STROKESTRA

Stroke Rehabilitation through Creative Music-Making

Programme Guide

Hull City Council

ROYAL PHILHARMONIC ORCHESTRA

Humber NHS
NHS Foundation Trust

STROKESTRA Programme Guide

This programme guide outlines the process, content and logistical requirements for running a STROKESTRA music rehabilitation programme with stroke patients, as developed by the Royal Philharmonic Orchestra and Hull Integrated Community Stroke Service. The guide is designed as a tool for the arts and health sectors, sharing best practice and offering advice for both artistic and clinical partners interested in creating an engaging and motivational group music therapy framework for stroke survivors and their carers.

For further information, consultation or training to support your organisation in setting up an equivalent music and stroke rehabilitation programme, contact resound@rpo.co.uk.

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Programme Summary

STROKESTRA is a pioneering stroke rehabilitation programme that harnesses the power of group creative music-making alongside professional musicians and clinicians to drive patient-led recovery in stroke survivors and their carers. The programme was developed by the Royal Philharmonic Orchestra (RPO) and Hull Integrated Community Stroke Service (HICSS), part of Humber NHS Foundation Trust, and utilises a range of specially adapted musical techniques to address the complex needs of stroke survivors and their carers. From physical rehabilitation work involving functional movement, grasp and mobility to social integration supporting confidence-building, communication and renewed sense of self, the programme supports patients and their families to work towards rehabilitation holistically, setting and meeting goals that matter to them.

The programme was developed and piloted in 2014-2015 with support from Hull Public Health and the Hull Health & Wellbeing Board. Beginning with an intensive research and development phase, professional musicians and stroke therapists came together to devise appropriate musical techniques for use with stroke patients. A pilot programme was developed involving a series of intensive projects designed to test the intrinsic value of these specially-devised creative music workshops for a wide range of stroke rehabilitation needs. Patients and carers were referred by HICSS therapists and consented to take part in the programme. All patients worked with their referring therapist to create a list of individualised goals to work towards during sessions including improved sensation, mobility, strength, flexibility, cognitive function, socialisation, speech and language, communication and wellbeing.

From May to October 2015, 50 patients and carers took part in 16 days of intensive project work during which they tried out instruments, listened to music, conducted musicians, improvised and created music alongside professionals, all supporting their work towards their stroke recovery goals. The pilot programme culminated in a high-profile performance ahead of the RPO's season opening concert at Hull City Hall on 1st October 2015 featuring stroke survivors, carers, therapists and RPO musicians performing original pieces of music in a celebratory showcase of their creative and rehabilitative successes.

Throughout the project, therapists and staff carried out a robust service evaluation utilising a variety of qualitative and quantitative data to evaluate patients' social, physical, cognitive, communicative and psychological changes. Patients, carers and staff reported marked improvements in a number of areas including:

- 86% of patients felt the sessions **relieved disability symptoms**, citing improved sleeping, reduced anxiety, fewer dizzy spells and reduced epilepsy symptoms.
- 91% of patients reported social benefits, including **improved relationships and communication skills**.
- 86% of patients indicated that the project benefited them cognitively, including reports of **increased concentration, focus and memory**.
- 86% of patients felt the project **benefited them emotionally**, citing increases in confidence, morale and renewed sense of self.
- 71% of patients achieved physical improvements, including **improved walking, standing, upper arm strength and increased stamina**.
- 56.3% of patients achieved **at least a 10 point improvement** on the Stroke Impact Scale hand use section.
- **100% of carers reported improvements in wellbeing**, respite from their role as a carer and improved relationships with their relative after participating alongside them.

A full pilot programme evaluation report is available for download on the STROKESTRA webpage: www.rpo.co.uk/strokestra.

Aims & Objectives

The STROKESTRA model incorporates a range of aims and objectives pertaining to the various stakeholders and aspects of a rehabilitation treatment programme:

RESEARCH & DEVELOPMENT

- To investigate the potential uses of different instruments and musical techniques to mimic, complement or even improve standard rehabilitation techniques
- To evaluate the effects of group creative music-making sessions on the social and psychological recovery of stroke patients
- To refine techniques for working with stroke patients in an inclusive, accessible and creative environment with intrinsic value to stroke recovery and artistic outcomes
- To develop a sustainable, cost-effective model of group creative music therapy that supports the holistic rehabilitation of stroke survivors

PATIENTS

- To contribute towards patients' physical, psychological, cognitive, communication and wellbeing recovery
- To empower patients to regain control of aspects of their lives including making artistic decisions and driving their own therapy goals and outcomes

CARERS

- To provide a period of respite for carers where clinical staff can take over their role
- To improve physical, emotional and mental wellbeing for participating carers
- To strengthen and improve relationships between carers and their patients

CLINICAL STAFF

- To train clinical staff in creative and musical leadership skills, enabling them to utilise techniques and activities in their wider professional work
- To raise staff morale and provide a fun and stress-reducing activity
- To renew relationships between staff and their patients, by participating alongside them in an enjoyable activity
- To challenge staff perceptions of patient abilities through supporting patient-led rehabilitation work

ARTISTIC

- To produce meaningful pieces of music depicting the lives and experiences of stroke survivors and their families
- To improve participants' musical skills including instrumental, rhythmic and creative abilities and confidences
- To provide access to professional musicians and encourage community engagement in music-making

ARTS ORGANISATION

- To train leaders and musicians to facilitate music-making workshops with measureable rehabilitation and health benefits
- To increase project management expertise for the successful delivery of accessible creative therapy sessions

About the Partners

Hull Integrated Community Stroke Service (HICSS) is a dedicated health and social care team that supports stroke survivors in Hull. Funded by the Hull Clinical Commissioning Group as part of the Humber NHS Trust, HICSS uses a team of occupational, physical and speech and language therapists, nurses and clinical psychologists to provide support for stroke survivors throughout their recovery, including inpatient rehabilitation, Early Supported Discharge and longer term community rehabilitation.

The **Royal Philharmonic Orchestra (RPO)** was founded in 1946 with the aim of bringing world-class music to communities around the UK and abroad. In addition to delivering more than 170 mainstream concerts per year, RPO Resound, the Orchestra's award-winning community and education programme, uses the transformative power of music to reach the communities the Orchestra serves, providing inspiring musical experiences in a range of settings from prisons to primary schools and beyond. Each project is bespoke and delivered in collaboration with our partners to meet the needs of specific participant groups and achieve artistic, social and personal aims, including improving participants' aspirations, abilities and life chances. With over 23 years' experience delivering innovative community and education projects, RPO Resound works to gain a wider impact through music outside the traditional concert hall format.

Partner Roles and Responsibilities

The STROKESTRA programme explores the synergies between the arts and healthcare sectors and is designed as an equal collaboration between a clinical team and an artistic organisation, drawing on their combined expertise to produce an effective creative intervention for stroke rehabilitation. Each partner is responsible for various aspects of project planning, delivery and evaluation, as outlined below.

Clinical Partner

The clinical partner provides all therapy expertise to the programme and is ultimately responsible for patient care and driving patient rehabilitation throughout the project. Specific responsibilities might include:

- Provision of a project team to facilitate all planning, delivery and evaluation activities (see **Staff** section for descriptions of roles), including management of staff rotas and clinical budgets
- Patient recruitment
- Collection and storage of patient data, including clinical assessments for evaluation purposes
- Co-creation of goals alongside patients
- Organisation of patient transportation and refreshments
- Briefing of artistic team on patient needs, risks and goals
- Pastoral care for patients at all times, including support to and from taxis, assisting with toilet access and overseeing breaks
- Supporting patients during workshops:
    - Supporting patients to access activities as required (e.g. Speech and Language Therapists supporting relevant patients with communication needs; occupational/ physiotherapists supporting patients in standing and use of affected limbs, etc.)
    - Participating alongside patients by playing, singing and joining in creative activities
    - Offering suggestions of possible adaptations to musical techniques and instruments to support individual rehabilitation needs as they arise
- Leading all interim projects
- Contributing to post-session debriefs with observations, suggestions, concerns and comments

Artistic Partner

The artistic partner is responsible for leading all creative aspects of the project, taking into account patient needs, abilities and recovery goals. Specific responsibilities include:

- Provision of 1 Project Manager, 1 Workshop Leader and a team of trained musicians (these roles are detailed in **Staff** section)
- Procurement of venue, instruments, resources and technical requirements
- Scheduling and co-ordination of project dates with all artists and partners
- Developing effective artistic techniques to support musical creation and stroke rehabilitation, taking into account clinical team suggestions
- Leading all artistic team projects, and supporting patients, carers and clinical staff to engage as fully as possible
- Training clinical staff to lead interim projects
- Driving the development of the artistic outcomes, using structures, musical fragments and ideas created by participants
- Contributing to post-session debriefs with observations, suggestions, concerns and comments
- Budget management of artistic team expenditure

Programme Requirements

Staff

The programme runs best when there is an equal partnership between clinical and artistic staff, with both feeling comfortable to contribute musical and rehabilitation ideas during the planning, delivery and evaluation of sessions. Buy-in from both clinical and artistic staff is paramount to the programme's effectiveness, and appropriate staff training and support (see **Training** section) is required throughout the programme. Each team requires a number of specific roles as below:

Clinical Staff

- **Clinical Lead:** A senior member of staff such as the service or team leader should lead on the implementation of the programme, supporting and advocating for the work internally. The lead should facilitate staff involvement both in terms of timetabling/rotas and ensuring staff from across disciplines are supported to participate. The Clinical Lead should also liaise with the artistic staff Project Manager to arrange all strategic and logistical details of the programme, or assign a key member of staff to do so on their behalf.
- **Administrative Lead:** A minimum of 1 administrator is required to organise patient transportation to and from sessions (see **Transportation** section), disseminate project information to patients, and collate patient data collected by therapists. The administrative lead may liaise with patients to confirm their attendance at upcoming sessions and/or make home care arrangements where music sessions conflict, though clinical staff may do this for patients on their case load.
- **Qualified Therapists:** A range of therapists from across disciplines (occupational therapists, physiotherapists, speech and language therapists, clinical psychologists) should be involved in the programme planning and delivery. Therapists will refer patients to the programme, set goals collaboratively with their patients, and delegate individualised therapy techniques based on patient goals for delivery by Associate Practitioners. A minimum of 1 Qualified Therapist is required for all project sessions, though 2 may be required for sessions with large numbers of patients with specific needs.
- **Associate Practitioners:** A core team of trained occupational therapy and physiotherapy assistants and/or Associate Practitioners are required to support session delivery, with a minimum of 4 required at each session (assuming a participant cohort of 25 per workshop session):
    - 1 Associate Practitioner should be assigned as Team Coordinator, responsible for overseeing the running of sessions, including registering patients as they arrive, distributing name badges and resolving any transportation issues that may arise.
    - 3 additional Associate Practitioners are required to assist patients to/from taxis, support patients to access activities and instruments appropriate to their recovery goals, model participation by playing or singing along as required, and assisting patients during breaks.
    - 2 Carers or Volunteers may also help to distribute tea/coffee and support socialisation upon participant arrival and during breaks. Associate Practitioners may undertake this role if available, or indeed past participants who wish to give back to the programme.

Artistic Staff

- **Project Manager:** The Project Manager is the main point of contact between the clinical and artistic teams and facilitates all planning and logistical needs, including venue hire (in consultation with clinical staff), resource purchasing (instruments, materials to adapt resources, etc.), booking and briefing musicians and the Workshop Leader, budget management, and technical requirements.
- **Workshop Leader:** The Workshop Leader designs and leads the practical music-making workshops, ensuring content is relevant to patients' identified goals. The workshop leader is responsible for creating a supportive environment where all participants and staff feel able to contribute musical and therapeutic ideas. They should drive the creation of high-quality artistic outcomes, utilising the skills of the professional musicians and drawing content from participant and staff experiences. The Workshop Leader will also deliver practical training sessions (see **Training** section) for musicians, clinical staff and other project partners.
- **Team of professional musicians:** A team of specially trained professional musicians support the Workshop Leader during sessions, providing expert musical instruction, technical advice, artistic grounding and inspiration for participants and clinical staff. Musicians may also liaise with clinical staff to identify appropriate instruments for specific patient goals and consult on ways to make instruments accessible to specific disabilities. A minimum of 3 musicians are required for each creative workshop session, to provide a solid musical framework for the composition process. A minimum of 6 trained musicians are recommended to support performance outcomes to ensure a full sound and appropriate support for the combined group.

Participants

The programme is designed to be open to any stroke patient who is medically stable, has rehabilitation potential and is receiving support from the clinical partner, regardless of time after stroke, disability or level of recovery. Patients may therefore experience a range of disabilities, including mobility difficulties, speech and language problems, cognitive impairments, mental health issues and more. Carers of patients are also encouraged to attend and participate alongside their relatives, gaining important wellbeing and respite outcomes themselves. Sessions are open and inclusive to participants with any level of musical ability or interest, with instruments and resources provided.

Participants are assigned to either a morning or afternoon group, and take part in two-hour sessions on each project day, avoiding overworking or fatigue. A maximum of 25 participants (patients and carers combined) can be accommodated in one session without compromising staff ability to ensure individualised rehabilitation work, making the programme's full capacity 50 participants. Performance days may involve longer sessions, including a joint rehearsal featuring both morning and afternoon groups together, followed by a performance.

Clinical staff must collect informed consent, patient medical history, current medication regimes, support needs and risk factors from all registered participants, and should carry out individualised risk assessments for each patient and each programme venue (see **Patient Recruitment** section).

Patients will set individual goals (see **Appendix A**) with their therapists prior to attending; these may range from confidence and wellbeing related goals to specific physical, cognitive or communication rehabilitation goals. Goals should be reviewed throughout the project and amended where appropriate.

Venue

An appropriate venue to host the projects should be identified and thoroughly risk assessed by clinical staff, taking into account any known needs of specific participants. Appropriate venues should have:

- At least one large, light, open space with room for the full group (25 participants plus clinical and artistic staff) to be seated in a circle with instruments
- Easily accessible breakout spaces for small group work, and to provide a safe space to deal with medical emergencies or to offer respite to overwhelmed patients during sessions
- Adequate accessible parking or a flat, easily accessible loading area to meet patient taxis
- Step free access throughout
- Accessible evacuation plans
- Adequate disabled toilets
- Facilities for preparing tea, coffee and break-time refreshments
- Sufficient chairs for all participants and staff, including some with arms for patients who need arm support when standing
- Movable tables on which to place instruments

The largest space should be set up with a circle of chairs in the middle of the room, with tables against one wall and instruments laid out for easy access. Other considerations when setting up the space include:

- Leave adequate space around the edge of the participant circle and all equipment to allow for a wheelchair to move easily past the group, ensuring easy access for participants and to facilitate quick evacuation of participants in the event of an emergency
- Tape down all wires from electrical equipment to avoid trip hazards or wheelchair entanglement
- Keep the floor clear of stray instruments and accessories at all times to avoid tripping participants
- Keep entry and evacuation routes from all spaces clear

Transportation

Transportation should be provided to all patients who require it to eliminate any barriers to participation. Individual taxis ensure patients spend as little time as possible travelling to and from sessions, limiting related stress and fatigue. This may require accounts to be set up with multiple taxi agencies to ensure enough wheelchair-accessible taxis are available at one time. Individual risk assessments, carried out by the referring therapist, should take into account patient support needs for getting to and from, and in and out of, transport.

Minibuses may be appropriate where patients are travelling to and from similar locations (i.e. wards or hospital units), but it is important to be mindful of the total length of time patients spend travelling. Minibuses will ideally include step-free access and individual seats rather than bench seats, to facilitate patient access and comfort.

Companies employed to transport patients should be made aware of any support needs of patients including meeting the patient at the door or helping them into the taxi. All drivers should be requested to wait for clinical staff to meet them in the parking or loading area before patients exit the taxi to reduce falls or other mishaps.

Transportation should be booked to arrive 15-30 minutes before the start of sessions to reduce late arrivals and allow therapists time to review goals with patients before sessions start. This extra time also offers valuable opportunities for further socialising amongst participants.

Instruments

A selection of instruments is required for all aspects of the programme including the artistic and clinical sessions, and for participants to take home for their 'homework' tasks.

Before the programme begins, at least 2 instruments per participant should be secured (purchased/loaned) for participants to use both at the clinical team sessions and at home. These should mainly include portable hand percussion which is easily carried between participants' homes and sessions, as well as a few larger instruments – especially djembes/floor drums – which can be stored and transported to sessions by the clinical partner.

Additional instruments may be brought in for the artistic team sessions. These can be used both by the professional musicians and by participants to enable them to try new sounds and musical/rehabilitative techniques. It is likely these will include an array of larger and/or more expensive instruments which the artistic partner already owns, such as vibraphones, tubular bells, trombones or electrical equipment.

Instruments should be chosen for their specific therapeutic functions, as relevant to patient goals. See **Appendix B** for a description of various instruments and examples of their therapeutic uses. Instruments used regularly during the STROKESTRA pilot were:

Purchased or loaned to clinical team for use throughout:	
2x djembes	3x güiros
2x acoustic guitars	12x tambourines
1x Therimini	2x rainsticks
1x trombone	1x 2-octave chime bar set (25 bars)
1x tenor horn	10x 10" hand drums
1x flute	8x maracas
3x bass bars	24x egg shakers
2x log drums	4x metal agogos
Set of 5 'Wah Wah' tubes	6x cabasas
4x rectangular woodblocks	Assorted beaters/mallets, including: • 12 medium-hard rubber beaters • 12 wooden drum sticks • 10 cord wound beaters
4x tulip woodblocks	

Brought by artistic team to sessions:	
1x vibraphone	2x cymbals + stands
1x orchestral glockenspiel	Mark tree + stand
1x keyboard + stand	2x djembes
1x kaossilator + amplifier	2x congas
1x electric guitar + amplifier	1x ocean drum
1x bass guitar + amplifier	1x talking drum
1x tubular bells + stand	6x bass bars
1x set of chime bars (25 bars)	1x soprano xylophone

Workshop Resources

In addition to instruments, other resources contribute to the running of sessions:

- Name badges (sturdy plastic clip on badges are best) to encourage participants to mingle, especially patients with aphasia who may struggle to introduce themselves
- Mugs with large handles for patients with hand grasp difficulties
- Clipboards to hold communication aids for patients with speech and language difficulties, such as alphabets or blank paper for writing or drawing
- Foam piping, scissors and masking tape for adapting instruments and accessories to facilitate hand grasp
- Sturdy, waist-height tables to create ‘standing stations’ where patients can hold on and rest instruments while standing to play
- Stackable foam mats to adjust the height or angle of instruments for patient accessibility
- Chairs with arms for patients needing support to move from sitting to standing positions
- Durable bags for participants to carry portable instruments and other workshop materials between their homes and sessions
- Journals for patients to record their experience and improvements
- Earplugs or defenders for patients experiencing noise sensitivity
- Laptop or other recording device and writable CDs to create recordings of session material for home practice and listening
- Extension leads to ensure all equipment is accessible to patients regardless of mobility
- Gaffer tape for taping down wires and other trip hazards
- Flip-chart, paper, markers and blu-tack for writing down lyrics or other notes and posting around the room to support patients with difficulty learning or remember words/patterns
- Spare batteries for any electrical or recording equipment
- Plastic crates or boxes for storing and transporting instruments and other resources


53rd Hull
Guide Unit

Procedure

The STROKESTRA programme requires sufficient lead-in time to ensure the programme is fully supported and meets the requirements of the patients, clinical team, artistic team, programme context and setting. The programme, therefore, includes a series of phases as follows:

- Research & Development
- Planning
- Patient Recruitment
- Resource Development
- Staff Training
- Delivery
- Evaluation

Research & Development

New programmes require time for artistic and clinical staff to come together for a Research & Development phase to facilitate partnership building, secure staff buy-in, and begin training in stroke understanding and/or music-making. Sufficient time should be taken to ensure as many clinical and artistic staff as possible meet, learn about each other's work, experience a creative music session, and begin to generate ideas before the programme begins.

Staff should be encouraged to develop bespoke project aims and discuss potential issues and solutions around delivery, including patient needs, scheduling, staff time and accessibility of techniques. Solutions may include developing suitable session structures and frequencies to meet staff availability and avoid patient fatigue, finding appropriate delivery venues or devising participant recruitment strategies.

This Research & Development phase is an essential time for clinical and artistic staff to trial the **STROKESTRA musical techniques**, choose those relevant to specific group needs, and develop new techniques as required.

Organisations may wish to contact RPO Resound on resound@rpo.co.uk for support or consultancy advice on developing techniques.

Planning

The planning phase draws upon the techniques and structural ideas developed during Research & Development to plan full programme delivery and confirm logistical details including:

- Programme aims and evaluation plans (clinical and artistic)
- Programme dates and times, including culmination performance
- Programme venue (see **Venue** section)
- Patient transportation options (see **Transportation** section)

Clinical staff should agree policies and procedures, and communicate these clearly to all staff and volunteers:

- Safe staffing levels
    - A minimum of 1 Qualified Therapist and 4 Associate Practitioners is suggested for sessions with up to 25 participants (patients and carers combined).
- Staff rota system including standby staff
    - A rota listing all session dates and required staff should be created in advance to allow clinical staff to plan sessions around case-loads, holidays and other commitments.
- Emergency evacuation plan – single patient emergency
    - All staff should be aware of evacuation procedures for individual patient medical emergencies.
    - A Patient File for each patient should be readily available for clinical staff to access at the venue (see **Patient Recruitment** section for content).
    - Where possible, patients requiring medical attention should be moved to one of the accessible breakout spaces where help can be given away from the group. At least two staff should be devoted to caring for a patient awaiting further medical help, with the remaining staff continuing to support patients in the main group.
- Emergency evacuation plan – all patients/venue emergency
    - All staff should be aware of how to evacuate a full group in the case of a venue emergency.
- Refreshments
    - Patients with diabetes or other dietary requirements (e.g. thickened fluids or modified diets) should be identified before attending to ensure needs are accommodated and that all staff and volunteers are made aware of related risks.

Patient Recruitment

Once logistical details of the programme have been arranged, clinical staff should begin referring patients to take part. Depending on the clinical partner's reach, patients may also be referred from local GPs, community stroke groups or residential homes.

Patient Information Pack

A patient information pack should be created outlining the purpose, dates, venues and structure of the programme, as well as what will be expected of participating patients and carers. This should be distributed to any interested patients, with adaptations available for specific disabilities (e.g. aphasia).

Patient File

A file should be created for each patient at the time of registration, and should include details necessary for staff to provide appropriate care during the programme:

- Personal profile – name, carer name (if applicable), family situation, address, age, ethnicity, emergency contact details
- Medical profile – GP information, brief medical/stroke history, list of any care packages or other support arrangements, list of medications and regimes, mobility issues, stroke disabilities, allergies, dietary needs, specific risks
- Informed consent to take part in the rehabilitation programme
- Photo/video/media consent (if required)
- Patient's individual goal descriptions and what measures will be used to assess progress
- Individual risk assessments for each patient at each location
- Baseline data collection of selected outcome measures

Resource Development

Instruments and **workshop resources** should be purchased, inventoried, labelled and stored in easy-to-carry boxes before sessions begin.

Clinical staff should also create a folder compiling all patient data to be brought to every session. The folder should contain:

- A comprehensive spreadsheet featuring at-a-glance medical information, goals, risks and consent status for each patient
- Session attendance sheets including individual taxi arrangements
- All individual Patient Files collected during patient recruitment

Staff Training

All clinical and artistic staff should receive prior training to ensure that they understand the programme's structure, aims and objectives. Training should be delivered in separate clinical and artistic team sessions and include both theoretical learning and opportunities for practical exploration.

Clinical staff training should include:

- Their role as clinicians during sessions, including supporting patients to access activities, participating in musical activities alongside patients, and advising patients and the artistic team on adapting techniques/instruments to be more beneficial
- Techniques for leading interim music sessions, including how to conduct, lead improvisation exercises and develop riffs/melodies

Artistic staff training should include:

- Information about stroke, relevant impairments and how to accommodate them
- How to communicate effectively within a mixed-needs group
- Their role as a professional musician in this project, giving expert musical advice to patients, carers and clinical staff

Contact RPO Resound on resound@rpo.co.uk for training support, including practical demonstrations of instruments, techniques and rehabilitative applications.


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Delivery

Programme delivery takes place over ‘terms’ of activity lasting five months each. Each term culminates in a celebratory performance featuring the songs and pieces of music written during that term. The pilot found that terms spanning five months successfully balanced the time required to make significant rehabilitation progress while devising and perfecting high-quality musical outcomes, without sessions becoming boring or repetitive for participants.

There are two fortnightly projects per month, alternately led by the artistic and clinical teams. Projects should aim to take place on the same day of the week to facilitate easier scheduling for participants.

Artistic team projects take place over two consecutive days, while clinical team projects are one day only in recognition of the increased responsibilities of clinical staff during these sessions. Patients participate in one 2-hour workshop session per project day, attending either the morning or afternoon group. Techniques, timetables and structures are included in the **Session Outline** section below.

The final artistic team project is extended with a third project day of activity which brings the morning and afternoon groups together for a joint rehearsal and performance. This culmination performance allows all patients, carers, artists and clinical staff to come together and celebrate their creative and rehabilitative successes. It also provides an important goal for the ensemble to work towards throughout sessions, giving added meaning to each of the projects.

Projects lasting longer than three days were found to be too strenuous for patients during the STROKESTRA pilot, leading to some patients over-exerting themselves. Therefore, limiting the finale project to two workshop days plus a rehearsal/performance day is recommended.

Termly Delivery Schedule	
Month 1	2-day Artistic Team Project 1
	1-day Clinical Team Project 1
Month 2	2-day Artistic Team Project 2
	1-day Clinical Team Project 2
Month 3	2-day Artistic Team Project 3
	1-day Clinical Team Project 3
Month 4	2-day Artistic Team Project 4
	1-day Clinical Team Project 4
Month 5	3-day Artistic Team Finale Project & Performance

Evaluation

Evaluation should be integrated into all stages of the programme, from planning to post-delivery. A range of qualitative and quantitative measures may be used to capture patient, carer and staff impacts. Partners are reminded to seek advice from clinical partner ethics committees to determine whether their evaluation plan requires ethics approval before undertaking patient evaluation.

Examples of relevant evaluation methodologies include:

- Baseline clinical data collected during patient recruitment and repeated post-project to gauge effects of the programme on recovery
- Evaluation surveys completed by all patients, carers and staff to gather feedback about the effects, structure and content of the project from all stakeholders
- Focus group sessions with participants to gather qualitative feedback, which can be analysed through thematic or discourse analysis to determine which project elements are most useful and meaningful to patients and carers (NB: focus groups also offer an opportunity for collective participant reflection and sharing of experiences, providing closure and a celebration of the programme)
- Participant journals, if distributed at the beginning of the project, analysed using thematic, content or discourse analysis
- Musical outputs analysed for content, complexity and execution, with expert opinion provided by the professional musicians
- Financial assessments including analysis of actual versus expected expenditure and cost effectiveness compared to other therapies, including highlighting areas for future savings

Once all data has been collected, a comprehensive report should be created, outlining successes, challenges and learnings. Results should be incorporated into the planning of the next phase of the programme.

For extended discussion of evaluation techniques and challenges, including methodologies used during the STROKESTRA pilot, download the full evaluation report on www.rpo.co.uk/strokestra or contact RPO Resound on resound@rpo.co.uk.

Artistic Team Session Outline

Overview

Artistic team sessions follow a clear structure including set up, briefing sessions, participant arrival, creative work, tea break, reflection and departure.

Once the room and resources are set up (see **Venue** section), all clinical staff attend a short briefing meeting to review patient goals, relevant therapeutic work and specific needs, including dietary or medical requirements. Using consistent staff reduces the importance of these brief meetings as staff become familiar with patients, but may be difficult to arrange with rotas and may not give all interested staff the chance to participate.

One member of the clinical team then leads the artistic team briefing, giving information about the patients in attendance, their specific disabilities and goals. There is a fine line between how much the artistic team needs to know in order to deliver a safe session and where too much information might limit their expectations of specific patients. Patient confidentiality should be maintained except where the project necessitates sharing of information. Briefing sessions should include:

- General goals for each patient (e.g. speech, upper limb, memory) to ensure the Workshop Leader includes activities for all goals in attendance.
- Non-visible access needs, including speech and language, cognitive, vision or other hidden impairments that the team should accommodate.
- Anyone with impulsive behaviour who is at risk of taking on activities that may be dangerous. Most patients are over cautious about their abilities, but patients who are impulsive, struggle to self-regulate or who have limited or no insight into their difficulties need to be highlighted so that artistic staff don't ask them to do potentially dangerous tasks without clinical staff support.
- Identification of anyone without obvious mobility or strength issues who shouldn't carry heavy objects or may be at risk of falling.
- How to handle anyone with unusual behaviour or behaviours that should be treated in a specific way. For example, when not to address emotional lability (involuntary emotions), such as uncontrollable crying, as this may exacerbate the situation.

Participants begin to arrive up to thirty minutes before sessions start. A clinical staff member meets all patients at their car and assists them into the venue. Patients then receive their name badge and are offered tea or coffee. A qualified therapist visits all patients upon arrival to review their stated goals and suggest ways they can continue to work towards these goals during the session. This short discussion also reminds patients to continue to work towards therapy goals, rather than focus exclusively on immediate mastery of the musical techniques.

Creative sessions consist of a variety of whole and small group activities designed to facilitate social interaction, the creation of new musical material and opportunities for patients to work on rehabilitation goals. Specific techniques are chosen and led by the Workshop Leader, and are outlined below.

Roughly half-way through the session, the Workshop Leader suggests a short break for refreshments and relaxation. The length and timing of the break should be flexible and adapt to the mood and energy of the group on that day. Breaks are necessary to ensure patients do not over-exert themselves, and are an important opportunity for patients to practice communication and socialising by speaking to other people in similar situations.

Following the break, further creative work takes place until a few minutes before the end of the session. The session closes with a short 'cool down' period reflecting on the session and discussing ongoing work. The Workshop Leader encourages participants to take home a piece of hand percussion and assigns a small homework task such as listening to music, practicing a specific riff or rhythm, or creating a new melody. These tasks support the continuation of programme benefits between sessions. Instructions for homework should be written down for patients who may forget, to reduce stress and encourage engagement. A summary of what an individual has done during the session is also beneficial for those with difficulty remembering or communicating to family or carers not present.

As taxis arrive, patients are escorted to their cars by clinical staff while the artistic team packs away instruments and resources. Once all participants are safely away, the full team sits down for a debrief to discuss patients, techniques and ideas for future sessions.

Timetable

9.15-10.00	All staff unload instruments and set up the room.	
9.45-10.00	Clinical staff briefing with therapist re: patient goals and relevant techniques.	
10.00-10.30	Clinical staff meet patients at taxis and assist to enter venue. Clinical staff register patients and offer tea and coffee. Therapist discusses goals with patients individually. Artistic team briefing on patients and session outline.	
10.30-12.30	**AM Session**	Creative work Break Creative work Cool down & homework
12.30-12.50	Clinical staff help patients to taxis.	
12.50-13.20	LUNCH	
13.20-13.30	Clinical staff briefing with therapist re: patient goals and relevant techniques.	
13.30-14.00	Clinical staff meet patients at taxis and assist to enter venue. Clinical staff register patients and offer tea and coffee. Therapist discusses goals with patients individually. Artistic team briefing on patients and session outline.	
14.00-16.00	**PM Session**	Creative work Break Creative work Cool down & homework
16.00-16.30	Clinical staff help patients to taxis. Artistic team put away instruments and tidy venue.	
16.30-17.00	All staff debrief session.	

Musical Techniques

Artistic team sessions use a variety of techniques and activities to facilitate group creative music-making with specific functions to aid stroke recovery. Techniques are chosen and led by the Workshop Leader as appropriate to patient goals, group feeling, energy levels and workshop context. Techniques used frequently during the pilot programme included:

- **Instrument demonstrations** – Musicians demonstrate their instruments by performing short solos or improvisations. Participants ask questions, make comments and interact with musicians and each other. ‘Name that tune’ activities work particularly well, where musicians play selections from TV shows or films for participants to recognise and guess the name.
- **Conducting musician improvisations** – Musicians improvise while following cues from participant conductors. Patients work on fine and gross upper limb movement as they move arms up and down to indicate higher or lower notes and open and close hands to signify dynamics. The activity also requires abstract thinking to understand the relationship between their movements and the resulting music, and attention to the group process in order to pass the conducting role on to other participants. Patients may choose to conduct standing or sitting, and the exercise empowers patients with limited independence by offering complete control over the music created by a professional musician. This technique can be extended by involving multiple musicians or conductors at once, enhancing the ability to create musical harmonies and requiring more complex cognitive skills.

- **Sampling instruments** – Patients are encouraged to try out different instruments and mallets/beaters to explore their sounds and ways of playing. This is an important activity especially in initial workshops as it encourages patients to try new things, make independent decisions, and work on mobility, visual perception, psychological and cognitive goals in order to approach and select new instruments.
- **Instrument circles** – Sitting in a circle, participants select an instrument and play a single note person by person. This exercise allows patients to focus on physically playing their chosen instrument (involving holding a beater or instrument, gross and fine motor skills, motor planning and coordination) in conjunction with maintaining awareness of their position within the group and developing visual communication skills.
- **Drum patterns** – Participants copy drum patterns demonstrated by the Workshop Leader. This exercise requires patients to understand spoken instructions and visual cues, and successfully involve fine and gross upper limb movement, coordination, timing, motor planning, initiating, inhibiting and sequencing of movement. In this exercise more than others, patients receive immediate auditory feedback about the accuracy of their movements through drum sounds, while also developing feelings of belonging by contributing to a group sound. Extensions include involving both hands and additional instruments, or developing longer rhythmic patterns to improve aural and working memory through the ‘chunking’ strategy.

- **Groove work** – Participants and musicians simultaneously repeat short, improvised phrases, while the Workshop Leader picks out complementary riffs and directs participants to start, stop and play together in duets, trios or small groups. This exercise quickly creates quality artistic outcomes featuring a 'groove', the repeated rhythmic quality of music which is naturally communicative and soulful. It also requires patients to use various physical skills depending on their chosen instrument, as well as maintain attention to spoken and symbolised instructions, initiate and inhibit movement as directed, practice auditory attention to locate similar or complementary riffs and exhibit creativity to create a unique phrase.

- **Musical 'postcards'** – Participants and staff work in small groups to create short musical sections representing a chosen theme or piece of imagery. This technique requires verbal and musical communication, abstract thinking, holding and playing instruments, and creativity. It also supports socialisation through sharing ideas and creating something new with others.

- **'Kitchen Drum Kits'** – Participants explore the potential uses of found household objects to create interesting and pleasing sounds or rhythms. This exercise encourages patients to move around their home environment and engage with their space in a new way as they explore potential sounds. New instruments can be brought to sessions and shared with other participants, supporting group feedback and encouraging participants to complete therapeutic musical homework tasks.

- **Choreography –** Many instruments can use choreography to both help remember specific rhythms or patterns, and to engage patients in movements relevant to their rehabilitation goals. For example, tambourines, shakers and other hand percussion easily lend themselves to using up and down and side to side upper limb movements to create a dance-like upper body workout while contributing to the artistic product.

- **Creating melodies** – Melodies are devised by participants, with feedback and suggestions from the artistic team, through trial and error or chance techniques such as using the letters from a person's name. Melodies may be created using voice or tuned instruments such as chime bars, or transferred between voice and instruments. Once a satisfactory melody has been created, patients practice the melody repeatedly, supporting cognitive and physical development work.

- **Songwriting** – Participants work in small groups to devise words on a chosen theme. Group responses are then reviewed as a full group and edited to form song lyrics, which can be set to participant-created melodies.

In all techniques, instrument choice is flexible, allowing patients to choose instruments they prefer or instruments that will have specific benefits to their rehabilitation goals. Although skills may improve over time, newcomers can easily access any technique due to their flexible, improvisatory nature and the underlying support of professional musicians. Workshops are therefore equally accessible to new and returning participants.

This list of techniques is not exhaustive, and other techniques may be developed to meet specific needs. For demonstrations, training or advice on developing techniques, contact RPO Resound on resound@rpo.co.uk.

Clinical Team Session Outline

Overview

Interim sessions run by the clinical staff follow a similar structure to that of artistic team sessions, but run for one day rather than two. One or more trained clinical staff take the role of Workshop Leader and direct the musical activities, supported by other clinical staff in their normal roles.

Other Techniques

Musical techniques for clinical team sessions are closely related to those used during artistic team sessions, except where impossible due to lack of professional musicians. Additional techniques also include:

- Listening to music to develop aural awareness, concentration and attention.
- Talking about favourite pieces of music to facilitate speech and language work, as well as emotional recovery and socialisation. This also encourages participants to think about music whilst away from the group, which can have potential psychological and habitual benefits.
- Playing along to recordings of music created during previous sessions to practice rhythmic improvisations, aural awareness and concentration to ensure improvisations fit within musical structures, time signatures and genres.
- Beating the rhythm of famous film lines on drums while speaking them aloud to support communication work.

The artistic team may also leave homework activities for the ensemble, such as devising pieces of music to represent specific themes or ideas, writing song lyrics, or practicing rhythms or riffs learned at previous sessions.

Other Opportunities

The STROKESTRA model can be extended through various opportunities for local partners to engage with the programme, and also through a range of additional musical experiences and activities which participants can be signposted to or indeed engage with.

Opportunities will vary based on the programme context and delivery partners, but examples include:

- Opportunities for participants and clinical staff to attend informal Open Rehearsals by the artistic partner
- Discounted ticket offers to attend concerts by the artistic partner
- Engaging local youth ensembles and university groups to deliver concerts at local care homes or hospital wards
- Signposting university students to provide instrumental tuition to participants seeking to extend their musical technique
- Practical work experience for university students supporting the programme (for example, the pilot engaged nursing, clinical psychology, occupational therapy, speech and language, music and research staff and students from local universities)
- ‘Taster’ sessions delivered by local community music groups during interim sessions, supporting patients to find out about external groups in a comfortable, safe environment
- Support for participants to research and register with other local groups, facilitating greater community engagement following their participation on the STROKESTRA programme

ROYAL PHILHARMONIC ORCHESTRA

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Appendix A: Patient Outcome List

The activities of the STROKESTRA programme are designed to address the following goals/outcomes in patients.
For a description of outcomes for all participants and staff, refer to the Pilot Evaluation Report on www.rpo.co.uk/strokestra

Patients	
Physical Recovery	• Muscle strength (hands/arms/legs/core) • Range of motion (wrists/elbows/shoulders/hips/neck/knees/ankles) • Improved pain management • Relief of spasticity • Coordination • Core stability • Balance • Mobility • Finger dexterity • Functional movement (eg. reach, grasp, release) • Sensation • Breath support • Sleep quality
Cognitive Recovery	• Memory • Concentration • Planning • Sequencing • Motor planning • Insight • Problem solving • Abstract reasoning • Orientation • Attentional switching • Sensory awareness

Patients (continued)	
Communication Recovery	• Increased confidence in speaking 1:1 and in group settings • Increased confidence in communicating with unfamiliar people • Increased confidence in using strategies to support communication • Opportunities for nonverbal communication and expression through music • Improved receptive language (eg. following instructions) • Improved listening skills • Improved expressive language through sharing information, speaking with other group members • Improved abilities to understand and describe concepts (eg. louder, quieter, slower, faster, etc.) • Opportunities to improve writing skills through reflective diary
Emotional Recovery	• Improved mood • Enjoyment • Reduced feelings of depression • Facilitation of adjustment to their symptoms and change in life resulting from stroke • Increased feelings of worth and/or purpose • Reduced feelings of anxiety • Self-expression • Confidence • Empowerment – both to create their own music and to take control of their personal rehabilitation • Increased feelings of independence • Development of new interests and hobbies
Social Recovery	• Socialisation • Confidence in group situations • New relationships • Improved relationships between carers and patients • Improved relationships between patients and HICSS staff
Musical Skills	• Knowledge of instruments, orchestral repertoire and musical terms • Rhythm • Creativity • Instrumental and singing skills • Performance and confidence skills

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Appendix B: Rehabilitative Uses of Instruments

Instrument	Photo	Movement(s) involved	Rehabilitation uses	Cost Estimate
Triangle		• Strike with beater • Dampen sound by gripping with hand • Either hold in one hand and beat with the other, or hang for one-handed use	• Grasping beater • Opening and closing hand to allow/dampen sound • Hand eye coordination to strike • Holding the triangle in second hand for extended periods	£8
Güiro		• Scratch beater across grooved face • Hit with beater	• Grasping beater and instrument • Holding and/or cradling instrument • Side to side arm/wrist movement • Sensation of beater moving across grooved face	£29 – plastic £15 – wooden
Cowbell		• Strike with beater • Either hold in one hand and beat with the other, or place on a table/stand	• Grasping beater and/or instrument • Hand eye coordination to strike • Gross arm movement to strike	£17.50
Metal Agogo		• Strike with beater • Each bell creates a different pitch	• Grasping beater and/or instrument • Hand eye coordination to strike desired bell • Fine wrist movement to strike desired bell	£20
Tambourine		• Shake or hit with hand/finger • Can be played one-handed or held in one hand and hit with the other, or placed on a table and hit, or placed on the floor and tapped with foot	• Grasping tambourine if being held • Wrist movement if shaking • Gross movement of body part used to strike, e.g. finger/hand/leg/arm/etc. • Stability, as the instrument makes noise at the slightest movement so holding it silent is challenging	£8

Claves		• Hit together • 'Proper' technique involves holding one clave in a cupped hand to improve resonance (not necessary)	• Grasping claves – normal hand position • Cupping hand to hold clave 'properly' • Gross arm movement of one or both arms to hit together	£5-10 per pair
Cabasa		• Hold handle in one hand while placing beaded end on other palm, and rotate handle to rub beads across open palm • Hold handle and rub beaded end across other hand or another part of body • Shake	• Sensation of beads on hand/other body part • Grasping of handle • Gross movement of arm if rubbing across body • Turning wrist motion if using hand to rotate	£15 (or large for £24)
Maracas		• Hold handle and shake • Hold bowl-shaped end and swirl	• Small grasp of handle • Gross arm movement if shaking • Large grasp of bowl-shaped end • Circular wrist movement if swirling	£5 per pair
Woodblock		• Hit with beater • Either hold in one hand and beat with the other, or place on a table/stand	• Grasping beater and/or instrument • Hand eye coordination to strike correct spot • Fine and gross motor function	£30
Tulip Woodblock		• Hold by handle and hit tulip end with beater	• Grasping beater and instrument • Hand eye coordination to strike • Fine and gross motor function	£5
Castanets		• Wrap string around thumb and use fingers individually to press sides together in quick succession • Wrap string around thumb and open and close fist around castanet to cause it to close against itself • Hold by rope and shake	• Open and closing of fist if wrapping around thumb • Fine finger movements at speed (not necessary) • Shaking of wrist if shaking	£11 per pair
Table Castanets		• Place on table and press and release with fingers	• Finger dexterity • Fine movement	£33

Kokiriko		• Hold one end of the instrument with each hand and move hands up and down in opposite directions to allow wooden slats to hit each other in succession	• Grasping instrument (both hands) • Coordination of movement between hands • Gross up and down arm movement	£8
Sleigh Bells		• Hold by handle with bells pointing down • Strike top of the handle with fist • Hold by handle and shake • Set on table and strike bells with hand or other body part	• Grasping handle • Holding hand in a fist • Gross movement if hitting and/or shaking • Fine finger movement if placing on table and hitting with fingers	£15
Finger Cymbals		• Hold the string with two hands, with each hand slightly below one cymbal, and move hands up and down causing cymbals to strike each other • Drape over forearm and rotate arm side to side to cause cymbals to chime against each other	• Finger dexterity to hold thin string • Hand eye and hand to hand coordination • Fine up and down movement of hands/wrist or rotation of arm	£5
Egg Shaker		• Hold egg in finger tips and shake • Hold egg in fist and shake	• Grasping egg • Gross arm or wrist movement for shaking	£1.50 per item
Wrist Bells		• Secure velcro strap around wrist/ankle/etc. and move relevant body part to ring bells	• Gross movement of relevant body part (i.e. arm, leg)	£2.50
Rain Stick		• Grasp the middle of the instrument with the hand and tip from side to side allowing beads inside to run down, creating a rain sound	• Grasping instrument • Rotating wrist • Stability, as the instrument makes noise at the slightest movement so holding it silent is challenging	£7 for short ones

Bird Calls		• Place mouthpiece in mouth and blow • Cover/uncover holes with hand to change notes	• Breath support • Fine finger movements if covering hole (not necessary)	£10-25 each
Bulb Horn		• Squeeze rubber circular end to create noise	• Hand strength and grasp • Creating a fist	£5
Mark Tree		• Suspend instrument from a stand and move an arm/finger/beater/etc. in a sideways motion through the chimes to create a noise	• Gross side to side movement (abduction/adduction) of arm/finger/leg/etc. as used to create noise • Grasping beater if used • Sensation against hand/arm if used	£35
Wah Wah Tubes		• Hold one bar in hand and hit other end with beater • Place thumb over hole and cover/uncover to create ‘wah wah’ effect	• Grasping beater and/or instrument • Fine thumb movement (not necessary) • Hand eye coordination to strike bar with beater	£48 set of 5 pitches, or £8 per smallest bar
Chime Bars		• Place chime bars on a table and use one hand to strike • Hold one bar in one hand and strike top with a beater with other hand • Use one bar for one pitch or multiple bars for multiple pitches	• Grasping beater and/or instrument • Hand eye coordination to strike • Fine and gross motor function • Memory challenge if repeating specific pattern	£105 for two-octave set of 25
Bass Bars		• Hold one bar and strike with beater • Place multiple bars on a table and strike with beater	• Grasping beater and/or instrument • Hand eye coordination to strike • Fine and gross motor function • Memory challenge if repeating specific pattern	£58 each

Xylophone		• Place on table and strike notes with beater • Remove individual notes to assist patients with remembering which to play or to make it easier to hit the desired notes • Use one or both hands	• Grasping beater • Hand eye coordination to strike • Fine wrist movement to strike desired bar • Memory challenge if repeating specific pattern	£200-£475 depending on size
Vibraphone		• Sit or stand at the vibraphone and strike the desired note with a beater • Press or release pedal with foot to dampen or let sound ring • Turn motor on to create vibrato effect	• Standing while playing (not necessary) • Grasping beaters with one or two hands • Hand eye coordination to strike desired note • Memory challenge if repeating specific patterns • Lower limb engagement if pedal is used (not necessary but unique to this instrument)	£2,000-£4,000
Tubular Bells		• Strike the top of the appropriate bell with a hammer • Best played standing to reach the top of the bells, but can be played sitting if necessary • On beginner models, bells can be removed to more easily facilitate 'correct' notes	• Standing while playing (not necessary) • Grasping hammer • Fine and gross upper limb movement to strike desired bell • Memory challenge if repeating specific patterns	£650 for aluminium, non-professional quality 'Chromatic set of Chimes on Frame'
Keyboard		• Place on stand or table and press keys • Use one or both hands	• Fine finger movement and dexterity if playing notes in quick succession • Gross arm movement if playing chords or one note at a time slowly • Hand eye coordination	£65-85 for small ones

Ocean Drum		• Hold in two hands and tip side to side to allow beads inside to roll around creating an ocean sound • Hit top of drum with hand	• Grasping drum in one or two hands • Slow arm and/or core movement up and down or side to side to create sound • Gross up and down arm movement if hitting • Stability, as the instrument makes noise at the slightest movement so holding it silent is challenging	£15-20
Hand Drum		• Either hold in one hand and beat with the other, or place on table/stand and strike with hand or beater	• Grasping beater and/or instrument • Gross up and down or side to side arm movement to strike instrument	£10-15 each
Bongos		• Place drums on lap or table/stand and strike top • Each drum makes a different pitch	• Flexion/extension of shoulder and elbow to strike drums • Hand eye coordination to strike desired drum • Option to use one or both hands/arms • Can use fine finger movements to create soft noises	£35 for small
Talking Drum		• Hold drum under one arm or between legs and strike top with the beater • Squeeze drum with arm/legs to change pitch	• Grasping beater • Holding of drum under arm or between legs • Squeezing of drum to change pitch (not necessary) • Gross arm movement at an angle to strike drum	£65
Djembe		• Hold or prop drum at an angle between legs and strike top of drum with hand • Change sound by striking either the middle of the drum head with an open palm or the rim of the drum head with fingertips	• Supporting drum between legs (not necessary) • Forward flexion/extension to strike • Precision of arm movement to strike chosen part of drum to create specific noise • Can use fine finger movements to create soft noises	£35-85 depending on size/quality
Log drum		• Place drum on table and strike top with beater • Each ‘slit’ of wood creates a different sound • Use one or both hands	• Grasping beater • Gross arm movement to strike • Hand eye coordination to strike desired drum • Memory challenge if repeating specific pattern	£50-£100 depending on size/quality

Recorder		• Place mouthpiece in mouth and blow • Cover/uncover holes with fingers on both hands to change notes	• Fine individual finger movement and dexterity • Breath support (requires less than other wind instruments below)	£8
Flute		• Blow across the mouthpiece as though across a bottle top • Press keys with fingers on both hands to change notes	• Fine individual finger movement and dexterity • Breath support and velocity	£100+ for student model
Tenor Horn		• Place lips against mouthpiece and blow • Use three fingers on right hand to press valves to change notes	• Breath support and velocity • Fine individual finger movement of three fingers on right hand • NB: tenor horn may be more suitable for use than other brass instruments (such as trumpets) due to being held close to the body and having less resistance	£200+ for student model
Trombone		• Place lips against mouthpiece and blow • Move slide in and out with right arm to change notes	• Breath support and velocity • Gross arm movement if using slide	£100+ for student model
Guitar/ Bass Guitar (or Ukulele)		• Hold on lap and pluck or strum strings to make sounds • Left hand can be used to press on the fret board to create chords • Bass guitar has fewer, larger strings and is usually plucked one at a time • Guitars can be acoustic or electric, using amplifiers to control volume	• Gross arm movement if strumming • Finger sensation if strumming across multiple strings • Fine individual movement if plucking and/or creating chords • Hand eye coordination if plucking individual strings • Memory of chord positions if using left hand	£50+
Kaossilator		• Plug Kaossilator into amplifier and use dial to choose a sound setting • Rub, tap or press the pad with a finger/nose/cheek/etc. to create noise	• Fine movement of whatever body part is used to touch the pad • Stability if trying to maintain a single sound as pad is extremely sensitive to minute movements (very difficult)	£200

Theremini		• Set on table or stand • Move arm or finger towards or away from vertical pole to change pitch • Move the other arm towards or away from the metal loop to control volume (optional) • Uses inbuilt speaker system or amplification	• Gross movement if using arm; fine movement if using fingers to control pitch • Multiple motions needed at once if controlling both pitch and volume (not necessary) • Abstract thinking to understand relationship between hand/finger movement and consequent sound changes	£270
Beater Cuffs		• Attach cuff to wrist with velcro and insert beater	• Assists with holding a beater • Prevents dropping	£10
Thick-foam Beaters		• Beater with thicker handle due to added foam	• Assists with grasping beater if necessary	£35 for pack of 6
T-shaped Beaters		• Beater with T-shaped handle to allow for different grips	• Assists with grasping beater if necessary	£35 per pack of two

Notes:

- Instruments included here are based on those owned by the RPO and used during the STROKESTRA pilot. For training in how to optimise and adapt existing instrument collections for rehabilitative uses, please contact resound@rpo.co.uk.
- All instruments can be used rhythmically, following a learned pattern, to a specific tempo, with choreography, etc. to assist with rehabilitation goals.
- Most instruments can be used lying on a table or incorporated into stands along the lines of:

Get in touch

Further information, videos, advice, consultation or training about the STROKESTRA programme can be obtained by contacting RPO Resound on resound@rpo.co.uk / Tel: 0207 608 8800 / www.rpo.co.uk/strokestra

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