

## Recreation Therapy Stroke Protocol Series

*“There are more than 400,000 Canadians living with long-term disability from stroke, and this number will almost double in the next 20 years. The effects range from mild to severe disability, and can be obviously physical limitations or more subtle such as memory changes. Recovery can take months or years, even for milder strokes, and many people never fully recover.”*

2017, Heart & Stroke<sup>1</sup>

This first of its kind document is a result of the hard work of various Recreation Therapy and Stroke professionals including individuals from the Recreation Therapy Stroke Professionals Network of the Southwestern Ontario Stroke Network, Georgian College, St. Thomas Elgin General Hospital, Woodstock General Hospital, and the Chatham-Kent Health Alliance.

The need for evidence based recreation therapy has increased as the needs of our clients are becoming continually complex. Evidence based practice (EBP) across professions is known to improve quality of care, provide continuity of care, improve health outcomes, as well as, act as a cost savings measure. EBP provides an opportunity for Recreation Therapists to provide their clients with interventions that are rooted in research. These protocols should be used together with the therapeutic process, and our professional standards of practice.

This document is a compilation of student work from the Georgian College Therapeutic Recreation Post Graduate program which has been vetted by Faculty and professional Recreation Therapists currently working in the field. All of the program protocols were created by the student authors and include research evidence to justify their validity. As always, it is up to you as the Recreation Therapist to use these and other protocols as a tool to create positive change for your individual clients. These protocols, coupled with further research and your clinical judgment should align your clients well for success in their health goals.

This is a living document that will continue to grow and evolve. The committee plans to invite Recreation Therapists on an annual basis, to submit evidence based protocols for consideration for inclusion in this valuable resource. This invitation will occur every February to coincide with both Therapeutic Recreation Awareness Month and Heart and Stroke Month.

We encourage you provide us with feedback or suggestions for protocols for inclusion in future editions of this publication. Feedback can provided by emailing [swosn@lhsc.on.ca](mailto:swosn@lhsc.on.ca) .

<sup>1</sup>Heart and Stroke. (2017). Stroke Report. Retrieved from <https://www.heartandstroke.ca>

## **Program Protocol – Rhythmic Rehab**

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**Prepared By:** Erin Manax

**Reviewed & Revised:** September 2023

**Program Title:** Rhythmic Rehab

### **Statement of Purpose:**

- To engage clients in a program that improves physical capabilities, elevates endurance levels and promotes healthy expression of emotion. The program uses functional intervention to strengthen physical capabilities, and increase cognitive and emotional state.

### **Program Description:**

- The proposed program is a Music Therapy Program called Rhythmic Rehab; consisting of six lessons that take place over a time span of six weeks (one lesson a week). The RT does not need to have musical background or be musically trained; however, it is mandatory that the RT take the Music Care Training course through Rm217 to enhance music knowledge. The training can be accessed by following [Recreation Therapy \(musiccare.org\)](https://www.musiccare.org) and enrolling in the “Music Care Skills Day” course. The appropriate group size for this type of program is approximately three to five clients, as there is only one Recreation Therapist.

### **Client Needs Program Will Address:**

- Gross motor skills
- Enhance cognitive and emotional state

### **Selection/Referral Criteria:**

- Inpatients of the stroke unit at any given hospital
- Age will vary depending on when stroke occurs – but expected prevalence is over the age of 55
- Must be able to communicate to the degree that they are understood by RT (mild aphasia is okay, but moderate to severe inhibits ability to participate)

### **Contradicted Criteria:**

- Participants suffer from moderate to severe aphasia
- Participants are unable to grasp any of the instruments offered in the program
- Participants lack desire or interest in the program

### **Program Outcomes (goals):**

- To demonstrate the ability to grasp musical instruments

- To demonstrate the ability to repeat movements with affected extremity (bells may be strapped to legs)
- To demonstrate the ability to follow along and make movements with the instrument to the beat of the music
- To demonstrate understanding to play along and/or play through a song based on comprehension and memory
- To exhibit feelings of happiness (non-verbally & verbally)
- To demonstrate an enhanced knowledge and comprehension of music playing

## Content and Process:

Lesson Number 1 – 1 hour

Lesson Title: Instrument Introduction

Lesson Description: This introductory lesson consists of clients being introduced to the instruments used throughout this program by physically showing each instrument, as well as learning to grasp each instrument and determining ability for this. The instruments available include a boom- whacker set, an egg shaker, a triangle, and strap-on bells (for the legs). These particular instruments were chosen because they have various levels of difficulty in terms of grasping and playing. Therefore, clients are able to pair up with an instrument that best suits their needs, and they have the potential to work towards trying more difficult instruments. The clients are able to explore and play around with the instruments as exposure to begin the program.

Upon successful completion of this lesson the participants will:

- To maintain or improve fine and gross motor skills through the use of musical instruments and the Rhythmic Rehab program
  - To demonstrate the ability to grasp musical instruments
- To enhance cognitive and emotional state through the use of musical instruments and the Rhythmic Rehab program
  - To exhibit feelings of happiness (non-verbally & verbally)

Time	Specific Activity	Supplies and Equipment Required
15 minutes	Introduction <ul style="list-style-type: none"> <li>• Begin with Leisure name game (see Appendix A), and use favourite leisure activity to pair with name</li> </ul>	<ul style="list-style-type: none"> <li>• Computer or Projector Screen</li> <li>• Chairs (dependent on how many participants are not in a wheelchair)</li> <li>• Leisure Name Game Instructions (for RT – see Appendix A)</li> </ul>
15 minutes	Explain overview of all six lessons & main goals of the program <ul style="list-style-type: none"> <li>• Instrument Introduction, Learning the Terms, Feeling the Instrument, Choosing the Song, Playing Along, Time to Shine</li> <li>• Highlight Music Care – benefits</li> <li>• Briefly show participants song book</li> </ul>	<ul style="list-style-type: none"> <li>• Program guide</li> <li>• Rm217 Music Care Brochure (see Appendix A)</li> <li>• Song book (see Appendix D)</li> </ul>
15 minutes	Introduce instruments and show participants how to grasp & play each instrument <ul style="list-style-type: none"> <li>• Boom whacker, Egg shaker, triangle, strap on bells</li> </ul>	<ul style="list-style-type: none"> <li>• Instruments: boom whacker, egg shaker, triangle, strap on bells</li> </ul>
15 minutes	Conclusion/Debrief <ul style="list-style-type: none"> <li>• Ask clients for feedback on the lesson, and if they have any recommendations or ideas for the next lesson</li> <li>• Ask clients if they enjoyed program/feel happier</li> </ul>	<ul style="list-style-type: none"> <li>• Pen &amp; Paper to record results</li> <li>• Lesson Debrief Form (see Appendix M)</li> </ul>

## Lesson Number 2 – 1 hour

Lesson Title: Learning the Terms

Lesson Description: This lesson involves the clients being taught some of the fundamental terms in music, and what those terms mean. These fundamental terms consist of: rhythm, beat, tempo, meter, timbre and melody. These terms will be taught, and explained to the clients by the RT. The RT will then help participants apply their knowledge by playing songs and identifying musical traits of the songs.

Upon successful completion of this lesson the participants will complete:

- To enhance cognitive and emotional state through the use of musical instruments and the Rhythmic Rehab program
  - To exhibit feelings of happiness (non-verbally & verbally)
  - To demonstrate an enhanced knowledge and comprehension of music playing Lesson Schedule

Time	Specific Activity	Supplies and Equipment Required
15 minutes	Introduction <ul style="list-style-type: none"> <li>• Begin with Leisure name game (see Appendix A), and use favourite band or musician</li> </ul>	<ul style="list-style-type: none"> <li>• Computer or Projector Screen</li> <li>• Chairs (dependent on how many participants are not in a wheelchair)</li> <li>• Leisure Name Game Instructions (for RT – see Appendix A)</li> </ul>
15 minutes	Teach Musical Terms <ul style="list-style-type: none"> <li>• Rhythm, beat, tempo, meter, timbre and melody</li> </ul>	<ul style="list-style-type: none"> <li>• Music Care Manual (unavailable in Appendix as it is purchased in the course)</li> </ul>
15 minutes	Apply knowledge of Terms <ul style="list-style-type: none"> <li>• Play songs (using CD from Rm217, or iPod/radio/music device)</li> <li>• Review terms with participants: rhythm, beat, tempo, meter, timbre and melody</li> </ul>	<ul style="list-style-type: none"> <li>• Music Care Manual (unavailable in Appendix as it is purchased in the course)</li> <li>• CD from Rm217, or iPod/radio/music device</li> </ul>
15 minutes	Conclusion/Debrief <ul style="list-style-type: none"> <li>• Ask clients for feedback on the lesson, and if they have any recommendations or ideas for the next lesson</li> <li>• Ask client if they enjoyed program/feel happier</li> </ul>	<ul style="list-style-type: none"> <li>• Pen &amp; Paper to record results</li> <li>• Lesson Debrief Form (see Appendix M)</li> </ul>

## Lesson Number 3 – 1 hour

**Lesson Title:** Feeling the Instrument

**Lesson Description:** This lesson entails the clients' refreshing their memory on how each instrument is held as well as played. Then, clients are instructed to practice playing the instruments at their own pace, and strive to begin repetition of playing the instrument. This allows for clients to understand and feel the sound being made. Furthermore, in this lesson, clients are encouraged to try other instruments available to enhance grip and promote fine and gross motor development.

Upon successful completion of this lesson the participants will complete:

- To maintain or improve fine and gross motor skills through the use of musical instruments and the Rhythmic Rehab program
  - To demonstrate the ability to grasp musical instruments
- To enhance cognitive and emotional state through the use of musical instruments and the Rhythmic Rehab program
  - To exhibit feelings of happiness (non-verbally & verbally)

Time	Specific Activity	Supplies and Equipment Required
15 minutes	Introduction <ul style="list-style-type: none"> <li>• Begin with Leisure name game (see Appendix C), and use favourite band or musician</li> <li>• Introduce and distribute instruments to clients</li> <li>• Supervise and assist as clients grip and hold instruments</li> </ul>	<ul style="list-style-type: none"> <li>• Computer or Projector Screen</li> <li>• Chairs (dependent on how many participants are not in a wheelchair)</li> <li>• Leisure Name Game Instructions (for RT – see Appendix C)</li> <li>• Instruments: boom whacker, egg shaker, triangle, strap on bells</li> </ul>
30 minutes	Play <ul style="list-style-type: none"> <li>• Demonstrate how to play each instrument for the clients</li> <li>• Encourage repetition of playing instruments</li> <li>• Allow clients breaks when needed</li> </ul>	<ul style="list-style-type: none"> <li>• Instruments: boom whacker, egg shaker, triangle, strap on bells</li> </ul>
15 minutes	Conclusion/Debrief <ul style="list-style-type: none"> <li>• Ask clients for feedback on the lesson, and if they have any recommendations or ideas for the next lesson</li> <li>• Ask client if they enjoyed program/feel happier</li> </ul>	<ul style="list-style-type: none"> <li>• Pen &amp; Paper to record results</li> <li>• Lesson Debrief Form (see Appendix M)</li> </ul>

## Lesson Number 4 – 1 hour

Lesson Title: Choosing the Song(s)

Lesson Description: This lesson includes the opportunity for clients to engage in music of their choice – and find ways to connect playing their instrument to this music. There is a song book that has been custom made for the program – consisting of songs ranging from simplicity such as Twinkle Twinkle Little Star to more complex, well known songs. This lesson is when clients are exposed to the songbook in its entirety – allowing them time to listen to the songs, and vote for their top choices to play along with. Clients will be directed as a group to select at least one, (or more with varying difficulty) song to learn to play. Clients will be encouraged to apply knowledge and skills from previous lessons to practice grip and listen and identify the beat, meter or melody of the song.

Upon successful completion of this lesson the participants will complete:

- To enhance cognitive and emotional state through the use of musical instruments and the Rhythmic Rehab program
  - To exhibit feelings of happiness (non-verbally & verbally)
  - To demonstrate an enhanced knowledge and comprehension of music playing

Time	Specific Activity	Supplies and Equipment Required
10 minutes	Introduction <ul style="list-style-type: none"> <li>• Welcome participants – recap names and check in and see how everyone is doing</li> </ul>	<ul style="list-style-type: none"> <li>• Computer or Projector Screen</li> <li>• Chairs (dependent on how many participants are not in a wheelchair)</li> </ul>
10 minutes	Review <ul style="list-style-type: none"> <li>• Review musical terms from Rm217 guide – meter, beat, tempo, melody, timbre</li> <li>• Review songs in song book</li> </ul>	<ul style="list-style-type: none"> <li>• Song Book (see Appendix D)</li> <li>• Music Care Manual (unavailable in Appendix as it is purchased in the course)</li> </ul>
15 minutes	Play <ul style="list-style-type: none"> <li>• Use iPod/radio/music device to play available songs for clients</li> </ul> Identify <ul style="list-style-type: none"> <li>• Beat, meter or melody in songs</li> </ul>	<ul style="list-style-type: none"> <li>• iPod/radio/music device</li> <li>• Song book (see Appendix D)</li> </ul>
15 minutes	Choose <ul style="list-style-type: none"> <li>• Discuss songs with clients – determine interest and passion for certain songs</li> <li>• Record client’s responses of the song(s) they are most interested in playing or have a connection to</li> <li>• Come to a consensus with entire group of at least one, but no more than three songs to focus on</li> </ul>	<ul style="list-style-type: none"> <li>• Pen &amp; paper to record answers</li> </ul>
10 minutes	Conclusion/Debrief <ul style="list-style-type: none"> <li>• Ask clients for feedback on the lesson, and if they have any recommendations or ideas for the next lesson</li> <li>• Ask client if they enjoyed program/feel happier</li> </ul>	<ul style="list-style-type: none"> <li>• Pen &amp; paper to record answers</li> <li>• Lesson Debrief Form (see Appendix M)</li> </ul>

Lesson Number 5 – 1 hour

Lesson Title: Playing Along

Lesson Description: This lesson entails the clients playing along to the beat, or perhaps even the entire song, along with the RT. After interest is gathered, and the clients have selected songs that interest them (occurring in lesson 4), RT guides the clients repetitively through these songs along with the beat, meter or melody. The iPod/radio/music player can be used as guidance if necessary. Clients are to spend this lesson working on increasing difficulty – striving to play for as long as possible and work their motor skills.

Upon successful completion of this lesson the participants will complete:

- To maintain or improve fine and gross motor skills through the use of musical instruments and the Rhythmic Rehab program
  - To demonstrate the ability to repeat movements with affected extremity (bells may be strapped to legs)
  - To demonstrate the ability to follow along and make movements with the instrument to the beat of the music
- To enhance cognitive and emotional state through the use of musical instruments and the Rhythmic Rehab program
  - To demonstrate understanding to play along and/or play through a song based on comprehension and memory
  - To exhibit feelings of happiness (non-verbally & verbally)

Time	Specific Activity	Supplies and Equipment Required
10 minutes	Introduction <ul style="list-style-type: none"> <li>• Review everyone’s names and interests</li> <li>• Give each client their instrument(s)</li> <li>• Discuss and provide client with the song(s) they have chosen to work on</li> </ul>	<ul style="list-style-type: none"> <li>• Computer or Projector Screen</li> <li>• Chairs (dependent on how many participants are not in a wheelchair)</li> <li>• Instruments</li> <li>• Songbooks (see Appendix D)</li> </ul>
35 minutes	Play <ul style="list-style-type: none"> <li>• Take time with each client to work one-on-one to play their instrument and work on the song(s) they have chosen to focus on</li> </ul>	
15 minutes	Conclusion/Debrief <ul style="list-style-type: none"> <li>• Check in with clients on how they are feeling physically and emotionally</li> <li>• Ask clients for feedback on the lesson, recommendations/ideas for next lesson</li> <li>• Ask client if they enjoyed program/feel happier</li> </ul>	<ul style="list-style-type: none"> <li>• Pen &amp; paper to record results</li> <li>• Lesson Debrief Form (see Appendix M)</li> </ul>



## Lesson Number 6 – 1 hour

Lesson Title: Time to Shine

Lesson Description: Targeting client success in the program, family members and friends are invited to see clients perform a concert. Clients are given the opportunity to play along with the song as a group. Alternatively, depending on skill level, some clients may need guidance or assistance from the RT throughout their performance.

Upon successful completion of this lesson the participants will complete:

- To maintain or improve fine and gross motor skills through the use of musical instruments and the Rhythmic Rehab program
  - To demonstrate the ability to grasp musical instruments
  - To demonstrate the ability to repeat movements with affected extremity (bells may be strapped to legs)
  - To demonstrate the ability to follow along and make movements with the instrument to the beat of the music
- To enhance cognitive and emotional state through the use of musical instruments and the Rhythmic Rehab program
  - To demonstrate understanding to play along and/or play through a song based on comprehension and memory
  - To exhibit feelings of happiness (non-verbally & verbally)
  - To demonstrate an enhanced knowledge and comprehension of music playing

Time	Specific Activity	Supplies and Equipment Required
15 minutes	Welcome/Introduction <ul style="list-style-type: none"> <li>• Welcome and introduce family members and clients</li> </ul>	<ul style="list-style-type: none"> <li>• Computer or Projector Screen</li> <li>• Chairs (dependent on how many participants are not in a wheelchair) – extra chairs for visitors</li> </ul>
30 minutes	Perform and Play Along <ul style="list-style-type: none"> <li>• Dependent on client’s skill level and ability, clients are given the opportunity to play alone – or play along to the song(s) they chose</li> <li>• Direct friends and family members to sing along, and create an encouraging atmosphere</li> </ul>	<ul style="list-style-type: none"> <li>• iPod/radio/music player</li> <li>• Songbook (see Appendix D)</li> </ul>
15 minutes	Conclusion/Debrief <ul style="list-style-type: none"> <li>• Thank family and friends for coming</li> <li>• Ask clients for feedback on the lesson, and if they have any recommendations or ideas for the next lesson</li> <li>• Ask client if they enjoyed program/feel happier</li> </ul>	<ul style="list-style-type: none"> <li>• Pen &amp; Paper to record results</li> <li>• Lesson Debrief Form (see Appendix M)</li> </ul>

**Staff Requirements and Responsibilities:**

- Recreation Therapist
  - Re
- RT Assistant
  - Se
- All staff: first aid and CPR certified

**Program Evaluation:**

- Two forms

## PERFORMANCE SHEET

PROGRAM: Rhythmic Rehab STAFF: \_\_\_\_\_  
 LESSON: Week One – Introduction DATE: \_\_\_\_\_

### Enabling Objectives

NAME:	TPO2, EOB: To exhibit feelings of happiness (both verbally and non-verbally)	TPO1, EOA: To demonstrate the ability to grasp musical instruments	Notes:
1.			
2.			
3.			
4.			
5.			

Fill out the name of each participant under the 'NAME' column. If possible, try to use the same number for each client as they return weekly. At the completion of a weekly lesson, mark with an (x) if the participant has successfully performed the intended objective for the lesson. If the participant does not receive an (x), explain in detail in the notes section. Further, use the 'notes' section to keep track of participant happiness levels.





## Research:

After a stroke, individuals suffer physical, emotional and cognitive affects to the body (National Stroke Association, n.d.). Music has been a proven benefit to target each of these categories of affects post-stroke, whilst providing a stimulating and enriched environment to enhance recovery (Sarkamo et al., 2008; Schneider et al., 2007).

Exposure to music has been proven to increase mood and have a positive, lasting effect on emotions (Jeong & Kim, 2007). Music is a commonality that most individuals share, and has a high motivational value for interaction and engagement; meaning that clients will likely have a strong desire to partake in the program (Sarkamo et al., 2008). Not only does contact with music elevate mood, but it is also proven that dance and movement paired together help to enhance quality of life, and reveal a better sense of well-being for individuals (Ritter & Gradd, 1996). Further, interaction with music activates a wide-spread network of brain regions related to attention, semantic processing, memory, and emotional processing (Sarkamo et al., 2008). Music has a positive impact on people with aphasia, as they are able to repeat and recall more words from singing and speaking along to songs (Sarkamo et al., 2008).

Särkämö, T., Tervaniemi, M., Laitinen, S., Forsblom, A., Soinila, S., Mikkonen, M., ... & Peretz, I. (2008). Music listening enhances cognitive recovery and mood after middle cerebral artery stroke. *Brain*, *131*(3), 866-876.

Jeong, S., & Kim, M. T. (2007). Effects of a theory-driven music and movement program for stroke survivors in a community setting. *Applied Nursing Research*, *20*(3), 125-131.

Ritter, M. & Gradd, K. (1996). Effects of dance/movement therapy: A meta-analysis. *The arts in psychotherapy*, *23*(1), 249-260.

## RT Signature and Date:

### Appendices:

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Skills Day are either a ½ or full day training for a particular group of caregivers or an organization for hands-on music and/or care skills-based training. Skills Day can be customized for relevancy, i.e. we have delivered to Rec Therapists, Hospice's, College Students, Hospital, and LTC.

Skills days are in person and are exclusive to your care site or organization (although we have had a few care sites collaborate with eachother).

The price for a full days skills day is \$2200 + travel + parking (if paid) + taxes

By hosting a skills day, you will be able to promote the use of music in programming, build a community within an organization, enhance an existing care practice, and increase the confidence of staff who may already be using music in programs.

## **Acknowledgements**

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