care complexity. Approximately 5% of the population uses 66% of healthcare services in Ontario, and they are primarily people with multiple conditions requiring complex care. This population of healthcare users includes older adults toward the end of the life, but also young and midlife individuals who may have 20-30 years of health and social care needs ahead of them.

Bridgepoint Active Healthcare is a leader in collaborative, multidisciplinary healthcare. Its innovative model of “active healthcare” recognizes the unique needs of individuals living with chronic health conditions, and demonstrates a commitment to patient-centered, flexible, and life-enhancing care. Through embracing a life-long view of patients, prioritizing patient and family decision-making, and drawing on multiple health-promoting resources to support patients' overall quality of life, Bridgepoint is transforming how persons with chronic diseases live full lives.



At Bridgepoint, the design of the care environment and care delivery is geared towards a comprehensive Complexity Framework to better address needs of complex health issues.¹ This framework identifies the need for research to better understand the development of treatment models and skills needed for practitioners working in complex health care.² It also calls for the optimization of psychosocial interventions that support the patient, care partners and physical environment.

Currently, music at Bridgepoint is incorporated into various programs offered by both the Recreation (TR) and the Spiritual Care (SC) departments. TR

provides patients with the opportunity to listen both actively and passively, and appreciate music through various programs offered, including snoezelen therapy, seated exercise, hymn sing, live entertainment, special events and cultural programs e.g. Chinese happy hour, Chinese movie and Tzu Chi music group. TR staff organize volunteer and paid musicians to play on unit or travel room to room for patients and visitors. Patients also enjoy music through various forms of technology, including radios, television, mP3 players, iPads, iPods and laptops. TR refers patients to the music therapy program which is facilitated by two certified music therapists in a 1:1 or group setting. SC provides patients with the opportunity to listen to and appreciate music at their Sunday services as well as on the labyrinth.

MUSIC IN 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.^{3,4,5,6,7} 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 complex care, and specifically the unique architectural design and structures at Bridgepoint, the benefits of using music to enhance quality of life may not be fully developed.



The healing power of music can be understood in two different ways. The first is that music is part of healing content and is used directly as a curative agent. The elements of music, themselves, for example, rhythm, might impact brainwave state, attention, or gait. The second is that music is part of the healing context. Music supports natural balance and attunes our mind-body-spirit to the universe. Every music care practice, whether it is old or new, is based on one or a combination of these two ideas.⁸

Music care is an emerging approach which accounts for both of these ideas by recognizing that musical elements like tempo, rhythmic patterns, melodic shape and range, timbre, in themselves have healing capacities.⁹ Music care is not a specific practice, rather a paradigm within which music enhances quality of life and plays an integral role in care and care settings. Music care is comprised of informed and intentional music implementation and integration throughout care delivery.

Music care is comprised of ten domains which provide a contextual framework for how music delivery might be understood in caring communities. Table 1 provides a summary on each domain (refer to Appendix 1 for a more detailed explanation).

Domain	Key highlights
Community Music	Outside musicians or entertainers invited in to perform
Music Care Specialties	Musicians with some specific training for music and wellbeing
Music Therapy	Therapists skillfully using music in a therapeutic relationship
Musicking	Informal and spontaneous use of music in the community
Music Programming	Formal use of music within programs by staff
Music Technology	Technology used to deliver music for a therapeutic goal
Sound Environment	Intentional sounds for wellbeing
Music Medicine	Prescriptive use of music strategies
Music Care Training	Training for caregivers to integrate music into practice
Music Care Research	Evidence-based research using music strategies

TABLE 1. 10 DOMAINS OF MUSIC CARE

RESEARCH PURPOSE, DESIGN AND ANALYSIS

The purpose of this study was to explore how music can be optimized in complex care environments, supporting improved quality of life and outcomes for patients with multiple chronic conditions. The study examined the feasibility of music care in complex rehabilitation and care, and specifically, the music care approach as a strategic framework for music optimization at Bridgepoint Health. A review of research and grey literature on music care models, components and impact of music on quality of care in complex health care settings was conducted (see Appendix 1). Data was collected to gain information from various Bridgepoint Hospital stakeholders using four methods (refer to Figure 1):

- i) Design charrettes – Twenty-nine (29) outside experts with connections to Bridgepoint Health as well as staff from within Bridgepoint offered feedback on music in the new Bridgepoint setting during two evening guided tours and focus groups. Outside experts included architects, artists, designers, professional musicians, composers, music educators, music stakeholders from other Toronto hospitals, Bridgepoint patient family members. Bridgepoint staff included a nurse, geriatric psychiatrist, vice president, and chaplain.
- ii) Musical café – Twenty-nine (29) Bridgepoint patients participated in a 90-minute afternoon focus group by sharing their lived musical experiences at Bridgepoint and their advice regarding music use at Bridgepoint. Participants came from 11 different units, were mixed in age and gender (refer to Figure 3). The café concluded with a thank you performance for patients with performers Lenny and Wendy Solomon.
- iii) Electronic questionnaire – Seven (7) Bridgepoint staff responded to a survey delivered through the Daily Dose newsletter which invited ideas for music care.
- iv) Ideas box – Fifty-eight (58) people from the larger Bridgepoint community submitted music care ideas via 13 idea boxes placed at nursing stations, and other common areas throughout the building.

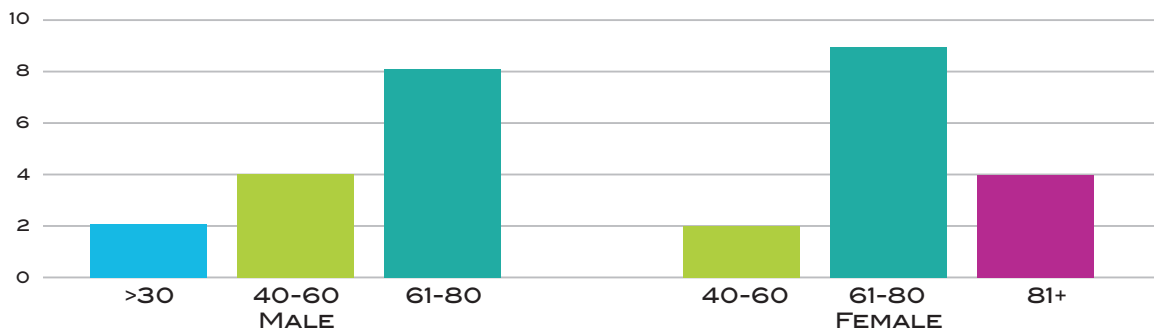
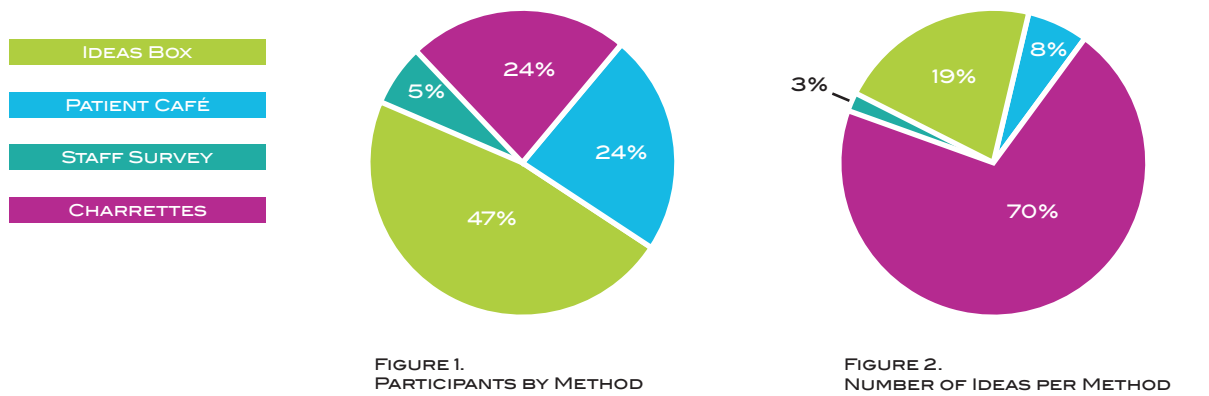


FIGURE 3. MUSIC CAFÉ PATIENT AGE DEMOGRAPHICS

KEY DATA ANALYSIS ACTIVITIES

- Through the initial review of the data, researchers identified key value statements put forward by participants during data collection. These statements were not tied to a specific optimization idea, but served as the context for participants' ideas. Researchers also noted the values that drove the research question and design (figure 4).
- Researchers collated all of the music optimization ideas presented by 123 participants through the four data collection strategies, resulting in 564 ideas (Figure 3).
- Music optimization ideas were subsequently mapped against the music care domains (refer to Appendix 3) in an effort to determine what types of music care might be provided through the implementation of participant ideas.
- Through the analysis, researchers identified key operational elements required for music optimization. These are essential elements that organizations must attend to as they explore opportunities for optimization (Figure 5).
- A set of recommendations generated from the optimization ideas was presented to Bridgepoint leaders.

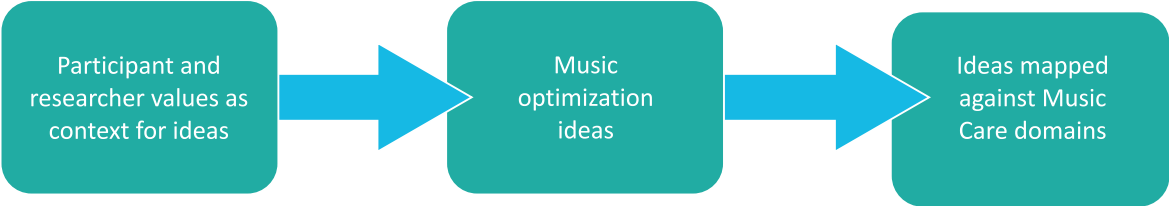


FIGURE 4. FLOW OF DATA ANALYSIS

Additional outcomes included:

- Music Care Optimization Essentials
- Validation of the 10 Music Care Domains

RESULTS

Researchers initiated this study valuing the unique role music can play in complex rehabilitation/continuing care and specifically at Bridgepoint. Additional researcher and contextual values were elucidated during the conduct of this study. While recognizing music’s history at Bridgepoint, researchers also appreciated that Bridgepoint is a place that *intentionally invests in facilitating innovation* which *optimizes quality of care and patient experience*. The *imaginative* design of the new building creates a physical environment for *functional integration* of resources while creating opportunities for *hospitality* and *relational intersection* among dyads, families, the Bridgepoint community and the community as a whole. *Defined use of space* matters at Bridgepoint. The new hospital building is “built for activity” which is apparent in the patient floor layout as well as the natural light throughout the building. Researchers recognize that *person-centered care* is at the heart of culture change and the philosophical shift from traditional medical to social constructs of care can be *catalyzed by music*. Bridgepoint values treating every person as a unique human being. Researchers appreciate that patients, staff, volunteers and families are all *members* of the Bridgepoint community with a shared responsibility for *stewarding* human and financial resources in a *sustainable* way.

The patients at the music café shared the importance of music in their lives. One patient said “on a scale of 1-10 [music] is 10 - very important.” Another said he was “born in music”. Statements like “it should be a [patient’s] choice” and “I prefer sounds that are inviting and ease me into the rehab phase” suggest that patients value *agency*, having influence and control over the music they listen to and want to be involved in.

Patients expressed that music-making is a means of *building community* that gives them a *sense of belonging*. One patient listens to music when lonely. Another patient said that when they did karaoke, “it was fun and they became

close to each other.” A charrette participant wondered if music could help “draw people in” within the new spacious patient floors. Within that sense of togetherness, music was identified as a mechanism that could help patients establish *personal identity*. One participant suggested that “music will create a relaxing and friendly environment that will lead to less complaining to each other”.

Ensuring all patients have *equitable accessibility* to music care services, resources, programming, space and information while *embracing the unique needs and wishes of each individual* was important to patients. For example, many participants voiced the importance of accommodating cultural preferences in music. Patients *also recognized* that music has the capacity to *break down barriers* across professional or social roles. Music has the ability to *invite and facilitate relationships and interaction*.

The interconnectedness of patient, researcher and clinician values, combined with music optimization ideas supported the identification of ‘foundational components for optimizing music care’. Three (3) value-based essentials for successful music care are: *optimization, person-centered culture, intentional leadership* and *understanding context* as shown in Figure 5.



FIGURE 5. MUSIC CARE OPTIMIZATION ESSENTIALS

Participant music optimization ideas were both general and solution-specific. General ideas tended to offer broad suggestions, such as the need for more music therapy, the desire to engage patients in active music-making, and the possibility of playing music through the public address system. Solution-specific ideas included ideas about one or more of the following: personnel (who), programs or actions (what), locations (where), logistics (when, how) and investments (how). For example, a solution specific idea was to use Bridgepoint's public spaces as performance venues for music students who must perform as part of their curriculum (i.e. thus attending to who, what, where).

Information collected from participants took on several forms - ideas, suggestions and general comments. Some ideas were cautionary comments, such as the need for ensuring culturally-sensitive music care practices, or the importance of attending to patient safety with regards to sound cues (i.e. call bells). Other ideas were questions such as, “What about patients who can no longer speak, but they can still SING?” Some participant statements confirmed the need for music, for example, “Some hallways are very quiet at evening; some music would cheer [patients]”. Some ideas were suggested multiple times across participant groups and data collection approaches. These were collated in the music care domain mapping.

MUSIC MATTERS: MUSIC OPTIMIZATION AT BRIDGEPOINT HOSPITAL

Ideas that came from the charrette methodology tended to be about space and design. Ideas that came from the patient music café tended to be about community and music preferences. There were also ideas offered about other artistic media as well, such as hosting sculptors, dancers or storytellers in the rotunda gallery.

Researchers mapped the ideas/comments to the ten music care domains (see Table 2 for examples and Appendix 3 for a full list). Some ideas could be placed within more than one domain, however, researchers attempted to assign these items a single domain.

Domain	Examples
Community Music	The 10th Floor space could be used for practice or performance space by outside community music groups.
Music Care Specialties	Bring in musicians specialized in meditation.
Music Therapy	Install a music therapy room.
Musicking	Add piano in cafeteria for passersby to use.
Music Programming	Music and staff care ideas i.e. staff choir
Music Technology	Offer individual listening devices/stations in labyrinth, patient floors, family dining rooms, gym, 10th floor.
Sound Environment	Environmental sounds are barriers in certain locations i.e. fans outside labyrinth, air conditioning in family dining room, fans in cafeteria, road sound on terrace, high winds in labyrinth, cafeteria acoustics
Music Medicine	Rotunda could be a place for low-frequency and vibroacoustic interventions.
Music Care Training	Education needed for use of music in programs.
Music Care Research	Does familiar music assist with delirium?

TABLE 2. IDEA MAPPING TO MUSIC CARE DOMAINS EXAMPLES

In addition to music implementation ideas, participants also voiced ideas that were not connected to domains of music care but that they associated with this study’s scope of inquiry. These comments helped inform the *Music Care Optimization Essentials*. These themes included: ideas about physical space and design, ideas about the logistics of music care implementation and ideas about other artistic media. Physical space and design ideas were closely linked to the operational elements of “person-centered culture”, “intentional leadership” and “understanding context” and their corresponding values. Some examples of these ideas include: the need for live elements on the labyrinth; the hope of “warming up” the rotunda with such items such as lights, candles, soft seating, tapestries, garden, fountain, mirrors, vines; and the aim of creating more interactive, multi-functional surfaces throughout the facility. Ideas about the logistics of music care also linked to the operational elements and values. Some examples of these ideas include: the use of the rotunda space for fundraising purposes; and the need for accessible information for patients, families and staff regarding the music care initiatives around the hospital.

DISCUSSION

Participants believed that music can play an important role in health care and had many ideas regarding implementation strategies. Participants commented on the personal effect of music, as well as the social elements and possibilities of music in hospital. Participants from all data collection activities identified the role and potential impact of music on patient/staff moods, could see how music could be incorporated into expected and unexpected physical spaces, and noted that music could bring people together and create community.

Developing and refining the Music Care conceptual framework was a key outcome of this study. the Music Care Domains is an evolving framework, generated by a team of music care research specialists at the outset of this study. These domains were then validated by both the literature (see Appendix 1), and through the data analysis by mapping the ideas into domain categories. Unique to this framework was that the actionable ideas that participants were invited to contribute also contributed to the building of the Music Care Domains. This framework can be applied to other health care contexts and be used to generate programmatic results, and is a theoretical piece that is also actionable. This study ultimately produces two results: practical recommendations for music care optimization, and a research approach with a corresponding conceptual framework with which to assess music care optimization in a given setting. It is our hope as researchers that this framework will be used again by other facilities and research teams, and ultimately broadly support the use of music in health care.

Through the conduct of this study, we identified key elements of success regarding the research process. The data-gathering phase could not have happened without an on-the-ground point-person. Recreation therapists involved in this project were instrumental in connecting with patients and inviting them to the Music Café. Similarly, having a senior-level advocate was an important asset to the study, to bring strategic community relationships and the recognition that music matters in health, well-being and the care experience. Touring the physical space was also an essential component to gathering location-specific ideas, and connecting external participants to the clinical context. This is a strongly recommended component for any future music optimization study.

KEY RECOMMENDATIONS

This research has demonstrated that there is a keen interest and appetite for music in care at Bridgepoint Hospital, and that there is also a commitment from stakeholders to move forward with an actionable plan for music care. An expectation of the project was that recommendations for Bridgepoint Active Healthcare would be made from the findings. In this regard, recommendations are as follows:



1. There was explicit interest from Bridgepoint staff and stakeholders to act upon the results of this study. We recommend that Bridgepoint build on the interest by implementing and testing music care interventions for effect on patient outcomes and patient experience at Bridgepoint.
2. We recommend that Bridgepoint leverage existing community programs outside the hospital to fulfill elements of key music domains i.e. Faculty of Music students could participate in performance and wandering musician activities.
3. Through the course of data collection, representatives from Mount Sinai Hospital said that replication of the study at the Mount Sinai site would be interesting and beneficial. We recommend that the Sinai Health System explore what form this replication could take.
4. We searched additional research looking at how optimizing each music care domain through assessment, implementation, and testing would further refine the Music Care conceptual framework. These results would enhance music optimization at Bridgepoint as well as other healthcare facilities.
5. While music is the topic of this study and provides direction for optimization, investing in music care implementation could be a model for other artistic mediums in care at Bridgepoint i.e. art, storytelling, drama, writing etc. We would recommend identifying one individual within a senior leadership role who could oversee all artistic endeavours to ensure standards of practice and care as well as interfacing with the artistic community-at-large.

APPENDIX 1 – LITERATURE REVIEW

Music care is an emerging approach that allows the therapeutic principles of sound and musical effect to inform our caring practices. Music care is not a specific practice, rather a paradigm within which music enhances quality of life and plays an integral role in care and care settings. We propose that music care is comprised of 10 domains:

1. Community Music represents individuals or organizations from outside the facility that partner with the healthcare and hospitality teams to provide live musical services or entertainment within the facility.¹⁰ Community musicians may require fee for service or may volunteer their time.
2. Music Specialist represents individuals that bring their training and experience in music care to a healthcare setting like music thanatologists at end of life¹¹ or harp therapists.^{12,13,14,15}
3. Music Therapy is a specific scope of music care practice that uses music and musical tools to address clinical goals and objectives within a therapeutic relationship. Music therapists practice in a variety of settings including complex continuing care and are accredited by a regulating body.¹⁶
4. Musicking¹⁷ refers to informal or spontaneous music-making within person-centered care of patients, families of patients, facility staff and volunteers, and is specific to the interest, ability and personal relationship to music of each care partner. Musicking may involve playing a musical instrument, singing, dancing, humming or any other act of music-making.
5. Music Programming is staff or volunteers within the facility who plan for and employ the use of music into recreational or therapeutic programs that are delivered to individuals or groups.¹⁸ Programming may include music appreciation, games or sing-alongs for example.
6. Music Technology is the intentional use of technology to deliver music for particular therapeutic intention. Personalized music may be delivered through systems like iPods^{19,20,21} or patient engagement systems.²² Innovative technologies like VMI²³(Virtual Music Instrument) may be used for complex care.
7. Sound environment is ambient healing sounds set intentionally in the facility.²⁴ Environmental psychologists report that audio environment is an environmental factor in healthcare that influences health outcomes and can increase or decrease stress of patients.^{25,26}
8. Music Medicine is the prescriptive use of music strategies in interventions for medical-related outcomes.²⁷ Examples of music medicine in complex continuing care contexts are Rhythmic Auditory Stimulation²⁸ which stabilizes gait and Melodic Intonation Therapy²⁹ a musical intervention to improve language reacquisition.
9. Music Care Training is educating care providers, caregivers and other stakeholders in the integration and implementation of music in care. Music care training helps caregivers gain confidence to integrate music into regular care practice.³⁰ Music care training may occur at the corporate or facility level, in the community, online or as a continuing education course of study at a college or university.
10. Music Care Research includes the use of systematic evidence for music and its use in healthcare embracing a range of topics, fields of study and applied contexts.³¹

APPENDIX 2 – VALUES OF MUSIC OPTIMIZATION

Emerging from music optimization ideas were implied values about what is considered important in care at Bridgepoint, care with music, and purportedly care at large. This was an unexpected and significant result of the study. These values offer important information about how music is already assumed to be a catalyst for leadership in patient-centered, context-sensitive care. The following definitions expand upon these emerging values, and are defined within the context of Bridgepoint Active Healthcare.

Agency: The amount of influence, decision making, and control the patient has in their care

Community-building: Growing a sense of togetherness and sharing within Bridgepoint Active Healthcare

Accessibility: Ensuring each person has equal access to care, service, resources, programming, space, and information

Flexibility: Embracing unique needs and wishes of Bridgepoint members, willingness to adapt and/or change programs and systems so as to better optimize their potential

Breaking down barriers: Inviting and facilitating relationships, with a sense of equality and shared personhood, in contexts and across professional/social roles where there may not traditionally have been contact or relationship

Membership: The experience of belonging and sharing co-responsibility for the Bridgepoint community

Identity: Establishing sense of “me”-ness within the “we”-ness of belonging at Bridgepoint Active Healthcare

Optimization: Making the most of the available resources (human, programmatic, material, structural) within Bridgepoint Active Healthcare, and reaching their full potential

Innovation: Being leaders in thinking outside the box, eagerness to try new approaches to care

Imagination: Conceiving of new possibilities and unorthodox approaches to care

Facilitation: Operating Bridgepoint Active Healthcare and/or providing structure for optimal healthcare, relationships, events

Stewardship: Having integrity with resources, guided by the spirit of membership and consequent responsibility for the resources

Sustainability: Managing resources in a way that considers longitudinal impact on BPH community, and the community at large

Relational intersections: Creating physical space for opportunities of fostered relationships among dyads, families, and the community as a whole, both within BPH and through intersections with outside communities

Functional Integration: Imagining efficient use of resources and space and optimizing possibilities

Space Definition: How the physical environment might invite connectedness to the Bridgepoint community, facilitate relationship, and provide information

Hospitality: The desire on the part of members of Bridgepoint Active Healthcare to invite others into the Bridgepoint community, representing and sharing the perceived sense of Bridgepoint Active Healthcare identity and values

APPENDIX 3 - IDEA MAPPING TO 10 MUSIC CARE DOMAINS

Domain	Idea Mapping
Community Music	<ul style="list-style-type: none"> • Find ways to facilitate patients' contribution of musical gifts at Bridgepoint Hospital • Integrate more live music for wellbeing (i.e. concerts) • Create stage in cafeteria for various kinds of artists • Use outdoor terrace for concerts • Rotunda is ideal for concerts, especially singing, acoustic, musical theatre, recording • Add live music to family dining rooms • 10th floor space could be used for practice space/performance space by outside community music groups • Live musical events on roof garden • Place pianist near coffee shop • Invite music students from schools, music schools, universities, etc. to perform or rehearse
Music Care Specialties	<ul style="list-style-type: none"> • Bring mobile (wandering) musicians to patients • Repeat having flautist or another instrumentalist playing/walking in labyrinth • Bring in musicians trained in mindfulness practices • Bring in musicians specialized in meditation, experimental music, spiritual care • Facilitate having music teachers available • Integrate Arts in Health programs (i.e. professional musicians in health care)
Music Therapy	<ul style="list-style-type: none"> • There is need for more music therapy • Offer active music therapy (not only receptive) • Offer music psychotherapy • Have music therapy integrated into other disciplines • Install a music therapy room • Educate patients and families about music as active agent of change • Implement a clearer referral process for music therapy • Music therapist to consider the connotations of the old Don Jail for patients and implement care plan • Facilitate a community music therapy drum circle (in labyrinth) • Family dining room excellent space for group music therapy
Musicking	<ul style="list-style-type: none"> • Engage patients in active music-making • Invest in musical instruments • Install a music room • Add piano in cafeteria for passersby to use • Add environmental sound and instruments for use on labyrinth • Allow patients and families instrument access and group facilitation in family dining room • 10th floor is great space for musicking • Start choirs
Music Programming	<ul style="list-style-type: none"> • Incorporate music into existing care disciplines • Spiritual care, recreation therapy, palliative care, rehabilitation, physiotherapy, occupational therapy, speech therapy • Integrate music in unit-based programs • Chronic disease (e.g. dementia), delirium, pre-operative • Facilitate scheduled music events in specific areas of Bridgepoint Hospital (e.g. seasonal celebrations in family dining room) • Video events in family dining room • Offer music education i.e. piano lessons • Music and staff care • Develop Snoezelen room • Use music as a cueing agent/sound source in the cafeteria • Music in labyrinth programs • Music and plant care/horticultural therapy in family dining room

MUSIC MATTERS: MUSIC OPTIMIZATION AT BRIDGEPOINT HOSPITAL

Domain	Idea Mapping
Music Technology	<ul style="list-style-type: none"> • More technology (e.g. radios) • Specific locations need sound systems – cafeteria, labyrinth, family dining room, gym, 10th floor, roof garden • Specific locations need more power sources – cafeteria, terrace, labyrinth, rotunda, roof garden • Offer individual listening devices/stations in labyrinth, patient floors, family dining rooms, gym, 10th floor • Cafeteria – technology is needed to assist with environmental sound (e.g. to soften/absorb sound with tapestries, transparency-created fabric art) • Labyrinth –install electric sensor to facilitate active creation • Rotunda – music and images on walls • Patient rooms – offer musical choice • Gym –install massage chair with speakers • Roof garden – install interactive music technology • Enable radio when shuttling patients • Create a hospital radio station • Enable sound therapy devices
Sound Environment	<ul style="list-style-type: none"> • Add background music to cafeteria, labyrinth, roof garden, throughout Bridgepoint Hospital, elevators, telephone system, labyrinth, dining rooms/meal times • Preferential music choices by patient/family, played publicly • Add music on patient floors to connect and make feel like home • Add environmental sound (i.e. ambient sound, nature sounds) in cafeteria, labyrinth, rotunda, patient floors, gym, roof garden, kitchen • Pay attention to natural human sound and its effects on environment • Environmental sounds are barriers in certain locations i.e. fans outside labyrinth, air conditioning in family dining room, fans in cafeteria, road sound on terrace, high winds in labyrinth, cafeteria acoustics • Need sound cues for patient safety • Minimize distractions with intentional silence in gym, public sound spaces and use of quieter spaces (i.e. 5th floor terrace) • Locations where environmental sound could be used for cueing and defining space: rotunda, patient floors, family dining room, garage and stairwell, cafeteria, connecting areas of the Bridgepoint facility • Location specific considerations: rotunda (unique acoustics); roof garden (good sound quality);
Music Medicine	<ul style="list-style-type: none"> • Rotunda could be a place for low-frequency and vibroacoustic interventions • Gym – implementing brain entrainment • Acquisition of sound therapy devices and expertise • Explore music for stimulation, memory, delirium
Music Care Training	<ul style="list-style-type: none"> • Bridgepoint Hospital as music care exemplar • Staff training for sound therapy devices • Patients want staff to encourage music listening • Education needed for use of music in programs • Providing adequate training for preserving distinct identities (i.e. culture and otherwise) of patients with music
Music Care Research	<ul style="list-style-type: none"> • Some research ideas for Bridgepoint: <ul style="list-style-type: none"> ▪ Research a labyrinth - how it reduces blood pressure, cardiac, respiratory rates ▪ What is the goal/purpose of music at Bridgepoint? ▪ Can the length/timing of a piece of music help patients' endurance? Does music provide a nudge to “hang in” there until they finish? ▪ Does familiar music assist with delirium?

REFERENCES

- 1 Shaik et. al developed a Complexity Framework that encompasses demographics, mental health, social capital, medical/physical health and health and social experiences (2012).
- 2 Shaik, A.K., Kuluski, K., Lyons, R., Fortin, M., Jadad, A.R., Upshur, R. & Wodchis, W.P. (2012). A scoping review and thematic classification of patient complexity: offering a unifying framework. *Journal of Comorbidity*, 2, 1-9.
- 3 Live performances improve quality of life for patients with dementia (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.
- 4 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>.
- 5 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.
- 6 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.
- 7 Coffman, D. D. (2002). Music and quality of life in older adults. *Psychomusicology*, 18(1–2), 76–88.
- 8 Crowe, B.(2004). *Music and soul making: toward a new theory of music therapy*. Lanham, Maryland: Scarecrow Press.
- 9 Foster, B., Pearson, S. (2014). The Fundamentals of Music Care: Theory and Context. *Music Care Certificate Program*, Level 1, p 16. The Room 217 Foundation.
- 10 Curtis, S. L. (2011). Music therapy and the symphony: A university-community collaborative project in palliative care. *Music and Medicine*, 3(20), 20-26.
- 11 www.chaliceofrepose.com, Therese Schroeder-Sheker, founder music thanatology.
- 12 Sand-Jecklen, K., Emerson, H. (2010). The impact of live therapeutic music intervention on patients' experience of pain, anxiety and muscle tension. *Holistic Nursing Practice*, 24(1), 7-15.
- 13 Williams, S. (2006). Harp beat affects heartbeat. *The Harp Therapy Journal*, 11(1), 1,12.
- 14 Briggs, T. (2003). Live harp music reduces anxiety of patients hospitalized with cancer. *The Harp Therapy Journal*, 03, V.8-#4, pp. 1,4,15.
- 15 Aragon, D., Farris, C., & Byers, J. (2002). The effects of harp music in vascular and thoracic surgical patients. *Alternative Therapies*, 8(5), 52-60.
- 16 Canadian Association of Music Therapy. www.musictherapy.ca.
- 17 Small, C. (1998). *Musicking*. Middletown CT: Wesleyan University Press.
- 18 Smith-Marchese, K. (1994). The effects of participatory music on the reality orientation and sociability of Alzheimer's residents in a long-term care setting. *Activities, Adaption and Aging*, 18(2), 41-55.
- 19 Janata, P. (2012). Effects of widespread and frequent personalized music programming on agitation and depression in assisted living facilities. *Music Medicine*, 4(1) 8-15.
- 20 Gerdner, L. A., Schoenfelder, D. P. (2010). Individualized music for elders with dementia. *Journal of Gerontological Nursing*, 36:6, 7-15.
- 21 www.musicandmemory.org, Music and Memory Project and the Alive Inside Documentary Film, (2014).
- 22 www.lincor.com Lincor Solutions is a world leader in patient engagement technological systems.
- 23 Virtual Music Instrument technology allows persons with physical or cognitive limitations to make music through movement. An example is the VMI at Holland Bloorview Hospital in Toronto.
- 24 Drahota, A., Ward, D., MacKenzie, H., Stores, R., Higgins, B., Gal, D., Dean, T., (2010). Sensory environment on health-related outcomes of hospital patients. *Cochrane Review*. DOI: 10.1002/14651858.CD005315.pub2.
- 25 Mazer, S. (2014). Music as environmental design. *Healing Healthcare Systems*, 1-7.
- 26 Ulrich, R. S. (2000). Effects of Healthcare Environmental Design on Medical Outcomes. *International Academy for Design and Health*, WCDH 1-11.
Ulrich, R. S., Berry, L.L., Quan, X., Parish, J. T. (2010). A conceptual framework for the domain of evidence-based design. *HERD: Health Environments Research and Design Journal*, 4:1 95-114.
- 27 Racette, A., Bard, C., Peretz, I. (2006). Making non-fluent aphasics speak: Sing along! *Brain: A J of Neur*, 129 (Pt 10): 2571-2584.
- 28 Thaut, M. H., McIntosh, G. C., Rice, R. R., Miller, R. A., Rathburn, T., Brault, J. M. (1996). Rhythmic auditory stimulation in gait training for Parkinson's Disease patients. *Movement Disorders*, 11(2) 193-200.
- 29 Norton, A., Zipse, L., Marchina, S., Schlaug, G., (2009). Melodic Intonation Therapy – Shared insights on how it is done and why it might help. *The Neurosciences and Music III: Disorders and Plasticity: Annals of New York Academy of Sciences*. 1169:431-436.
- 30 An example is Room 217's Music Care Certificate Program. <http://www.room217.ca/music-care-certificate-program>.
- 31 Examples of researchers include Vera Brandes (neurodevelopmental auditory interventions), Julien Thayer (physiological concomitants of music listening), Frank Russo (music, hearing and cognition), Joanne Loewy (music and trauma), Jessica Grahn (music and cognitive neuroscience), Bin Hu (Music Apps for Parkinson's Disease).

