



Article

Tele-Rehabilitation for People with Dementia during the COVID-19 Pandemic: A Case-Study from England

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Abstract: Introduction: The Promoting Activity, Independence and Stability in Early Dementia (PrAISED) is delivering an exercise programme for people with dementia. The Lincolnshire partnership National Health Service (NHS) foundation Trust successfully delivered PrAISED through a video-calling platform during the Coronavirus Disease 2019 (COVID-19) pandemic. Methods: This qualitative case-study aimed to identify participants that video delivery worked for, to highlight its benefits and its challenges. Interviews were conducted between May and August 2020 with five participants with dementia and their caregivers ($n = 10$), as well as five therapists from the Lincolnshire partnership NHS foundation Trust. The interviews were analysed through thematic analysis. Results: Video delivery worked best when participants had a supporting caregiver and when therapists showed enthusiasm and had an established rapport with the client. Benefits included time efficiency of sessions, enhancing participants' motivation, caregivers' dementia awareness, and therapists' creativity. Limitations included users' poor IT skills and resources. Discussion: The COVID-19 pandemic required innovative ways of delivering rehabilitation. This study supports that people with dementia can use tele-rehabilitation, but success is reliant on having a caregiver and an enthusiastic and known therapist.

Keywords: tele-rehabilitation; dementia; physical activity; exercise; COVID-19

1. Introduction

Dementia presents with a cluster of symptoms, including impairment in motor skills [1–4]. Keeping physically active is beneficial for executive functioning, mobility, activities of daily living, independence, and quality of life of people living with dementia [5–18]. Several physical activity and exercise intervention programmes have been developed for people with dementia, targeting different outcomes. The Finnish Alzheimer's Disease

Exercise Trial (FINALEX) [13] evaluated the effectiveness of intense and long-term physical exercise on the physical functioning and mobility of home-dwelling participants living with Alzheimer's disease. The Dementia and Physical Activity (DAPA) trial [14] evaluated the effectiveness of moderate to high intensity exercise training on the cognitive performance of participants living with dementia.

The Promoting Activity, Independence and Stability in Early Dementia (PrAISED) study intervention consists of an individually tailored programme of physical, dual-task exercises, and functional activities of daily living delivered in participants' homes by a multidisciplinary team including physiotherapists (PTs), occupational therapists (OTs), and rehabilitation support workers (RSWs). The clinical and cost effectiveness of PrAISED is being evaluated in a randomised controlled trial (RCT) involving 368 participants [19].

In March 2020, the United Kingdom (UK) government implemented measures to slow the spread of Coronavirus 2019 (COVID-19) [20–22], including recommendation for people over 70 years of age and with pre-existing conditions (e.g., dementia) to self-isolate [23,24]. As a result, the PrAISED multidisciplinary teams were unable to visit participants in their homes. Therefore, the participants who were receiving the intervention were supported by therapists remotely (phone or video calling), in line with current guidance for practice [25,26]. The PrAISED research team provided the therapists with plans and guidance on how to deliver PrAISED remotely (Appendices A–C). The Lincolnshire partnership National Health Service (NHS) foundation Trust (LFPT) PrAISED therapy team delivered the intervention through a video-calling platform named Q Health.

Tele-rehabilitation has been successfully used in other medical areas [27], and evidence is mounting on the potential benefits in a population living with dementia [28–31]. However, there is paucity of research around the experience of delivering and receiving tele-rehabilitation for people with dementia during the COVID-19 pandemic. Given the potential need in the future to deliver services remotely (e.g., in the context of social distancing requirements), this study aims to present preliminary evidence on tele-rehabilitation for people with dementia and identify the type of clients with dementia tele-rehabilitation works for, how, and under which conditions; the benefits for the clients receiving tele-rehabilitation and the therapists delivering tele-rehabilitation; and the challenges of tele-rehabilitation and how to potentially address these.

2. Materials and Methods

This study abides by the consolidated criteria for reporting qualitative research (COREQ) [32].

2.1. Setting

Q Health (<https://qhealth.io/>, accessed 10 January 2021) is an NHS Digital and NHS England-approved video patient consultation solution developed by a centrally funded supplier, introduced in PrAISED by the LFPT team at the end of March 2020, as part of the COVID-19 response. The platform allowed therapists and participants to set up and attend digital appointments during lockdown. Q Health required that the user had access to technology (i.e., internet connection and a computer, tablet or smart phone) and was able to download the Q Health application, to book the digital appointments and connect for the session. The therapy team developed a simple set of instructions and supported PrAISED participants via the phone to download and set up the Q Health application. Once the application was installed, the participants were provided with a one-time use code to grant secure access, select an appointment time, and enter the video consultation.

2.2. Participant Inclusion/Exclusion Criteria

Participants with dementia were eligible to participate if they met the following inclusion criteria: aged 65 years or over; had a diagnosis of mild cognitive impairment or dementia (of any subtype, except Dementia with Lewy Bodies); had a Montreal Cognitive Assessment (MoCA) [33] score of 13–25 (out of 30); had an informal caregiver who was

willing and able to be a participant in the study too; were able to walk without help, communicate in English, and see and hear; had sufficient dexterity to perform neuropsychological tests, mental capacity to give consent to participate, and consent to do so; were involved in the intervention arm of the PrAISED RCT at the time of recruitment (May 2020) and were being supported through Q Health.

Participants with dementia were ineligible to take part if they had a diagnosis of Dementia with Lewy Bodies or a co-morbidity preventing participation (e.g., severe breathlessness, pain, psychosis, Parkinson's disease or other severe neurological disease); were part of the control group in the PrAISED RCT; were part of the intervention group in the PrAISED RCT but were not supported through Q Health (e.g., phone only).

Participants with dementia and caregivers were purposively sampled to represent variance in gender, relationship to each other (e.g., spouses, parent–child) and residence status (i.e., living together or independently). All the LFPT therapists delivering PrAISED through Q Health were also recruited in the study.

2.3. Data Collection

The participants with dementia and their caregivers were invited by the main researcher (CDL) to take part in two semi-structured qualitative interviews. After identifying potential participants through the PrAISED RCT database, CDL made a preliminary phone call to provide information about the study and register their potential interest in taking part. If the participants agreed, CDL would give them the option to have the interview either by phone or via video calling, independently or separately of the caregiver. A phone interview session was then scheduled. Before the interviews, CDL would send the participants a study information sheet and a copy of the consent form, explaining that consent would be taken orally on the day of the interview. The first interview was conducted one/two months after implementation of Q Health and the follow-up interview four months after implementation.

The therapists delivering PrAISED through Q Health were identified through the study database. CDL approached them by email and invited them to take part in a qualitative semi-structured interview, either over the phone or via video calling. Upon a positive response, a session was scheduled. Before the interviews, CDL would send the therapists a study information sheet and a copy of the consent form, explaining that consent would be taken orally on the day of the phone interview. Therapists' interviews took place three/four months after implementation of Q Health.

All interviews were conducted by CDL, and based on a topic guide (Appendices D and E) developed in collaboration with two Patient and Public Involvement (PPI) contributors with experience of caring for someone with dementia, who were also involved in the development of the study and its protocol, and in the writing of this manuscript. While the topic guide focused on the overall experience of the PrAISED RCT, a flexible approach was used in the interviews to explore and capture information relating to Q Health. All the interviews were carried out through speakerphone, so that participants and caregivers could both hear and respond to the questions. The use of speakerphone also enabled CDL to record verbal consent and the interview session through an encrypted password-protected digital audio-recorder, as per ethical approval received by the Bradford Leeds Research Ethics Committee (Reference 18YH/0059). Data collection continued until "conceptual density" (i.e., a sufficient depth of understanding of the domains under investigation) was reached [34].

2.4. Data Analysis

The transcripts were downloaded from the audio-recorder, anonymized, and passed to a professional agency for transcription. The transcripts were then imported in NVivo [35] and analysed through deductive thematic analysis [36] (i.e., using study objectives as the themes). Two authors (CDL and AB) extracted the relevant selections from all the interview transcripts independently of each other and categorised them into the themes. If any

discrepancies between the two authors emerged, a decision was made by involving a third author (RHH). The PPI contributors and therapists provided feedback on the findings.

3. Results

Five participants with dementia and their caregivers ($n = 10$) were involved in this study (Table 1). They all opted for phone interviews and agreed to have the follow-up interview. The average length of the interviews was 28 min (range 17–56). Five therapists were involved in this study (Table 1). Two were RSWs, two OTs and one a PT. They were all female and opted for a phone interview. Their interviews lasted on average 38 min (range 22–58). Quotes are reported below by identifying the participants' and therapists' ID (as per Table 1).

Table 1. Characteristics of participants.

Participant with Dementia ID	Age	Sex	Living Status	Caregiver ID	Age	Relationship to Participant	Therapist ID	Role in PrAISED	Sex
P3031	67	F	Living alone	C3031	43	Daughter	T11	Rehabilitation Support Worker	F
P3039	72	F	Living with caregiver	C3039	63	Husband	T12	Occupational Therapist	F
P3042	83	M	Living with caregiver	C3042	80	Wife	T13	Rehabilitation Support Worker	F
P3044	76	M	Living with caregiver	C3044	72	Wife	T14	Occupational Therapist	F
P3036	76	F	Living with caregiver	C3036	50	Daughter	T16	Physiotherapist	F

3.1. Type of Participant This Platform Works for, How and under Which Conditions

The qualitative interviews found that Q Health worked better with some participants than others. Therefore, using tele-rehabilitation would depend on assessment of a person's physical, as well as digital ability:

"I don't think all of your service could be delivered remotely, but actually tailoring it depending on what you've assessed with your patient, including their digital ability. Ideally, clients would have a fairly good balance and strength and they'd be able to follow instructions". T16, PT

It was agreed that there might be risks in progressing exercises or activities through video consultation for clients who might be at risk of falling:

"With patients where their mobility isn't as good, I would worry about being able to progress their exercises over Q Health". T16, PT

Given the risk of injury with vulnerable clients, a condition under which tele-rehabilitation worked better was the presence/support of someone in the home during the video calling. The presence of a supporter in the home was also key for positive risk-taking:

"When I start walking backwards and counting backwards, I go a bit unsteady. So I need somebody there. Without anybody here it would not have been as beneficial". P3042, male

Most participants agreed that the caregiver was key for successful video coaching, as they would facilitate the set-up and help to operate the system. In cases when the participant lived independently, arrangements had to be made for a supporter to be present and initiate the video call. Some pre-requisites were also needed on the therapists' side. Creativity was deemed to be a key element to balance out some features missing in tele-rehabilitation. To promote engagement, the therapist had to show commitment and enthusiasm for the new technology:

"With the remote side of things, you have to really believe and put across to the participants that this is going to work". T12, OT

To be able to work more effectively through tele-rehabilitation, another requirement was having previously established good rapport with the client. This was perceived to be instrumental both for participants to trust the therapist, and also for the therapist to confidently work toward progression targets:

“I had already met her before, so we just adapted and got on with it. It was more straight forward and reassuring”. C3036, female

3.2. Benefits for the Participants and the Therapists

A number of benefits occurred for both the clients and therapists as a result of video consultation compared to telephone support only. One benefit was seeing each other, which enhanced rapport and connectedness and made it possible to grasp non-verbal cues:

“I think it (Q Health) is brilliant. We can talk and I can see if she is laughing at something I have said and laugh along”. P3031, female

Another benefit of the video calling was that the participants could go through their exercises with the therapist, by modelling, in real time, the moves and positions. Similarly, they could engage in visually based cognitively challenging tasks:

“We do all the exercises together. She does them with me. I put my iPad where she can see me and she has got her computer where I can see her”. P3031, female

Compared to telephone support, the visual feedback also aided therapists in making a more accurate assessment of participants’ improvement (or lack thereof), facilitating progression (as opposed to mere maintenance) of participants’ goals. It was also instrumental in boosting clients’ motivation and clinician’s confidence to progress:

“It gives me confidence to progress their exercises because I can see if my participants could stand on one leg for 20 s and I can see that they’ve got a work surface next to them if they need to hold on”. T16, PT

“It was a while before Q Health was set up and I can honestly say I didn’t like it when we were doing it over the phone. I think that just seeing her makes a difference”. P3031, female

Some therapists reported that another advantage of video calling was that it was more efficient than face-to-face contact. Some therapists reported that there are rural areas where clients are hard to reach by community support. In this case, tele-rehabilitation could reduce their risk of exclusion from services. Avoiding travel to and from participants’ homes allowed for more frequent and focused sessions. The therapists also brought forward a financial argument in favour of tele-rehabilitation. They suggested that offering video support was a “good value for money” strategy to prevent participants from getting deconditioned and frail over time during “lockdown”:

“The clients that I’m supporting through Q Health would not normally be seen through an NHS service, as they would be seen as being safe at home. So these clients are not getting frail and de-conditioned because of COVID like a lot of older people that haven’t got this kind of service”. T16, PT

They continued that video calling would also prove beneficial for long-term engagement in physical activity programmes once the PrAISED programme is completed for the participant:

“A lot of clients could actually be seen remotely in the long term which may help with improving people’s compliance with increasing their physical activity levels”. T16, PT

Some benefits were also recorded for caregivers. By facilitating the video sessions, the caregivers became informed about the therapy programme and more involved in the care of the person. This could be seen as a positive and a negative as well, as the physical absence of therapists could add to caregiver burden:

“I have learned so much more about dementia in the last months. But I have absolutely no support at the moment to care for (participant), nothing at all. And my children, one lives up north and the other lives down south”. C3039, male

A benefit for the therapists was that the video calling challenged them to step out of their comfort zone, to become adaptable to the inevitable changes that COVID-19 entailed and think creatively about solutions for future practice:

“It’s just made me think of different ways I could work to make physical activity and exercise more accessible for more clients. For example, last week we wanted to make one of our participant’s exercises harder, so me and a rehab support worker, we went to the local park and we took pictures of me and her doing the exercises and then we emailed them to the participant”. T16, PT

3.3. Challenges and How to Potentially Address These

There were a number of challenges pertaining to tele-rehabilitation. The majority of participants felt that video calling was more valuable than no support at all or phone consultations. However, it was inherently different from home visits, where human connection occurred at a more meaningful level:

“I do miss the face to face. I just think it’s having somebody here with me, I can’t really explain it, it just doesn’t feel the same”. P3031, female

One participant explained that the digital divide between older and younger generations makes older participants with dementia less able to learn and interact through digital media:

“To see R (the therapist) on the video link feels a bit unnatural to me though, because I don’t use it (video calling) much in real life. The children are more geared to learning like that and taking things in like that than I am”. P3036, female

Therapists felt that given the limitations in environmental risk assessment typical of remote support, including relying on information reported by participants, they could not challenge participants who lived independently to the same extent they would normally during home visits:

“When somebody lives on their own you’re really reliant on them giving you a picture. And because people have their memory problems, they’re not always able to give you an accurate picture”. T14, OT

Given the remote nature of video calling, the therapists also lamented the impossibility to progress participants towards goals which required their physical presence:

“We are losing out on a lot. Like we’ve got participants who we would be going to the gym with, because they’re at the level where they can go to the gym, they want to go to the gym but we can’t”. T11, OT

Given these limitations, the therapists contended that tele-rehabilitation could be an integrated part of a hybrid delivery package, after the initial visits are (ideally) made through home visits:

“The ideal is to have at least some face-to-face contact with participants. The Royal College of OT has just published some up-to-date formal guidelines. And it makes it really clear that you must be able to assess how somebody is functioning within their home environment. But after the initial visits, if you can get a video call system that the participants can get to work then that’s really good”. T12, OT

Both caregivers and therapists agreed that Q Health did not cater to participants with dementia because of their cognitive issues. Sometimes, when the team were trying to explain to the participants how to install the programme or how to operate it, they would get very frustrated if they could not do it:

“One participant I had was tech savvy but still, she just couldn’t get hers to work and she got quite frustrated with it”. T13, RSW

Looking at potentially implementing this intervention in the community on a larger scale, the participants proposed ideas on how to address the digital exclusion that participants lacking basic IT knowledge would face, including guidance and support from therapists:

“I think most people with dementia would do panic when something different or unexpected happens. But if you have J (the therapist) on the phone and you said “Oh there is a pop up” she would just be able to say “I have seen that before, just click ok and that will be fine”. C3036, female

In recognising the importance of addressing the present digital divide, some therapists proposed ideas for making the platform more dementia-friendly:

“There are companies that produce phones specifically for older people or people who struggle with technology. And I’m just wondering if potentially they might have a very basic tablet in their range. You can set it up in a specific place in the house, have it ring at the certain time and then all they have to do is press the answer button and then they’ve got a video call and then they can hang up”. T11, OT

4. Discussion

This qualitative case-study contributed evidence around tele-rehabilitation to support people with dementia to remain physically active during the COVID-19 pandemic. We found that delivering the PrAISED intervention using Q Health was feasible and acceptable from the perspectives of clients, caregivers, and therapists. Similar findings have been reported by Burton and Nissen [37,38], who found that tele-rehabilitation was helpful with clients with cognitive impairments but required frequent modifications. One of the major barriers found in this study was the lack of digital literacy and access amongst clients with dementia and their caregivers. This study identified some strategies that could address digital exclusion, including ongoing support from therapists and the need to develop dementia-friendly equipment, education, and support services for users and therapists. While some attempts in developing this kind of support have been reported [39], there still is a clear need for service design, guidance, and delivery of dementia-friendly tele-rehabilitation.

Another important finding was the perceived effectiveness of delivering the PrAISED intervention using tele-rehabilitation during the COVID-19 pandemic. Although face-to-face was the preferred method, given the circumstances, the participants felt that video calling using the Q Health platform was preferable to a phone consultation.

Previous studies with cognitively impaired adults have also shown that there might be added benefits in using video—as opposed to telephone—support [37,38,40,41]. Video calling might enhance users’ satisfaction [42], facilitate the development of therapeutic alliance, which is instrumental for intervention uptake and adherence [43], and promote the empowerment of a client with dementia, who might have difficulty communicating with the therapist without face-to-face contact. From a therapist’s perspective, video calling might facilitate capturing non-verbal cues from clients.

Evidence is also mounting to the effectiveness of tele-rehabilitation, compared to face-to-face rehabilitation. The potential of cost and time efficiency of tele-rehabilitation has been noted [40]. Travelling long distances (where services cover large catchment areas) or for a long time (in the case of metropolitan conurbations) for face-to-face rehabilitation sessions is resource-intensive. Tele-rehabilitation could optimise limited time and financial resources. In terms of clinical outcomes, a non-inferiority study by Laver et al. [40] compared face-to-face versus tele-rehabilitation delivery of a programme designed to address environmental and functional issues in patients with dementia and their caregivers [44]. This study

found no statistically significant difference between groups in caregiver mastery, and both groups reported significant improvements in perceptions of caring.

There are some key issues warranting careful consideration in future implementation. The creativity and enthusiasm of the therapists and service described and the recognition from the LFPT of the need to prevent participants' deterioration serve as an illustration of what is required from a service design and set-up perspective. They also illustrate the importance of health professionals leading the way in innovations. Another crucial consideration is how to balance the practicalities of resource optimisation with the individual needs of clients. We found that face-to-face visits were felt to be better suited in the context of the initial assessment of clients' situations (e.g., environment, falls risk, digital abilities), in establishing and in terminating support. While video consultations represent an acceptable adaptation when social distancing is required, a hybrid approach to rehabilitation would better respond to patients' needs for effective and ethical health care.

This work is characterised by several strengths. It took advantage of an existing trial to investigate innovation rigorously in real time. This opportunistic use of data sits well with the Medical Research Council (MRC) framework [45] for the development of evidence into this new field. There are many negatives associated with the COVID-19 pandemic, particularly for older adults. In the context of the COVID-19 pandemic, the risk of social isolation and deconditioning in people living with dementia has been highlighted by Alzheimer's Disease Support International as a significant concern, which requires ongoing support from health and social care practitioners [46]. The need for further research into technology-based support interventions for older people with cognitive impairment and their caregivers has also been identified as a research priority during the pandemic [47]. This study made an important contribution to the evidence base of tele-rehabilitation interventions to clients living with dementia. It also presented an ethical contribution to research, by giving voice to people with dementia and their caregivers, in an effort to support their ongoing involvement in research [48]. The study also featured triangulation of perspectives (through therapists' views), which better reflects the context of the video consultations as two-way or three-way interactions.

The case study design potentially has limited generalisability. Additionally, Q Health was designed and used in one specific setting, thus having limited transferability to other video conferencing platforms. However, the intention of this study was to report a phenomenon in a specific context upon which to build further understanding. The participants included only those that used Q Health, thus excluding the views of those unable to use the system. Finally, the participants were part of an existing study (the PRAISED RCT) and therefore they did not represent the wider population of people with dementia.

5. Conclusions

The COVID-19 pandemic has generated the need for innovative ways of delivering rehabilitation. There is little literature about supporting people with dementia and their caregivers through video consultations. This study supports that people with dementia can use video calling, but its success is reliant on having a caregiver and an invested, enthusiastic, and known therapist. In the light of potential future situation requiring remote support or to make it an effective component of hybrid delivery of rehabilitation services, further work to make tele-rehabilitation accessible and sustainable with the most vulnerable individuals with dementia is crucial.

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Institutional Review Board Statement: The study was conducted according to the principles of the Declaration of Helsinki and approved by the Ethics Committee of Bradford/Leeds (Ref. 18/YH/0059).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Transcripts of the qualitative interviews are available in full from the main author (C.D.L.), upon request.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A. Plan for PrAISED2 Intervention in Response to COVID19 Restrictions (Effective from 18 March 2020)

Appendix A.1. Immediate Plan

The NIHR have stated that their funded studies should stop all non-essential face-to-face contact. The PrAISED intervention is not considered essential care, and therefore, we must stop all face-to-face contact with our participants.

However, because we have a duty of care to our patients, considering many of them will be following the governments advice to reduce all social contact, we have devised a contingency plan to continue with the PrAISED intervention.

Appendix A.2. Intervention Group Participants

Therapy teams should contact all participants currently in the trial, or their carers if more appropriate, to explain the change in practice as below.

Appendix A.3. On-Going Intervention Group Participants

Visits to participants should be replaced with remote coaching as per their normal schedule, in terms of frequency. For example, if you are seeing someone weekly, this should be continued until they reach the time to reduce to fortnightly. This is the example frequency schedule set out in the intervention manual; however, continue to adapt this as appropriate in the same way you have been doing.

- Month 1–2: bi-weekly
- Month 3–6: weekly
- Month 6–9: fortnightly
- Month 9–12: monthly

The length of the session may be much shorter depending on what is discussed.

The content of the session should be guided by the telephone coaching instructions below.

Some participants will not be suitable for remote sessions. If the participant is unable to engage with this type of coaching, the carer should be contacted to determine if they may be able to use the remote coaching to support the participant. If the remote coaching is of no benefit to either the participant or the carer, then a courtesy telephone call should be given each month to keep in touch with the carer or participant as appropriate.

Final sessions should be carried out via remote sessions as appropriate; these should be followed up with an end of therapy letter and any follow-up material being provided using the post or email if appropriate.

Appendix A.4. New Intervention Group Participants

Intervention group participants seen by the research team but not yet seen by a therapy team, or who are in the assessment phase of the intervention, should be informed that they are not going to receive the PrAISED intervention until the current restrictions are lifted.

Appendix A.5. Control Group Participants

If you have completed the first control visit, you can carry out up to two follow-up visits by telephone as per the guidance below. If the first control visit has not yet been completed, please inform the participant that they are not going to receive the PrAISED intervention until the current restrictions are lifted.

Appendix A.6. Therapy Visit Log

Continue to complete the therapy visit log, via the hyperlink, for all remote sessions. Please put remote coaching in the comments box.

Appendix A.7. Medium-Term Plan

It is expected that PrAISED therapy staff at each site will deliver the immediate plan outlined above.

However, as the situation changes, a medium-term plan (outlined below) may come into action.

If sites cannot deliver the remote coaching sessions due to therapy staffing difficulties, the university staff may have capacity to be able to support. The PI from each site must contact the University as soon as possible if this happens. For university staff to be able to do the telephone coaching sessions effectively, we will need to know:

- the participant's details (e.g., contact telephone number for them and the carer/informant);
- a synopsis of the previous intervention session and what they are currently working on.

As each site is using different participant documentation systems, the PIs should liaise with Sarah Goldberg or Rebecca O'Brien, to form a contingency plan on how this will happen and how information is to be transferred and stored.

Appendix A.8. Telephone Coaching Instructions

Before making the telephone call, make sure you have looked at NHS England current advice for the client group you are dealing with, as this is likely to change on a regular basis (<https://www.nhs.uk/conditions/coronavirus-covid-19/>, accessed on 18 July 2020). Participants may have concerns about their current situation that need answering before the participant will engage in coaching.

- Explain who you are and why you are calling;
- Ask how they are and discuss any immediate concerns (they may need signposting as appropriate);
- Review their current activity and exercise plan;
- Review what they are currently doing during their day;
- Be aware that for many participants, all their activities may have stopped;
- Form a plan of what they can do within the current restrictions. For example, currently, people are advised it is ok to walk outside as long as they stay 2 m away from other people;
- Help them to make a daily plan of activities. For example, doing exercises more frequently, or if they are no longer walking outside, can they walk in the garden or up and down the stairs to get some cardiovascular exercise;
- Advise against sitting for long periods of time. For example, use a timer to remind yourself to get up or get up during advert breaks in television programmes;
- If the person is able to and wants to, they could put you on speaker phone while you go through their exercise programme with them. Only do this if they have the capacity to do this with their telephone. This could also be done with their carer or family member or named informant;

- Be aware people may be feeling quite worried and/or low in mood. You may need to discuss the benefits of and encourage them to continue to carry out daily activities or routines, such as getting dressed, or taking meals on time;
- Participants may raise safeguarding issues such as identifying they are low on medication and there is no one to help them with this. This will need to be addressed using the usual safeguarding procedures;
- If participants are complaining of COVID-19 symptoms, they should be encouraged to follow the current advice from NHS direct or to phone 111.

It is expected these telephone coaching guidelines will evolve as PrAISED therapists start conducting these sessions. Guidance can come from outside sources, e.g., RCOT (The Royal College of Occupational Therapists) have recently shared this online: <https://www.rcot.co.uk/staying-well-when-social-distancing>, accessed on 20 July 2021. It is important that we share good practice and suggestions, and we will discuss these guidelines during our PrAISED Therapist Teleconferences.

Appendix B. First Session or Review Sessions—Telephone Coaching Checklist for Physiotherapists and Occupational Therapists

1. If the participant has relevant information in their participant file, you may need to encourage them to locate this and have this with them at the beginning of the session.
2. Complete the therapy visit log, via the hyperlink, for all telephone calls. Please update goals if relevant.
3. Continue to complete the Frequency and Intensity Decision Support Tools and email a copy to Vicky/Louise if you are changing the frequency of sessions.

Telephone Coaching—Praised Intervention	Comments
Goals	
Review current activity levels and PrAISED goals and agree which goals can continue. Form a plan on what participant can do within the current restrictions e.g., if a walking goal, they are able to walk outside once a day staying 2 metres away from others (non-family), walk in the garden, use the stairs. Put unachievable goals impacted by COVID restrictions ‘on hold’.	
Identify Activities They Enjoy	
Think about which regular activities are most important to participant; ones that they are doing during the day. What are the important elements to these? Can you adapt them for the PrAISED programme to carry out in the home? For example, instead of a class, following an online strength and balance routine. Think about whether the participant’s needs to feel competent and autonomous are being met. Are they using all the space available to them, i.e., garden or hobby in spare room?	
Routines	
Routines provide structure and purpose. Establish a daily routine with the participant and set daily goals to provide purpose and a sense of achievement. This might include working through that list of things they have been meaning to do but never get round to. Can you help them build activities or exercise into habits which will help them continue longer term? Establish a balance of a weekly routine so they have a good mix of work (activities that have to be done), rest and leisure. Provide them with a weekly plan if appropriate.	

Telephone Coaching—Praised Intervention	Comments
Exercise Programme	
Are they able to continue with the exercise programme you have previously provided? Do they need to identify support with this either a member of the household or a family member that can do via technology? Are they able to continue with balance, strength and dual tasking activities? If not can you encourage them to do activities of daily living that cover these three areas?	
Tapering/Long-Term Engagement	
If the participant is coming to the end of the 12-month intervention period. Discuss how they can: <ul style="list-style-type: none"> independently continue to work on their goals; Remain as active as possible; Identify sources for further support; Explore other resources they may be able. 	

Staying Well and Social Distancing	Comments
Regular Activity	
Encourage participant to avoid staying still for too long. Exercise and regular movement will maintain fitness and strength. Use a timer to remind themselves not to sit for too long. Encourage activity up to 150 min a week	
Relatedness	
Encourage participant to keep in touch with family, friends, and neighbours to help them understand how they feel and how they can help. Suggest they arrange to speak to someone most days on the phone, through social media or over the garden fence. Age UK and Silverline have people to speak to.	
Self-Care	
If someone feels worried or low in mood—try and identify the triggers that make them feel low and look for ways to reduce or manage them. Encourage participant to take care of themselves. Eat and drink healthily with plenty of fruit, vegetables and water, to help boost the immune system and energy levels.	
Sleep	
Encourage participant to have a good sleep routine. If they are struggling, try avoiding tea and coffee in the late afternoon and evening, take a bath, using blackout curtains, listening to gentle music or deep breathing exercises.	
Safeguarding	
If a Safeguarding issue is raised, e.g., participant without meds or food: <ul style="list-style-type: none"> contact informant in first instance; if unresolved, it should go to Safeguarding trust policies and contact local social care need if appropriate. 	
COVID-19 Symptoms	
If participant is complaining about COVID-19 symptoms, encourage them to follow current advice from NHS direct or to phone 111	
Provide Information	
Send details of resources they can use at home—see resource sheet Issue RCOT ‘top tips’ sheet on staying well when social distancing https://www.rcot.co.uk/staying-well-when-social-distancing	
Technology	
Check technology available to use at home that you may be able utilise in the future and if there is anybody who can support them in using this	

There are also additional Resources for participants and therapists on PrAISED for during the coronavirus isolation restrictions.

Appendix C. Review Sessions—Telephone Coaching Checklist for Rehabilitation Support Workers

Telephone Coaching Checklist—Praised Intervention

1. Complete the therapy visit log, via the hyperlink, for all telephone calls. Please update goals if relevant;
2. Continue to complete the Frequency and Intensity Decision Support Tools and email a copy to Vicky/Louise if you are changing the frequency of sessions;
3. Put a number in the RSW column on the Visit and Task Tracker on TEAMS—change the colour of the font or background to identify that it was a telephone visit (the ratio of therapist/RSW is now variable, so we will record all telephone sessions as RSW sessions).

Telephone Coaching—Praised Intervention	Comments
<p>Ask how the participant is and talk through any immediate concerns</p> <p>Discuss which regular activities are most important to participant; ones that they are doing during the day.</p> <p>What are the important elements to these?</p> <p>Can you adapt them for the PrAISED programme to carry out in the home? For example, instead of a class, following an online strength and balance routine.</p> <p>Can they do ADL activities that challenge balance, promote strength or include dual tasking?</p>	
Staying Well and Social Distancing	
<p>If someone feels worried or low in mood—try and identify the triggers that make them feel low and look for ways to reduce or manage them.</p>	
<p>Encourage a daily routine with the participant and set daily goals to provide purpose and a sense of achievement. This might include working through that list of the things they have been meaning to do but never get round to.</p> <p>Can you help them build activities or exercise into habits which will help them continue longer term?</p> <p>Encourage balance in a weekly routine so they have a good mix of work (activities that have to be done), rest and leisure.</p>	
<p>Encourage participant to keep in touch with family, friends and neighbours to help them understand how they feel and how they can help.</p> <p>Suggest they arrange to speak to someone most days on the phone, through social media or over the garden fence.</p> <p>Age UK and Silverline have people to speak to.</p>	
<p>Encourage participant to take care of themselves.</p> <p>Eat and drink healthily with plenty of fruit, vegetables and water, to help boost the immune system and energy levels.</p>	
<p>Encourage participant to avoid staying still for too long. Exercise and regular movement will maintain fitness and strength.</p> <p>They could use a timer to remind themselves not to sit for too long, or get up and walk around in ad breaks, etc.</p>	
<p>Encourage participant to have a good sleep routine. If they are struggling, try avoiding tea and coffee in the late afternoon and evening, take a bath, using blackout curtains, listening to gentle music or deep breathing exercises.</p>	
<p>Refer to RCOT 'top tips' sheet on staying well when social distancing if needed https://www.rcot.co.uk/staying-well-when-social-distancing</p>	
<p>If a safeguarding issue is raised, e.g., participant without meds or food:</p> <ul style="list-style-type: none"> - contact informant; - if unresolved, the case should be further discussed with local clinical services and the Oxford Praised study team 	
<p>If participant is complaining about COVID-19 symptoms, encourage them to follow current advice from NHS direct or to phone 111 https://www.nhs.uk/conditions/coronavirus-covid-19/</p>	

There are also additional Resources for participants and therapists on PrAISED for during the coronavirus isolation restrictions on TEAMS.

Appendix D. Topic Guides for Qualitative Interviews with Participants with Dementia and Caregivers

Just to explain, I would like to get your opinion on the effect the recent coronavirus has had on you and some feedback on Q Health, but first, I want to ensure that you are happy to discuss this. It has been a difficult time for everyone, and I would not want to cause any extra stress. Are you comfortable talking about the impact the recent changes in PrAISED caused by the coronavirus pandemic have had on you?

(Continue if yes)

Thank you. I would like to start by asking what impact the recent changes in PrAISED due to the coronavirus pandemic have had on you . . .

As an introductory question, have you stayed in the house? Has this made you feel more isolated and lonelier?

Appendix D.1. Personal Beliefs

How important do you think being active is now that you are staying at home?

Have you been thinking more about your health now than you were before coronavirus? Could you tell me more?

Appendix D.2. Motivation

Are you able to carry on being active while at home?

Is there anything that helps you keep going with the programme, now that you are at home?

How much do you want to continue with the activities now that you are at home?

Is there anything else that would help you keep active whilst you are unable to go out?

Appendix D.3. Autonomy and Control

How do you feel now that you need to stay at home and cannot do the activities you like outdoors? Do you feel less in control of your daily activities?

Appendix D.4. Intervention Characteristics

Have you been able to follow the PrAISED programme as before?

How have you felt about receiving therapist support via Q Health?

What have been the positive and negative changes with this new approach?

Do you think the PrAISED programme is as effectively delivered without face-to-face interaction? If yes, have you any thoughts on what characteristics would make it work better for you?

Appendix D.5. Self-Efficacy

Do you feel you are still able to do the exercises and activities now that your therapists cannot visit you in person, due to the coronavirus pandemic?

Have you still received encouragement and support from your therapist(s) during the Q Health sessions?

Is there anything that would help you feel more confident to do the activities?

Appendix D.6. Social Opportunity and Emotional Support

How did it feel when your therapist could no longer visit you?

How has staying at home changed your social life? Are you able to talk to other people outside your home?

Have you found other ways to socialise with others (phone, computer)?

Is there anything that would have helped you feel more emotionally supported?

Appendix D.7. Support (Practical)

Do the Q Health sessions help you understand how to do the activities, when to do them and where to do them?

Have you experienced any problems trying to do the exercises without the therapists being with you?

Have you been more worried about falls without face-to-face support from the therapists?

Does your (caregiver role) give you practical support? For example, does he/she remind you how to do the activities, when to do them and where to do them?

Does your (caregiver role) give you more support, now that the therapists are not visiting?

What could be done to better support you to do the exercises?

Appendix D.8. Independence

How has staying at home affected your independence (e.g., on your health and activity)?

Do you feel more dependent on others?

Have you noticed a change in your quality of life?

Are there any activities you would like to do that you cannot do at home?

Appendix D.9. Expectations

Have your personal goals changed as a result of staying at home due to the coronavirus?

If yes, what goals are you looking to gain now?

Do you think PrAISED is supporting you to achieve them?

Appendix D.10. Final Remarks

Any final thoughts and feedback on Q Health?

Appendix E. Topic Guide for Qualitative Interviews with Therapists

I would like to start by asking what impact the recent changes in PrAISED due to the coronavirus outbreak have had on you . . .

Appendix E.1. Personal Beliefs

Do you feel that your views on PrAISED have altered since we changed the way we deliver it?

Do you believe that the programme can still be effective when delivered remotely?

Appendix E.2. Motivation

Does the fact that you need to work from home have an impact on your motivation to deliver PrAISED?

What aspects of delivering PrAISED from home have had a positive impact on your motivation?

What aspects of delivering PrAISED from home have had a negative impact on your motivation?

What helps you keep going with the programme now that you are at home?

Appendix E.3. Expectations

Have your personal expectations on PrAISED changed as a result of the changes we have made?

If yes, in what way?

How do you expect the participants will respond to PrAISED being delivered remotely and adapt to the unexpected change?

Appendix E.4. Autonomy and Control

How do you feel now that you need to deliver PrAISED remotely? Do you feel you have less control over the process of delivery?

Do you feel that you have been able to input as much as you would like in the participants' activities, since we discontinued face-to-face visits due to the Coronavirus outbreak?

Appendix E.5. Self-Efficacy

How competent/comfortable do you feel delivering the intervention remotely?

What could be improved in the training to boost your confidence to deliver the intervention remotely?

Have you any other concerns?

Appendix E.6. Social Opportunity

Has the lack of face-to-face interaction with participants had an impact on how effectively you can deliver PrAISED?

If yes, what was the added value of it?

How do you think the participants will experience reduced social opportunities and what can we do to support them?

Appendix E.7. Support (Practical and Emotional)

How has the lack of face-to-face support had an impact on you?

How do you find the training you received, now that we have changed how we deliver PrAISED?

How collaborative do you feel that the person with dementia and their caregiver are?

Are you concerned that delivering the interventions remotely is as effective in supporting loneliness and self-isolation?

Are you concerned that the participants may be more at risk from falls without face-to-face contact?

What could be done to make you feel better supported?

Appendix E.8. Intervention Characteristics

Have you been able to deliver the PrAISED programme as before?

What have been the positive and negative changes with this new approach?

How could the programme be improved? I would be interested in hearing how you see a PrAISED programme delivered remotely. What should its characteristics be?

What affect has delivering the interventions via Q Health had on the therapeutic benefits of the activities?

Appendix E.9. Final Remarks

Any final thoughts on Q Health?

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