Clear Speech Together

Instructions for Clinicians

by Anja Lowit
Strathclyde University

INTRODUCTION

ClearSpeechTogether is a combined individual-group therapy programme focusing on the treatment concepts LOUD and CLEAR. It consists of four individual sessions administered over two weeks, followed by four weeks of daily group sessions where clients work through exercises with their peers. The model is intended to maximise client exposure whilst minimising SLT input, ensure intensive practice of speech exercises, provide additional psycho-social benefits through group working and facilitate carry over of speech strategies to natural communication situations. It was originally developed with a small group of patients with progressive ataxia in a pilot project funded by Ataxia UK (Lowit et al. 2022). The publication can be accessed freely here:

ClearSpeechTogether: a Rater Blinded, Single, Controlled Feasibility Study of Speech Intervention for People with Progressive Ataxia | SpringerLink

The feasibility study investigated nine participants with a range of progressive ataxias. The preliminary data suggest that the intervention can result in improvements in voice quality, intelligibility, and communication confidence and participation. These results still need to be confirmed with a higher number of clients with ataxia, although results from qualitative feedback from participants of the treatment funded by Ataxia UK for its members (n=34), and formal measures from a recent pilot randomised controlled trial of people with cerebellar type Multiple System Atrophy (MSA-C, n=11, Lowit et al. 2023) continue to show beneficial communication outcomes.

In addition, potential benefits for other types of acquired dysarthria for whom the treatment strategies are appropriate also require further investigation. **If using this programme, the clinician therefore needs to carefully monitor their client's progress to ensure they are achieving the desired benefits.**

THE PROGRAMME

ClearSpeechTogether is designed to promote enhanced intelligibility as well communication confidence and participation. It supports motor learning through intensive delivery, graded exercises as well as opportunities to develop monitoring skills. Feedback from the feasibility study also suggests that listening to others successfully apply speech strategies can reduce worry about appearing unnatural when adopting altered speech patterns.

The treatment focuses on two evidence based strategies for improving intelligibility in motor speech conditions, i.e. loudness amplification and effective voice production (LOUD, cf. Lee Silverman Voice

Treatment (LSVT LOUD®), Ramig et al. 2018) and overarticulation or clear speech production (CLEAR, cf. Park et al. 2016, Schalling et al. 2021, Tjaden et al. 2014).

(1) LOUD: LSVT LOUD® was designed for speakers with Parkinson's Disease who frequently speak at reduced loudness levels. It should be noted that volume increases might not be a priority or indeed an appropriate strategy for clients with other types of motor speech impairment. However, there is some evidence, that increases in loudness can improve intelligibility even if baseline loudness falls within normal range (e.g. Wenke et al. 2008). In addition, there are other phonatory aspects that might require attention, such as effective breath management, appropriate choice of pitch level and range, and techniques to optimise effective voice production to reduce, harshness, strain, etc., in line with advice on voice rehabilitation. The cue LOUD is easily understandable and applicable for clients to remember in everyday conversation. ClearSpeechTogether therefore adopted this concept but clinicians are advised to apply it more flexibly depending on client profile and needs. Whilst strategies for LOUD might thus include raising speech volume, they should also consider other vocal parameters outlined above, as necessary.

(2) CLEAR: Clear speech relates to the over-articulation of speech movements to counteract the articulatory undershoot frequently observed in speakers with motor speech disorders. The strategy is aimed at improving the accuracy of sound production and thus increase intelligibility. A cue for CLEAR often results in a slowing of articulation rate. If this is beneficial, introduction of additional pausing strategies can be considered as part of the same concept.

Both of the concepts should result in greater effort put into speech production and encourage a reduction in rate and better breath management, thus reducing the need for additional cues to achieve the desired improvement in intelligibility. It is important to limit the number of strategies to facilitate carry over into natural conversation. Other aspects such as intonation, stress production, etc. should therefore be addressed through these concepts, e.g. both LOUD and CLEAR can be employed to encourage clients to highlight important words in an utterance.

ClearSpeechTogether is an intensive programme and it is essential that the time commitment is discussed with the client at the start and fatigue and cognitive levels are deemed adequate to participate in the group phase. This will minimise clients dropping out at that phase and reducing the quality of the group experience for the remaining members.

THE SCHEDULE

ClearSpeechTogether was designed as a 6 week programme, including 2 weeks of individual treatment and 4 weeks of intensive group work. This can reduce the time commitment for the clinician, whilst maximising input to the client. A group size of 5-6 participants is ideal to allow time for everybody to practise their speech but retain sufficient numbers should some members be unable to attend. The suggested schedule is outlined in Table 1. Although this schedule worked for clients in the pilot work across a range of severities, it is possible that it might need to be accelerated in mild cases or require extension and further individual support before or alongside the group sessions for more severely affected clients. The clinician should therefore closely monitor client progress during throughout the course of the programme.

The individual sessions can be scheduled flexibly to suit the client's and clinician's needs, however, it would be advantageous to space sessions as regularly as possible across the two weeks to allow the client sufficient time and practice opportunities to develop their speech strategies.

The first group session should be clinician led and include some activities to allow the group to get to know each other, agree the conduct rules outlined in the manual, explain how the group sessions will work, elect who will chair the sessions each day, and take the group through the tasks for Week 1 to make sure they understand what to do. In addition, the group should work through a few tasks from Day One in the manual with the clinician providing feedback to demonstrate what kind of features they should listen to and comment on with each other. From then on, the clinician should recap on some of the previous week's tasks to see how each client is progressing, remind them to use relevant speech strategies if necessary, explain the next set of tasks and elect the chairs for the following week. Scheduling the session with the SLT on a Friday worked well in our study to allow more immediate monitoring after the week's exercise programme had been completed (Monday – Thursday) and a faster response should additional sessions be required while the group progressed through the schedule. In addition, receiving instructions for the week's exercises before the weekend allowed clients more time to prepare their own practice materials. However, this can be varied to suit the clinician's needs as long as they attend the group at least once a week.

Delivery of the intervention in pilot trials has been exclusively online via zoom. This has been received positively by clients, but care needs to be taken to support those who require help with provision of the necessary hardware and using the software. From a therapeutic point of view, there is no reason not to offer the programme face to face, either fully or during phase 1 for the individual sessions. However, the logistics of clients attending clinic on a daily basis for 4 weeks obviously needs to be considered.

Table 1: Proposed Treatment Schedule

Schedule	**Sessions**	**Focus**
Pre-treatment	• as required, normally 1 session	Assessment for eligibility, baseline testing
Week 1	• 2 individual sessions: • graded homework tasks, increasing in demands	Establish therapeutic concepts up to single word level
Week 2	• 2 individual sessions: • graded homework tasks, increasing in demands • Friday: first SLT led group session	Establish therapeutic concepts up to single word level
Week 3	• Mon-Thu: Client led group sessions, • Fri: second SLT led group session	Single words to phrases
Week 4	• Mon-Thu: Client led group sessions, • Fri: third SLT led group session	Phrases to short paragraphs
Week 5	• Mon-Thu: Client led group sessions, • Fri: fourth SLT led group session	Short to longer paragraphs
Week 6	• Mon-Thu: Client led group sessions, • Fri: Wrap up and future directions with SLT	Paragraphs to free speech
Post-treatment	1 individual session (optional)	individual post-treatment testing for evaluation if required

PROGRAMME CONTENT

The exercise manual for the group phase starts at short phrase level (after a brief recap of single word production) and takes clients up to free speech level over the course of 4 weeks. Clinicians should ensure that clients are ready to work at phrase level at the end of their 4 individual sessions. Additional individual sessions might have to be arranged alongside the group input should they require further support.

As outlined above, the programme focuses on LOUD and CLEAR speech strategies. Should the client have specific individual needs that are not covered by the programme, the clinician needs to decide whether they are suitable for inclusion in the programme, or whether these can be addressed alongside participation in the group activities via further individual input. The group manual can also be used flexibly to include additional exercises if the whole group might benefit from these, e.g. practising phone calls by asking clients to call each other, or booking a restaurant while others are watching and can provide feedback.

Individual sessions

As indicated above, the clinician needs to ensure that the client fully understands the therapeutic concepts and is able to apply them independently before they start working in groups. The individual sessions should therefore establish which of the two strategies (LOUD and/or CLEAR) are most helpful for the client and ensure they are able to apply them correctly and effectively. **It is particularly essential that an effective voicing technique has been established before the client enters the self-practice group phase in order to prevent negative impact on vocal health.**

Any work on phonatory aspects should follow good practice guidance for voice rehabilitation, and take into account advice specific to particular conditions. As indicated above, some clients will require to work on increasing their speech volume in these exercises, others will need to focus more on reducing strain or developing more control over their voice, pitch and loudness. Where appropriate, clients could be advised to complete a series of prolonged vowels to work on voicing techniques, or pitch and loudness variations in case they present with instability or inflexibility of their voice. It can be helpful for clients to run through these tasks as homework practice in between individual sessions, as well as a warm up exercise before the start of the group sessions.

Group sessions

The exercise manual contains a range of tasks that will provide opportunities for clients to practise their speech strategies, moving from single word/short phrase level to more natural conversation. Where appropriate, prolonged vowel repetitions could be suggested as a warm up task before the session begins. After a short period of social chat, each day starts with production of some daily phrases (adapted from LSVT LOUD® guidance). The daily phrases represent a constant amongst the variety of exercise presented each day. They are intended to settle clients into the session and focus clearly on their strategies without distraction from other task demands. By choosing phrases that occur naturally and frequently as part of daily communication, they can also facilitate carry over of the strategies outside the clinic environment. Following feedback received from pilot studies, clients can change their phrases after one week. They might require some guidance in terms of length, complexity and content of the material, and it is best to co-develop the initial set during the individual sessions.

The most unique feature of ClearSpeechTogether is the fact that the majority of the group sessions are run by the clients themselves without the presence of a clinician. One benefit of these client led sessions is that individuals develop greater agency and independence in their journey towards more intelligible speech. This is further supported by asking clients to chair the sessions on a rotating basis, provide constructive feedback to each other and prepare their own practice materials which facilitates continued practice by individuals or groups beyond the treatment period.

The order of who will chair a session should be communicated by the clinician in advance of each week to allow clients to prepare. Although chairs mainly keep an eye on time so the group does not get carried away with social chat or staying on the same task for too long, this task can be daunting for some. Clients should therefore be given the choice to opt out of this role if required, and appropriately supported if they choose to take it on.

As with all group interventions, there might be occasions where one or several group members might not get on with each other. Whilst the clinician can mitigate this in SLT led therapy, the fact that ClearSpeechTogether is client led necessitates closer initial monitoring of group dynamics to avoid any negative impact. The clinician should ensure that each client feels confident that they can raise concerns in confidence and without impact on their care. In addition, the clinician needs to be sensitive to potential additional stress created by the need to work independently or having to chair sessions, and offer further support or an alternative therapy format if necessary.

HOMEWORK PRACTICE

Clients should, where possible, perform speech practice twice a day during the individual therapy phase. On days where sessions are scheduled, only one additional practice session is required. Ideally, practice is maintained during the group phase as well, but clients cab find it difficult to fit this in due to time restrictions or fatigue.

STAFFING REQUIREMENTS

Sessions required from SLT, including assessment & evaluation: 5-6 individual sessions per patient (4 for intervention, 2 for initial (and post-treatment) assessment), plus 5 group sessions. For a group size of 6 participants, this totals 6 to 7 client contact sessions.

NB time for administration, preparation of individualised, graded home practice tasks and note taking is not considered in this calculation.

Time commitment of the client: 5-6 individual sessions plus 20 group sessions, i.e. 24 treatment sessions, plus a commitment to perform home practice.

In addition, for online delivery, it is helpful if a volunteer / administrator can attend at the start of each group session to help resolve any technical issues with access etc. They should not play a role in the progression of the group session. No clinical qualification is therefore necessary. Arrangements should also be made for a point of contact should a client become upset during a client run group session and to resolve any interpersonal issues between clients.

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REFERENCES:

Lowit, A., Cox, J., Loucas, M., Grassly, J., Egan, A., van Brenk, F., & Hadjivassiliou, M. (2022). ClearSpeechTogether: a Rater Blinded, Single, Controlled Feasibility Study of Speech Intervention for People with Progressive Ataxia. *The Cerebellum*. https://doi.org/10.1007/s12311-022-01462-9

Lowit, A. Beith, A. Young, D., Hadjivassiliou, M. (2023) ClearSpeechTogether versus standard NHS speech intervention: Study protocol for a single, mixed method, rater blinded pilot randomised controlled trial for people living with MSA-C. ResearchSquare, https://doi.org/10.21203/rs.3.rs-3064044/v1

Park, S., Theodoros, D., Finch, E., & Cardell, E. (2016). "Be Clear": A New Intensive Speech Treatment for Adults With Nonprogressive Dysarthria. *American Journal of Speech-Language Pathology*, *25*(1), 97-110. https://doi.org/doi:10.1044/2015_AJSLP-14-0113

Ramig, L., Halpern, A., Spielman, J., Fox, C., & Freeman, K. (2018). Speech treatment in Parkinson's disease: Randomized controlled trial (RCT). *Movement disorders*, *33*(11), 1777-1791. https://doi.org/10.1002/mds.27460

Schalling, E., Winkler, H., & Franzén, E. (2021). HiCommunication as a novel speech and communication treatment for Parkinson's disease: A feasibility study. *Brain and Behavior*, *11*(6), e02150. https://doi.org/https://doi.org/10.1002/brb3.2150

Tjaden, K., Sussman, J. E., & Wilding, G. E. (2014). Impact of Clear, Loud, and Slow Speech on Scaled Intelligibility and Speech Severity in Parkinson's Disease and Multiple Sclerosis. *Journal of Speech, Language, and Hearing Research*, *57*(3), 779-792. https://doi.org/doi:10.1044/2014_JSLHR-S-12-0372

Wenke, R. J., Theodoros, D., & Cornwell, P. (2008). The short- and long-term effectiveness of the LSVT®for dysarthria following TBI and stroke. *Brain Injury*, *22*(4), 339–352. https://doi.org/10.1080/02699050801960987

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