

BMJ Open

BMJ Open is committed to open peer review. As part of this commitment we make the peer review history of every article we publish publicly available.

When an article is published we post the peer reviewers' comments and the authors' responses online. We also post the versions of the paper that were used during peer review. These are the versions that the peer review comments apply to.

The versions of the paper that follow are the versions that were submitted during the peer review process. They are not the versions of record or the final published versions. They should not be cited or distributed as the published version of this manuscript.

BMJ Open is an open access journal and the full, final, typeset and author-corrected version of record of the manuscript is available on our site with no access controls, subscription charges or pay-per-view fees (<http://bmjopen.bmj.com>).

If you have any questions on BMJ Open's open peer review process please email info.bmjopen@bmj.com

BMJ Open

Protocol for a pragmatic feasibility randomised controlled trial of peer coaching for adults with long term conditions: PEER CONNECT

Journal:	<i>BMJ Open</i>
Manuscript ID	bmjopen-2021-059966
Article Type:	Protocol
Date Submitted by the Author:	07-Dec-2021
Complete List of Authors:	Dennett, Rachel; Torbay and South Devon NHS Foundation Trust; University of Plymouth Thompson, T; University of Plymouth, Peninsula Medical School Faculty of Health Clyne, Wendy; University of Plymouth Straukiene, Agne; Torbay and South Devon NHS Foundation Trust Davies-Cox, Helen; Torbay and South Devon NHS Foundation Trust Hosking, Joanne; University of Plymouth Centre for Mathematical Sciences Bones, Krystina; Torbay and South Devon NHS Foundation Trust Weight, Olivia; Torbay and South Devon NHS Foundation Trust Elston, Julian; Torbay and South Devon NHS Foundation Trust; University of Plymouth
Keywords:	Protocols & guidelines < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, Quality in health care < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, Neurology < INTERNAL MEDICINE, Rheumatology < INTERNAL MEDICINE

SCHOLARONE™
Manuscripts

1
2
3 Title: Protocol for a pragmatic feasibility randomised controlled trial of peer coaching for
4
5 adults with long term conditions: PEER CONNECT
6
7
8
9
10

11 Rachel Dennett^{1,2} 0000-0003-0400-0502
12
13

14 Tom Thompson² 0000-0002-6366-9743
15
16

17 Wendy Clyne ^{2,3} 0000-0003-1523-700
18
19

20 Agne Straukiene ¹
21
22

23 Helen Davies-Cox¹
24
25

26 Joanne Hosking ²
27
28

29 Krystina Bones ¹
30
31

32 Olivia Weight ¹
33
34

35 Julian Elston^{1, 2} 0000-0003-1378-5030
36
37
38
39
40
41
42

43 ¹Torbay and South Devon NHS Foundation Trust, Torbay, UK
44
45

46 ²Faculty of Health, University of Plymouth, Plymouth, UK
47
48

49 ³NIHR Research Design Service (RDS) South West, UK
50
51
52
53
54

55 Corresponding author Rachel Dennett rachel.dennett@plymouth.ac.uk
56
57
58
59
60

ABSTRACT

Introduction

Patients with low levels of knowledge, skills, and confidence to manage their health and wellbeing (activation) are more likely to have unmet health needs, delay seeking healthcare, and need emergency care. NHS England estimates that this may be applicable to 25-40% of patients with long-term health conditions. Volunteer peer coaching may support people to increase their level of activation. This form of intervention may be particularly effective for people with low levels of activation.

Methods and analysis

This single site, two-arm randomised controlled trial has been designed to assess the feasibility of conducting a definitive trial of volunteer peer health and wellbeing coaching for people with long-term health conditions (multiple sclerosis, rheumatoid arthritis or chronic pain) and low activation. Feasibility outcomes include recruitment and retention rates, and intervention adherence. We will measure patient activation, mental health and wellbeing as potential outcomes for a definitive trial. These outcomes will be summarised descriptively for each time point by allocated group and help to inform sample size calculation for the definitive trial. Criteria for progression to a full trial will be used.

Ethics and dissemination

Ethical approval has been granted by the London - Surrey Research Ethics Committee, reference 21/LO/0715. Results from this feasibility trial will be shared directly with participants, presented at local, regional, and national conferences and published in an open access journal.

Strengths and limitations of this trial

- It specifically targets patients with low levels of patient activation
- It utilises a novel volunteer peer coaching intervention for out-patients with long-term conditions based on an evidence-based and manualised training programme delivered online
- The research team includes academics, clinical service members and public contributors
- As a single site study the transferability of the trial's findings to other sites may be limited

INTRODUCTION

NHS England estimates that 25-40% of patients in England have low patient activation, defined as poor knowledge, skills, and confidence to manage health and wellbeing (Level 1 or 2 on the Patient Activation Measure (PAM)).¹ These patients are more likely to have unmet health needs, delay seeking healthcare, and need emergency care. Activation level is a modifiable factor, and it is likely that people with low activation have most to gain from an intervention designed to increase patient activation levels. Supporting self-management in people with a health condition is one of six key components of the Personalised Care Model (PCM) to address low activation as set out in The NHS Long Term Plan.² The PCM focuses on an individual's strengths and assets alongside working towards improvements in health conditions based on a 'what matters to me' approach.

One emerging approach from the literature to support self-management is health and wellbeing coaching.³ Nationally, programmes have been developed primarily to support patients with lifestyle changes.⁴ These recommend health professionals deliver coaching alongside their clinical work. However, national roll out and adoption of these programmes has been slow, which may be in part due to increasing demand on services and lack of resources due to stagnating budgets.⁵ An alternative approach to staff delivery of coaching services is to involve patients with lived experience as coaches (peer coaches) especially if they are highly activated (PAM Level 3 and 4). There is growing evidence for the effectiveness of peer coaching provided via a range of delivery modes; in-person^{6, 7}; telephone^{8, 9} and digital.¹⁰ Recent randomised controlled trials of peer coaching have included people with diabetes^{8, 11, 12} and chronic pain.^{7, 13, 14} These studies have

1
2
3 demonstrated improvements in perceived physical activity (PA)⁸ , quality of life (QoL)^{8, 12},
4
5 pain⁸ and depression.^{11, 12} In contrast, Matthias and colleagues reported no statistically
6
7 significant between-group differences at six (estimate(SE) 0.01 (0.23), CI(-0.45,0.46)) or
8
9 nine-months (estimate(SE) 0.07 (0.24), CI(-0.40,0.54)) following their effectiveness trial of a
10
11 peer coach-delivered pain self-management intervention versus controls who received a
12
13 class on pain and pain self-management.⁷ However, several trials have reported barriers to
14
15 implementing this kind of intervention which guides towards methods to minimise or
16
17 overcome potential barriers.
18
19
20
21
22

23 A number of studies have highlighted potential challenges of peer coaching such as coach
24
25 wellbeing,¹³ low intervention adherence and high drop-out rates).^{7, 8, 12} A recent feasibility
26
27 RCT of peer mentorship for people with osteoarthritis in the UK reports a mixed picture with
28
29 challenges in matching coaches to peers and difficulties with coach retention alongside
30
31 positive reports of coach enjoyment and satisfaction.^{6, 15} We have not located any studies
32
33 of peer coaching that have targeted peer coaching interventions at patients reporting low
34
35 levels of activation. People with low levels of activation stand to benefit most from an
36
37 intervention designed to improve confidence, problem solving and ability to manage their
38
39 health care and wellbeing. This may in turn impact use of health and social cares resources,
40
41 and could feasibly be delivered by peers (others with long term conditions) with high levels
42
43 of activation to negate the issues of resource within the NHS.
44
45
46
47
48
49
50

51 This paper describes the trial protocol for the PEER CONNECT study, a two-arm randomised
52
53 controlled feasibility trial of peer coaching for people receiving out-patient care for one of
54
55 three long-term health conditions; multiple sclerosis, rheumatoid arthritis or chronic pain.
56
57 The peer coaching service will only be offered to people with low levels of patient
58
59
60

1
2
3 activation. It provides up to 14 coaching sessions delivered over six months which decrease
4
5 in frequency over time. Volunteer peer coaches (confirmed to have high levels of activation)
6
7 will attend a comprehensive training programme that follows a manualised coaching
8
9 approach and includes independent and group learning sessions delivered online. In
10
11 addition, they will receive regular individual and group supervision. The logic model for the
12
13 intervention is illustrated in Figure 1.
14
15
16

17
18
19 Figure 1 here
20

21 Objectives

22
23
24 Our research question is:

25
26
27 Is it feasible to undertake a future definitive multi-centre RCT to determine the
28
29 effectiveness of a targeted peer coaching intervention on the health and wellbeing of
30
31 people with long-term health conditions and low activation attending outpatient services?
32
33

34
35
36 Our trial feasibility objectives are:

- 37
38
39 1. Are we able to identify, recruit, retain and follow-up eligible volunteer coaches and
40
41 peers?
42
43
44 2. What is a sustainable number of peers per volunteer coach?
45
46
47 3. Are trial procedures acceptable to participants (peers and volunteer coaches)?
48
49
50 4. To estimate parameters needed to inform future sample size calculation
51
52
53 5. Are trial outcome measures acceptable to participants (peers)?
54
55
56 6. Does the trial demonstrate evidence to suggest that the coaching holds promise as
57
58 an effective intervention?
59
60

Definitions

Within this paper the following key definitions are used:

- Peers: Participants eligible to receive coaching
- Volunteer peer coaches: Participants eligible to train to deliver coaching to peers

METHODS AND ANALYSIS

Study design

This research is a single site, two-arm, pragmatic randomised controlled feasibility trial.

Eligible participants will be randomised 1:1 to either the intervention arm which includes (up to) 14 sessions of peer coaching over six months and their usual care, or the control arm who receive usual care only. Embedded within this feasibility study is a qualitative component that will include individual interviews with volunteer coaches and peers, clinic and peer coaching staff, and people who decline to take part in the interventional aspect of the study. All aspects of the trial protocol have been approved by the London - Surrey Research Ethics Committee, reference 21/LO/0715.

Participants

Eligibility criteria (peers and coaches)

Eligible participants will:

- Be aged 18 years or older (peers and volunteer coaches)

- Attend a rheumatology, pain or multiple sclerosis out-patient clinic (peers and volunteer coaches)
- Score PAM Level 1 or 2 (peers), PAM 3 or 4 (volunteer coaches)
- Be willing and able to engage in the six-month intervention (peers and volunteer coaches)
- Be willing and able to commit to undertaking assessments at baseline, six and nine months (peers).
- Have capacity to provide informed consent (peers and volunteer coaches)
- Have sufficient fluency in English to be able to engage with the intervention and trial material (peers and volunteer coaches)
- Not be participating in any other observational or interventional research trial

Recruitment

This trial aims to recruit volunteer coaches and peers to take part in the intervention.

Coaches, peers, clinic and service delivery staff, and people who decline to take part in the study will also be invited to take part in the qualitative component of the research.

Recruitment of volunteer coaches and peers

Potential volunteer coaches and peers will be recruited from the multiple sclerosis, rheumatology and chronic pain out-patient clinics at a single NHS Trust (Torbay and South Devon NHS Foundation Trust (TSDFT)). Figures 2 and 3 indicate the research journey of

1
2
3 eligible participants. Following initial telephone screening potential participants will provide
4
5 consent to complete the PAM to confirm eligibility as a volunteer coach or peer.
6
7
8
9

10
11
12 Figures 2 and 3 here
13
14

15 **Consent**

16
17
18 Participants will be offered a choice of four options for providing informed consent:
19

- 20
21 1. In-person signed form with scanned copy stored electronically on a TSDFT secure drive.
- 22
23 2. Video-recorded using MS Teams and stored securely as above.
- 24
25 3. Completed via Jisc (<https://www.onlinesurveys.ac.uk/>) with exported record stored
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
securely as above.
4. Postal signed consent form, scanned on receipt and stored as above.

40 **Randomisation**

41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
Following baseline data collection, eligible peers will be randomised to either the
intervention or control arm on a 1:1 ratio using random permuted blocks, stratified by out-
patient clinic. The randomisation list will be generated and stored by a statistician not
involved in the trial, and allocation will be accessed through a web-portal hosted by the
University of Plymouth Peninsula Clinical Trials Unit.

58 **Blinding**

1
2
3 Blinding of participants will not be possible due to the nature of the intervention. Due to
4
5 restricted capacity not all members of the research team will be blinded. The trial
6
7
8 statistician will be blinded to allocation.
9
10

11 12 13 14 **Intervention and setting**

15 16 17 **Setting**

18
19
20 All participants will be recruited from TSDFT, a district general hospital in the South West of
21
22
23 the United Kingdom (UK).
24
25
26
27
28

29 30 **Control arm**

31
32 Usual care is defined as access to services and treatment provided as routine care, examples
33
34 of which include attending out-patient clinic appointments, referral to therapies, and
35
36 signposting to community or support services as required.
37
38
39

40 41 **Intervention arm**

42
43 The intervention includes up to 14 sessions with a volunteer coach delivered over six
44
45 months. Sessions are expected to last from 15-60 minutes and will be provided in a COVID-
46
47 19 secure environment either on-line, by telephone or face-to-face. A flexible framework for
48
49 the coaching will be used to facilitate a personalised approach with a suggested format of
50
51 one session per week for the first two months, followed by fortnightly sessions for two
52
53 months and monthly sessions thereafter. Peers will be supported to produce a coaching
54
55 plan with associated goals at the end of each session. A brief summary of the content,
56
57
58
59
60

1
2
3 duration, and mode of coaching delivery will also be recorded. Missed planned sessions
4
5 (non-attendance) will be recorded by the volunteer coach. In addition, peers will be asked to
6
7 report any adverse events (AEs) they have experienced and rate their experience of being
8
9 coached.
10
11
12
13
14
15

16 **Volunteer coach training**

17
18
19
20 Volunteer peer coach training will include eight structured 90-minute live sessions
21
22 supported by interactive online learning tasks. Training will be delivered by the TSDFT
23
24 volunteer peer health and wellbeing coaching service, the 'Health Connect Coaching
25
26 Programme'. Sessions will draw on evidence-based behavioural change methods¹⁶,
27
28 motivational strategies¹⁷, and communication techniques. The content will also draw on
29
30 evidence-based materials to improve health and wellbeing such as Making Every Contact
31
32 Count (MECC)¹⁸ , Five Ways to Well Being¹⁹ , and NHS health coaching programmes .⁴ The
33
34 intervention will emphasise:²⁰
35
36
37
38
39

- 40 • A patient-centred approach where patients determine their goals
- 41
- 42 • Active learning or self-discovery
- 43
- 44 • A problem-solving focus to work towards goals
- 45
- 46 • Regular peer feedback on implementing the coaching plan
- 47
48
49

50
51 Training will initially be completed virtually using Microsoft Teams, with a view to offer face-
52
53 to-face training in the future should COVID-19 restrictions allow. Each 90-minute session will
54
55 include a break. There will be two training sessions each week for four consecutive weeks.
56
57
58
59
60

1
2
3 Training will total a minimum of 15 hours for each volunteer coach, including homework
4
5 activities, practical sessions, and on-line modules.
6
7

8
9 The training content covers:

- 10
11
- 12 • Background to personalised care and why it matters
 - 13
 - 14
 - 15 • How this volunteer role has been developed and why
 - 16
 - 17
 - 18 • Stages of behaviour change and how this relates to managing long-term condition(s)
 - 19
 - 20
 - 21 • Exploring beliefs and boundaries
 - 22
 - 23
 - 24 • Insight and awareness of the drama triangle and what impact this can have
 - 25
 - 26
 - 27 • Exploring each of the core coaching skills (open questions, empathy, value of silence,
 - 28 reflection, recognising change)
 - 29
 - 30
 - 31
 - 32
 - 33 • Using confidence and/or importance scaling and practising how to embed use of
 - 34 these in coaching conversations
 - 35
 - 36
 - 37
 - 38 • Skills practice throughout using pair and group activities
 - 39
 - 40
 - 41
 - 42 • Understanding the flow of coaching conversations
 - 43
 - 44
 - 45 • How to use appropriate resource tools to support conversations
 - 46
 - 47
 - 48 • Using Microsoft Teams and Patient Knows Best platforms
 - 49
 - 50
 - 51 • Awareness of appropriate signposting and increasing confidence in how to signpost
 - 52 well
 - 53
 - 54
 - 55
 - 56 • Goal setting and goal follow up
 - 57
 - 58
 - 59
 - 60

1
2
3 By the end of the course, volunteer coaches will be confident and competent to:
4
5

- 6 1. Understand their role, boundaries and how to seek help and guidance
- 7
- 8 2. Use technology to contact and engage with peers
- 9
- 10 3. Use health coaching conversational skills to work with peers on what matters to
- 11 them, to support motivation for positive behaviour change to improve their
- 12 health, wellbeing, and self-management of their condition
- 13
- 14 4. Be aware of local services and have the confidence to signpost to appropriate
- 15 services
- 16
- 17 5. Know when and how to use the Health Connect Coaching Programme
- 18 coordinators to support them in their role, and their peer on their journey.
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28
- 29
- 30

31 Training will also include learning to use a range of behaviour change techniques which may
32 include supporting peers to self-monitor, develop healthy habits, focus on past successes
33 and set goals. Following successful completion of all training sessions and competence
34 assessment by the coach trainers, coaches will be carefully matched to a peer. Matching will
35 completed by the Programme Coordinators and will be based on criteria including: having a
36 shared or similar health condition or symptoms, social deprivation (based on postcode), and
37 other factors that peers feel are important to them which will be explored in an initial
38 telephone conversation with the Coordinator. Volunteer coaches will be supervised and
39 supported through monthly peer coaching group meetings and one-to-one supervision
40 sessions with the coach coordinators as required. All coaches will complete a Disclosure and
41 Barring Service (DBS) check prior to working with peers.
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Outcomes

Primary Outcomes

The primary outcomes of this trial are feasibility outcomes.

Recruitment

Recruitment of peers and volunteer coaches will be calculated as follows:

Peer recruitment (%) = number of peers recruited/ potentially eligible cohort (indicated by the number of information packs distributed) x100

Coach recruitment (%) = number of volunteer coaches recruited/ potentially eligible cohort (indicated by the number of information packs sent or handed out) x100.

Retention and follow-up

Follow-up will be online. Peer retention and follow-up will be calculated as the proportion of peers completing all questionnaires at six months (post-intervention) and nine months (follow-up).

Coach retention will be calculated as the proportion of coaches who complete the training programme and coach at least one peer (defined as providing at least two coaching sessions).

Adherence

Adherence will be calculated as the number of sessions attended out of the total planned and mutually agreed coaching sessions (as long as this is at least two sessions).

Qualitative outcomes

1
2
3 We will report themes relevant to the experience of participating in the trial from peers,
4
5 volunteer coaches and service provider staff, including feasibility of progressing to a full-
6
7 scale trial. These will include experience of: referral and recruitment to the trial,
8
9 randomisation, questionnaire completion, interview participation, and burden and reward
10
11 for participation in the trial. In addition, reasons for not wanting to take part will be collated
12
13 and reported where such information is provided on reply slips and/or in decliner
14
15 interviews.
16
17
18
19
20
21
22
23

24 **Secondary Outcomes**

25
26
27 Peers will complete socio-demographic and health questionnaires at baseline only and the
28
29 following health, wellbeing and resource use outcomes at baseline, post-intervention (six
30
31 months) and follow-up (nine months) time points:
32
33
34

35 **Patient Activation Measure (PAM®):** This is a validated, 13-item licensed tool that has been
36
37 extensively tested in many studies.¹ It measures the spectrum of knowledge, skills and
38
39 confidence for managing health and healthcare.
40
41
42

43 **Warwick Edinburgh Mental Wellbeing Scale (WEMWBS):** This validated scale assesses
44
45 mental wellbeing within the adult population using 14 questions.²¹ The scale measures
46
47 positive mental wellbeing in terms of both feeling good (hedonia) and functioning well
48
49 (eudaimonia).
50
51
52

53 **ICECAP-A:** The ICECAP-A is a measure of capability in the adult population that can be used
54
55 for economic evaluation.²² It includes five items one for each domain: stability, attachment,
56
57 autonomy, achievement and enjoyment. Each item includes four possible responses. A tariff
58
59
60

1
2
3 value for an overall state is calculated using an ICECAP algorithm and is used to calculate
4
5 well-being adjusted life-years.
6
7

8
9 **Health Confidence Score (HCS):** The health confidence score is a short, generic, person-
10
11 reported measure of people's perceived confidence in managing aspects of their own health
12
13 and care. It has four items covering health knowledge, capability to self-manage, access to
14
15 help and shared decisions.²³
16
17

18
19 **Long-Term Conditions Questionnaire (LTCQ):** This 20-item questionnaire assesses outcomes
20
21 in patients with either single or multiple LTCs (physical and/or mental health condition(s)) in
22
23 health and social care contexts.²⁴ It measures across three broad concepts: impact of LTCs,
24
25 experience of services and support, and self-care.
26
27

28
29 **Resource use questionnaire:** Details of health service utilisation including health, social and
30
31 broader care provision and support (for example outpatient, A&E and GP visits, community
32
33 care worker visits, voluntary sector support, and informal care) will be captured using a
34
35 questionnaire developed by members of the research team for use in other trials.
36
37

38
39 **Session Rating Scale 3.0 (SRS).**²⁵ This is a four-item, client-completed measure of session
40
41 experience.
42
43

44 45 **Disease specific symptom measures**

46
47
48 Participants will additionally be asked to complete one disease specific questionnaire. This
49
50 will be selected based upon their clinical diagnosis from the five options below.
51
52

53
54 **Brief Pain Inventory (BPI):** The BPI includes 9 items and was developed to assess the
55
56 severity of pain and the impact of pain on functioning.²⁶
57
58
59
60

1
2
3 **Multiple Sclerosis Impact Scale (MSIS-29v2):** This is a 29-item condition specific measure of
4 health-related quality of life, devised specifically for people with multiple sclerosis.²⁷
5
6

7
8 **The EULAR Psoriatic Arthritis Impact of Disease: PsAID9 for clinical trials (PsAID9):** The 9-
9 item PsAID is a questionnaire validated to assess the impact of Psoriatic Arthritis on
10 patients' lives.²⁸
11
12

13
14
15 **The Bath AS Disease Activity Index (BASDAI):** This 6-item questionnaire assesses the impact
16 of the five major symptoms of Ankylosing Spondylitis.²⁹
17
18

19
20 **Rheumatoid Arthritis Impact of Disease (RAID) questionnaire:** The rheumatoid arthritis
21 impact of disease (RAID) questionnaire comprises seven domains of disease impact.³⁰
22
23

24 **Qualitative secondary outcomes**

25
26
27

28 We will gather the views of participants and coaches about the volunteer coach training,
29 matching process, intervention, coach-peer relationship, perceived impact on health and
30 wellbeing and overall participation in the trial using a combination of semi-structured
31 interviews, observations, and analysis of coaching plans. Purposive sampling will ensure
32 interviewees are representative of the cohorts' range of demographic characteristics,
33 degree of engagement with the programme, and in the case of coaches, will include coaches
34 who coach a different numbers of peers and who use online or face-to-face delivery. We will
35 also capture barriers to trial participation by interviewing decliners, volunteer coaches and
36 peers who drop out. Peer, volunteer coach, staff and decliner interviews will explore the
37 barriers and facilitators of set up and delivering the peer coaching service, its active
38 ingredients in relation to the four elements of coaching outlined above and elements of the
39 peer-coach relationship that facilitate behavioural change.
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3 We will observe the training and monthly coaching supervision to understand, explore, and
4 describe the intervention. Brief session notes will be recorded by the coach coordinators
5 who lead the supervision sessions that will be used by the research team to summarise
6 issues discussed. Analysis will be framed around a conceptual model of coaching adapted
7 from Matthias and colleagues which includes motivation, strategies and finding what
8 works.³¹
9
10
11
12
13
14
15
16
17
18
19
20
21

22 **PPI statement**

23
24 To ensure procedures and intervention delivery are acceptable and relevant to participants,
25 they were developed with input from a Patient and Public Involvement (PPI) group that
26 included people with lived experience of the targeted conditions (n=4). This was established
27 and convened twice during the set-up phase of the trial. Key objectives of the PPI group
28 include but are not limited to: trial materials development; questionnaire design and
29 delivery; disease specific questionnaire selection; adaptations to intervention format,
30 content, and delivery; data collection processes; interview topic guide development; and
31 the minimising of burden and maximising of engagement and retention through
32 identification of barriers and facilitators. Further consultation is planned to consider the
33 interpretation of findings, dissemination strategy and the study's next steps. All PPI consultation
34 has been, and will be completed in line with the NIHR guidelines, including financial
35 reimbursement.
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Data analysis

Quantitative

A detailed statistical analysis plan will be finalised before the trial database is locked. A CONSORT diagram will show information from screening, recruitment and follow-up and feasibility outcomes will be summarised with recruitment and retention rates presented with 95% confidence intervals. All quantitative data for this feasibility trial is self-reported and outcomes will be used and scored in line with author guidance. PAM scores will be calculated using the algorithm from Insignia Health (<https://www.insigniahealth.com/products/pam-survey>). Feasibility outcomes will be summarised with recruitment and retention rates presented with 95% confidence intervals. Descriptive statistics will be presented for secondary outcomes at baseline, six and nine months by allocated group. Between group differences of the change in scores between baseline and each follow-up time point will be presented but no inferential analysis will be performed, in accordance with CONSORT guidance.³²

Sample size estimation

To inform sample size estimation for a future trial, we will calculate the standard deviations of the secondary outcomes of patient activation, mental wellbeing and quality of life. To estimate plausible between group differences for a primary outcome in a future definitive trial, namely change in scores on key secondary outcome measures from pre- to post intervention, we will calculate the between group difference (with 95% confidence intervals) in change score between baseline and follow-up (nine months).

Qualitative

We will use thematic framework analysis³³ following the five steps of analysis (familiarisation, identifying a thematic framework, indexing, charting, and mapping and interpretation) to explore qualitative data with themes identified and discussed between a minimum of two researchers. The process will use a combination of inductive and deductive framing, using the conceptual model of the intervention as a guide. Analysis will be completed using NVivo Version 12 (QSR International Pty Ltd, 2018). PPI input will help clarify and interpret identified themes within the framework.

Progression criteria

At the end of this feasibility trial the following criteria, developed in line with Avery et al (2017) will be used to determine progression to a full trial application. We shall progress to a full trial application if minimum success criteria are achieved in key feasibility areas. These criteria will be discussed with the Trial Management Group (TMG) and Trial Steering Committee (TSC), but may include:

- Target peer population (n=60) plus sufficient coaches recruited within 9-month recruitment window (<60% stop, 60-80% discuss, 80+% go)
- Adherence (defined as attending at least two of the mutually agreed number of coaching sessions (which may range from two to 14 sessions) of participants randomised to coaching (<40% of peers attend stop, 40-60% discuss, 60%+ go)
- Completion of outcome measures (scored PAM at nine-month follow-up) (<60% stop, 60-80% discuss, 80+% go)

- Evidence to suggest efficacy i.e. that the coaching holds promise as an effective intervention (indicated by examination of the confidence intervals of the between group differences in PAM at nine months and qualitative data).

Any issues that arise during this feasibility trial will be discussed with our PPI group members to consider possible action. Changes may be implemented within this feasibility trial or be evident upon trial completion which will inform the feasibility, and optimum delivery, for a potential definitive trial.

ETHICS AND DISSEMINATION

Safety monitoring

Throughout the trial, all possible precautions will be taken to ensure participant safety and wellbeing. Experienced professional coaches will deliver the volunteer coaching training and will ensure that volunteer coaches are trained and supervised to an appropriate level in order to deliver the coaching independently and safely. All Adverse events (AEs) will be reported by participants to the health connect coaching coordinators via their volunteer coach. This information will be shared with the research team who will assess any relation to the intervention. All serious adverse events (SAEs) will be reported to the CI within 24 hours of identification and the trial sponsor will be informed. All AEs and SAEs will be reported to the TMG on a monthly basis. In addition, a summary of this information will be shared with the TSC every six months.

Data management and monitoring

Confidentiality

Any identifiable information will be stored in a shared drive on TSDFT computers. All self-reported data will be collected via Jisc platform (<https://www.onlinesurveys.ac.uk/>). This anonymised data will be exported to and stored on a password protected and encrypted University computer. Interview recordings will be transcribed with any identifiable information removed. The recordings will be destroyed after transcription and the transcripts containing non-identifiable information will be retained. At the end of the trial all anonymized research information held on University computers will be returned to the sponsor (NHS trust) for storage for a minimum of five years. All information will be handled in compliance with the General Data Protection Regulations (2018).

Data monitoring

Data will be managed independently from the Sponsor and research funder. As this is a feasibility trial a Data Monitoring Committee has not been deemed necessary, as there will be insufficient data to establish benefits or harms of the intervention worthy of invoking early stopping rules.

Trial management and oversight

Two committees are involved in the set up and management of this trial.

The **Trial Management Group** comprises the university research team and members of the NHS Trust peer coaching service. It will meet monthly throughout the course of the trial via web-based platforms such as Microsoft Teams or face-to-face should COVID-19 restrictions allow. The group is responsible for development of the protocol and other trial documentation and ensuring smooth and safe running of the trial.

1
2
3 **The Trial Steering Committee** is made up of an independent chair, an independent
4
5 statistician, a person with lived experience and an independent health economist. The role
6
7 of the group is to provide overall supervision for the trial on behalf of the Sponsor and
8
9 Funder and to ensure that the trial is conducted according to the rigorous standards set out
10
11 in the Department of Health's Research Governance Framework for Health and Social Care
12
13 and the Guidelines for Good Clinical Practice. The group will continue to meet twice a year
14
15 across the trial timeline.
16
17
18
19

20 21 **Post-trial care**

22
23
24 Participants in the control arm will be offered priority access to the intervention after final
25
26 data collection has taken place. All participants will have access to their usual health care as
27
28 routine practice.
29
30

31 32 **Dissemination**

33
34
35 Results from this feasibility trial will be shared directly with participants once they are
36
37 available. In addition, results will be presented at local, regional, and national conferences.
38
39
40 Further, the protocol and trial findings will be published in an open access journal and a final
41
42 report will be presented to the funders and sponsor.
43
44

45 46 **Trial registration**

47
48 This trial is registered with the ISRCTN. ISRCTN12623577

49
50
51 Protocol version 1.0, 24/08/2021
52
53
54
55
56
57

58 59 **Funding statement**

60

1
2
3 This work is funded by Torbay Medical Research Fund grant number project 137. The Funder
4
5 has no role in trial design, conduct, data analyses and interpretation, manuscript writing, or
6
7 dissemination of results.
8
9

10 **Roles and Responsibilities**

11
12
13
14 Dr Agne Straukiene (AS) is the chief investigator (CI) of the trial. Dr Julian Elston (JE) is the
15
16 research manager. Dr Wendy Clyne (WC) and Dr Tom Thompson (TT) advise on trial
17
18 methodology and conduct. Dr Joanne Hosking (JH) is the trial statistician. AS, JE, WC, TT and
19
20 JH were responsible for trial design. Rachel Dennett (RD) is the trial co-ordinator. Helen
21
22 Davies-Cox, Krystina Bones and Olivia Weight are responsible for the clinical delivery of the
23
24 peer coaching service. Each of the named authors are members of the TMG and have
25
26 contributed to the writing of this protocol.
27
28
29

30
31
32 This trial is sponsored by Torbay and South Devon NHS Foundation Trust
33
34 tsdft.researchgovernance@nhs.net. The Sponsor has no direct role for trial design, conduct,
35
36 data analysis and interpretation, manuscript writing or dissemination of the results.
37
38
39

40 **Acknowledgements**

41
42
43 The authors would like to acknowledge Annette Thom for her assistance with the initial
44
45 literature review. In addition, the study PPI group and trial steering committee for their
46
47 involvement in the design of this study.
48
49

50 **Competing interests**

51
52 The authors declare no conflicts of interest.
53
54
55
56
57
58
59
60

1
2
3 **Figure legends**
4

5
6 Figure 1: Volunteer peer coaching logic model
7

8
9 Figure 2: Trial flow diagram: volunteer coach
10

11 Figure 3: Trial flow diagram- Peer
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

For peer review only

REFERENCES

1. Hibbard, J. and Gilbert, H. 2014: Supporting people to manage their health. An introduction to patient activation. London: Kings Fund. Accessed at: https://www.kingsfund.org.uk/sites/default/files/field/field_publication_file/supporting-people-manage-health-patient-activation-may14.pdf
2. NHS England. 2019. The NHS Long Term Plan. Accessed at: <https://www.longtermplan.nhs.uk/wp-content/uploads/2019/08/nhs-long-term-plan-version-1.2.pdf>
3. Sforzo G, Kaye M, Todorova I, et al. Compendium of the Health and Wellness Coaching Literature. *Am J Lifestyle Med.* 2018;12(6):436-447. <https://doi:10.1177/1559827617708562>
4. NHS England and NHS Improvement 2020: Health Coaching. Implementation and Quality Summary Guide Support self-management. Accessed at: <https://www.england.nhs.uk/publication/health-coaching-summary-guide-and-technical-annexes/>
5. Robertson R, Wenzel L, Thompson J. et al. Understanding NHS financial pressures: how are they affecting patient care? *The Kings Fund.* 2017. Access at: <https://www.kingsfund.org.uk/publications/understanding-nhs-financial-pressures>
6. Anderson AM, Lavender EC, Dusabe-Richards E, et al. Peer mentorship to improve self-management of hip and knee osteoarthritis: a randomised feasibility trial. *BMJ Open* 2021;11:e045389. doi: 10.1136/bmjopen-2020-045389
7. Matthias MS, Bair MJ, Ofner S, et al. Peer Support for Self-Management of Chronic Pain: the Evaluation of a Peer Coach-Led Intervention to Improve Pain Symptoms (ECLIPSE) Trial. *J*

1
2
3 *Gen Intern Med.* 2020a Dec;35(12):3525-3533. doi: 10.1007/s11606-020-06007-6. Epub

4
5
6 2020a Jul 22.

7
8
9 8. Andreae, S. J. Andreae, L. J., Richman, J. S. et al. Peer-Delivered Cognitive Behavioral
10
11 Training to Improve Functioning in Patients With Diabetes: A Cluster-Randomized Trial. *Ann*
12
13 *Fam Med.* 2020 Jan;18(1):15-23. [https://doi: 10.1370/afm.2469](https://doi.org/10.1370/afm.2469).

14
15
16
17 9. Small N, Blickem C, Blakeman T, et al. Telephone based self-management support by 'lay
18
19 health workers' and 'peer support workers' to prevent and manage vascular diseases: a
20
21 systematic review and meta-analysis. *BMC Health Serv Res.* 2013 Dec 27;13:533. [https://doi:](https://doi.org/10.1186/1472-6963-13-533)
22
23 10.1186/1472-6963-13-533.

24
25
26
27 10. Fortuna, K. L., Naslund, J. A., Lacroix, J. M., et al. Digital Peer Support Mental Health
28
29 Interventions for People With a Lived Experience of a Serious Mental Illness: Systematic
30
31 Review. *JMIR Ment Health.* 2020 Apr 3;7(4):e16460. [https://doi: 10.2196/16460](https://doi.org/10.2196/16460).

32
33
34
35 11. Andreae, S. J. Andreae, L. J., Richman, J. S. et al. Peer-delivered Cognitive Behavioral
36
37 Therapy-based Intervention Reduced Depression and Stress in Community Dwelling Adults
38
39 With Diabetes and Chronic Pain: A Cluster Randomized Trial. *Ann Behav Med.*
40
41 2021.55(10)970-980. [https://doi: 10.1093/abm/kaab034](https://doi.org/10.1093/abm/kaab034)

42
43
44
45 12. Khodneva, Y., Safford, M. M., Richman, J. Volunteer peer support, diabetes, and
46
47 depressive symptoms: Results from the ENCOURAGE trial. *J Clin Transl Endocrinol* 2016 4:
48
49 38-44

50
51
52
53 13. Matthias Ms, Daggy J, Ofner S, t al. Exploring peer coaches' outcomes: Findings from a
54
55 clinical trial of patients with chronic pain. *Patient Educ Couns.* 2020b, (103), 1366-
56
57 1372. [https://doi:10.1016/j.pec.2020.02.007](https://doi.org/10.1016/j.pec.2020.02.007)

- 1
2
3 14. Shue, McGuire, AB and Matthias, M. Facilitators and Barriers to Implementation of a
4
5 Peer Support Intervention for Patients with Chronic Pain: A Qualitative Study. *Pain Med.*
6
7 2019 20 (7) 1311-1320. <https://doi: 10.1093/pm/pny229>
8
9
10
11 15. Lavender, E., Dusabe-Richards, E., Anderson, A. et al. Exploring the feasibility,
12
13 acceptability and value of volunteer peer mentors in supporting self-management of
14
15 osteoarthritis: a qualitative evaluation. *Disabil Rehabil.* [https://doi:](https://doi: 10.1080/09638288.2021.1964625)
16
17 10.1080/09638288.2021.1964625
18
19
20
21 16. Simmons, L. A. and Wolever, R. Q. 2013: Integrative Health Coaching and Motivational
22
23 Interviewing: Synergistic Approaches to Behavior Change in Healthcare. *Global Adv Health*
24
25 *Med, (2), 28-35.*
26
27
28
29 17. Lundahl, B. W., Kunz, C., Brownell, C., et al. A Meta-Analysis of Motivational
30
31 Interviewing: Twenty-Five Years of Empirical Studies. *Res Soc Work Pract.* 2010 (20), 137-
32
33 160. [https:// doi:10.1177/1049731509347850](https://doi:10.1177/1049731509347850)
34
35
36
37 18. Health Education England. Making Every Contact Count. Accessed at
38
39 <https://www.makeeverycontactcount.co.uk/>
40
41
42
43 19. Aked J, Marks N, Cordon C. et al. Five ways to wellbeing; communicating the evidence.
44
45 Accessed at: <https://neweconomics.org/2008/10/five-ways-to-wellbeing>
46
47
48 20. Wolever, R. Q., Simmons, L. A., Sforzo, G. A., et al. A Systematic Review of the Literature
49
50 on Health and Wellness Coaching: Defining a Key Behavioral intervention in Healthcare.
51
52 *Glob Adv Health Med.* 2013 Jul;2(4):38-57. <https://doi: 10.7453/gahmj.2013.042>.
53
54
55
56
57
58
59
60

- 1
2
3 21. Putz, R., O'hara, K., Taggart, F. et al. Using WEMWBS to measure the impact of your
4 work on mental wellbeing: A practice-based user guide. 2012. Warwick Medical School,
5
6 Coventry City Council, NHS Coventry.
7
8
9
10
11 22. Al-Janabi H, Flynn TN, Coast J. Development of a self-report measure of capability
12 wellbeing for adults: the ICECAP-A. *Qual Life Res.* 2012;21(1):167-176. doi:10.1007/s11136-
13 011-9927-2
14
15
16
17
18
19 23. Benson T, Potts HWW, Bark P, et al. Development and initial testing of a Health
20 Confidence Score (HCS) *BMJ Open Quality* 2019;8:e000411. [https://doi: 10.1136/bmjoq-](https://doi:10.1136/bmjoq-2018-000411)
21
22 2018-000411
23
24
25
26
27 24. Potter CM, Batchelder L, A'Court C, et al. Long-Term Conditions Questionnaire (LTCQ):
28 initial validation survey among primary care patients and social care recipients in England.
29
30 *BMJ Open* 2017;7:e019235. <https://doi:10.1136/bmjopen-2017-019235>
31
32
33
34
35 25. Miller SD, Duncan BL, Johnson LD (2000). The session rating scale 3.0. Chicago, IL:
36 Authors
37
38
39
40 26. Cleeland CS, Ryan KM. Pain assessment: global use of the Brief Pain Inventory. *Ann Acad*
41 *Med Singap.* 1994 Mar;23(2):129-38. PMID: 8080219.
42
43
44
45
46 27. Hobart JC, Lamping DL, Fitzpatrick R, et al. The Multiple Sclerosis Impact Scale (MSIS-29):
47 a new patient-based outcome measure. *Brain.* 2001;124:962-73.
48
49 <https://doi:10.1093/brain/124.5.962>
50
51
52
53
54 28. Gossec L, de Wit M, Kiltz U, et.al. A patient-derived and patient-reported outcome
55 measure for assessing psoriatic arthritis: elaboration and preliminary validation of the
56
57
58
59
60

1
2
3 Psoriatic Arthritis Impact of Disease (PsAID) questionnaire, a 13-country EULAR initiative.

4
5 Ann Rheum Dis. 2014 Jun;73(6):1012-9. doi: 10.1136/annrheumdis-2014-205207.
6
7

8
9 29. Garrett S, Jenkinson T, Kennedy LG, et. Al. A new approach to defining disease status in
10
11 ankylosing spondylitis: the Bath Ankylosing Spondylitis Disease Activity Index. J Rheumatol.
12

13
14 1994 Dec;21(12):2286-91. PMID: 7699630.
15

16
17 30. Duarte C, Santos EJP, Ferreira RJO, et al .Validity and reliability of the EULAR instrument
18
19 RAID.7 as a tool to assess individual domains of impact of disease in rheumatoid arthritis: a
20
21 cross-sectional study of 671 patients *RMD Open* 2021;7:e001539. <https://doi:>
22

23
24 10.1136/rmdopen-2020-001539
25

26
27 31. Matthias, M. S., Daggye, J., Adamsa, M. et al. Evaluation of a peer coach-led intervention
28
29 to improve pain symptoms (ECLIPSE): Rationale, study design, methods, and sample
30
31 characteristics. *Contemp Clin Trials*. 2019 Jun;81:71-79.
32

33
34 <https://doi:10.1016/j.cct.2019.04.002>.
35

36
37 32. Eldridge, S. M., Chan, C. L., Campbell, M. J., et al. CONSORT 2010 statement: extension
38
39 to randomised pilot and feasibility trials. *BMJ* 2016: 355:i5239
40

41
42 <https://doi.org/10.1136/bmj.i5239>
43

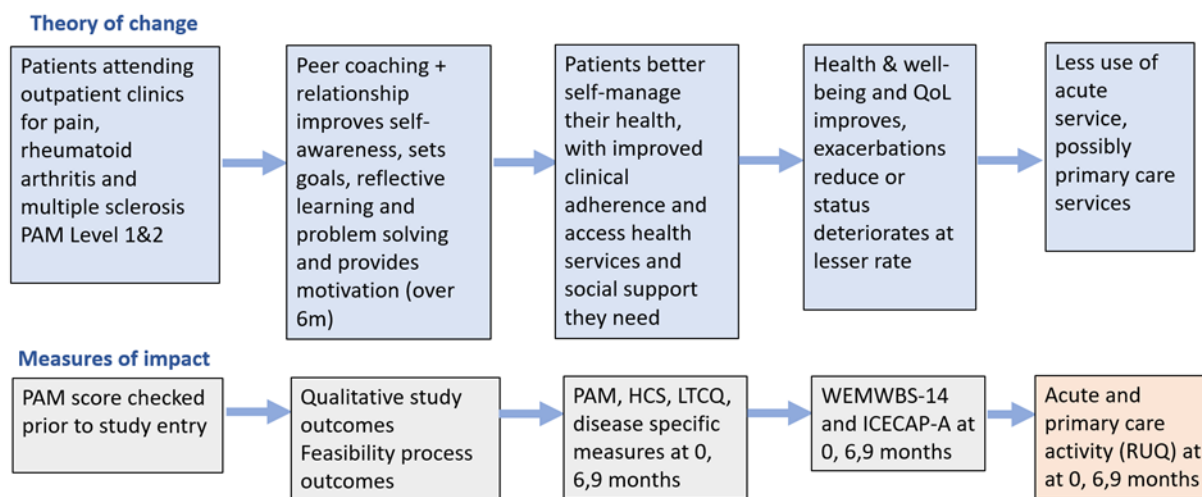
44
45 33. Ritchie, J. and Spencer, L. (1994) Qualitative Data Analysis for Applied Policy Research.

46
47 In: Bryman, A. and Burgess, R., Eds., *Anal. Qual. Data*, Routledge, London, 173-194.
48

49
50 34. Avery KNL, Williamson PR, Gamble C, et al. Informing efficient randomised controlled
51
52 trials: exploration of challenges in developing progression criteria for internal pilot studies.
53

54
55 *BMJ Open* 2017;7:e013537. <https://doi:10.1136/bmjopen-2016-013537>
56
57
58
59
60

Figure 1: Volunteer peer coaching logic model



Abbreviations: PAM: Patient Activation Measure, m: months, QoL: Quality of Life, HCS: Health Confidence Score, LTCQ: Long-Term Conditions Questionnaire, WEMWBS: Warwick Edinburgh Mental Wellbeing Scale, ICECAP-A: ICEpop CAPability measure for Adults, RUQ: Resource use questionnaire

Figure 2: Trial flow diagram: volunteer coach

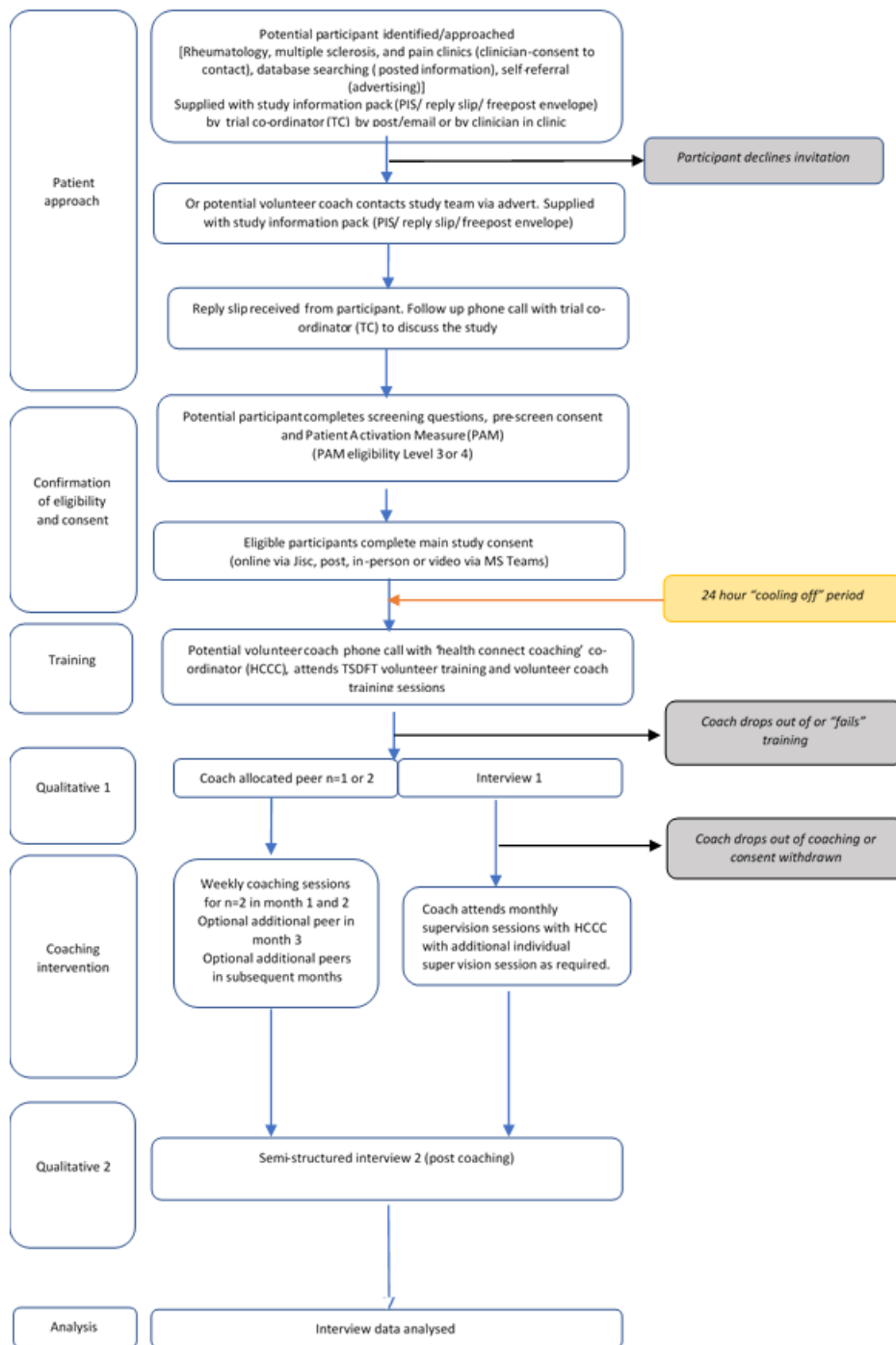
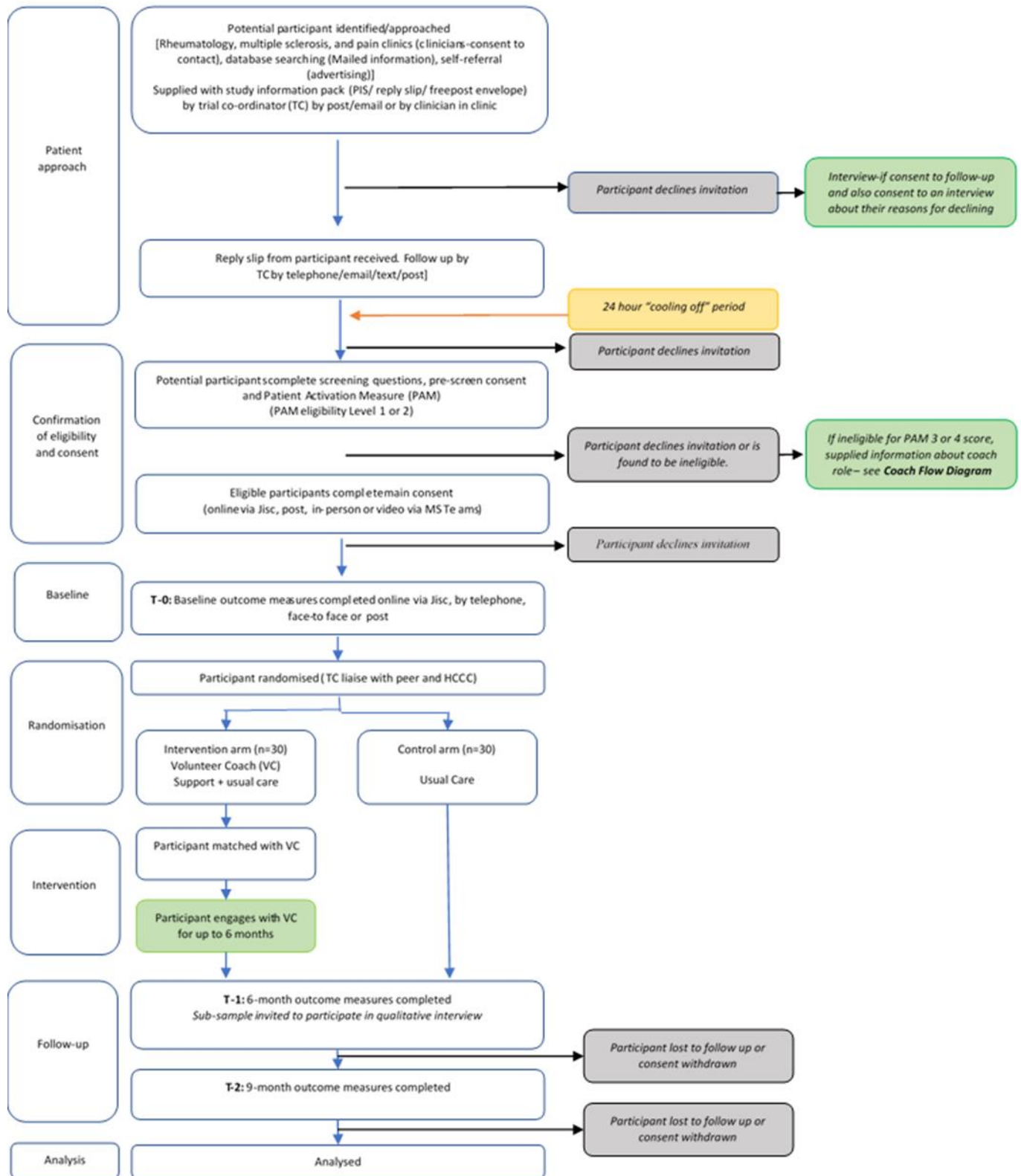


Figure 3: Trial flow diagram- Peer





Information Sheet for Peers:

PEER CONNECT: Coaching Peers with Long Term Conditions

We would like to invite you to take part in a research study being conducted by the University of Plymouth and Torbay and South Devon NHS Foundation Trust. Before you decide whether to take part, it is important for you to understand why the study is being done and what it will involve. This information sheet tells you about the study. Please take time to read it carefully and discuss it with others if you wish. If there is anything that is unclear, or if you would like more information, please ask us. Your participation in this study is entirely voluntary.

Summary

NHS England estimates that 25-40% of patients have poor knowledge of their condition and poor skills and confidence to manage their health and wellbeing (termed here as low activation). People with less confidence and skills to manage their health condition are more likely to have unmet health needs, delay seeking healthcare and need emergency care. Peer coaching is a potential intervention that may help people to develop skills and confidence to manage their health but to date no research studies have been conducted in this group of patients.

Torbay and South Devon NHS Foundation Trust are funding a new volunteer peer coaching service for people with long term conditions and low activation attending outpatient services at Torbay and South Devon NHS Foundation Trust. Volunteer coaches will be trained by the Trust and will be responsible for coaching someone (referred to as a peer) over a six-month period, meeting for short conversations lasting from 15 minutes to up to an hour. It is likely that there will be one session per week for the first two months, followed by fortnightly sessions for two months and then monthly sessions for the final two months, totalling 14 sessions although this will be flexible. Coaching will be provided in a COVID-19 secure environment either on-line, by telephone or face-to-face. This research study is focused on people from rheumatology, chronic pain, and multiple sclerosis clinics.

People who would like to be part of this research as peers will be randomly assigned to one of two groups (using a process similar to tossing a coin). One group will receive the coaching and the other group will access their usual care. At the end of the nine months of being in the study those individuals in the usual care group will be offered the coaching.

1
2 As part of the study, peers (you) may be asked if a researcher can ask you about your experiences of
3 being coached, your relationship with your coach and any impact it may have had on your health and
4 well-being.
5
6

7 **Why have I been chosen?**

8
9
10 You have been chosen to take part because at a recent clinic appointment you may have suggested
11 that you find managing your long-term health condition challenging. Alternatively, you may have seen
12 our advert and have asked to find out more.
13
14
15

16 **Do I have to take part?**

17
18
19 No, you do not have to take part. It is your decision whether to take part or not. If you decide not to
20 take part your usual healthcare will not be affected in any way.
21
22

23 **What will happen if I take part?**

24
25
26 If you decide you would like to take part, we will firstly contact you by phone or email to discuss the
27 research study and ask you to sign a consent form agreeing to us asking you some questions to see if
28 you would be eligible to be coached. This will include completing the Patient Activation Measure (PAM)
29 questionnaire. If you are eligible, you will then be asked to sign another consent form to take part in
30 the main study. You will be given signed copies of the consent forms for your own records. Next, we
31 will ask you to complete some questionnaires about your health and wellbeing. After this we will tell
32 you which group you are in. If you are in the coaching group, we will discuss our "matching" process
33 with you and ask if you have any preferences before allocating you a coach. If you are in the usual care
34 group you will be encouraged to continue to use your healthcare team as needed. After six months and
35 again three months later we will ask you to complete the health and wellbeing questionnaires again. In
36 addition, following the coaching we may ask if we can interview you to discuss your experiences. We
37 will ask you to consent specifically to this interview (discussion) which will be recorded and then
38 transcribed and anonymised.
39
40
41
42
43
44
45
46
47
48

49 **What will happen next?**

50
51
52 If you are interested in the study, please contact us using the information at the end of the sheet or by
53 completing and sending back the reply slip. We will then contact you to discuss the study further.
54
55 If you are not interested in taking part in the study after reading this information sheet but would be
56 happy to share your reasons why, please complete as indicated and return the reply slip.
57
58

Will any expenses be paid?

You will be offered £20.00 for completing the questionnaires at each of the three time points; the beginning, after the six months coaching and three months later. It is likely that interviews will take place on a web-based platform such as zoom and as such no payment is offered. If interviews are in-person, participants will be reimbursed for travel costs in-line with NIHR recommendations.

What are the possible disadvantages and risks of taking part?

It is possible that interpersonal issues may arise between you and your coach. Should this occur both parties will be encouraged to report such issues to the coaching co-ordinator and alternative coaching arrangements will be made if necessary. It is possible that coaches may offer inaccurate advice which could be detrimental to how you manage your condition. To try and ensure this does not happen, coaches will be trained to recognise boundaries to their role and limitations of their own knowledge. Any uncertainties will be addressed through regular supervisory meetings with the coordinator. To ensure the safety of you and your coach, the coach training will include elements of safeguarding, data protection and study reporting procedures. In addition, all coaches will have completed a DBS (Disclosure and Barring Service) check prior to working with you.

What are the possible benefits of taking part?

We cannot guarantee any direct benefit to you taking part in this study. It is hoped however, that taking part in the coaching will enhance your knowledge, skills, and confidence to manage your health more effectively.

How will we use information about you?

We will need to use information from you and your clinical team for this research project. This information will include your name, date of birth, contact details, diagnoses, GP and consultant names and contact details. Some members of the research team will use this information to do the research or to check your records to make sure that the research is being done properly (this may include the authorities governing UK research). Other members of the research team who do not need to know who you are will not be able to see your name or contact details. Your data will have a unique code number instead, so you cannot be identified. We will keep all information about you safe and secure. Your name and contact information will be stored on Torbay and South Devon NHS Trust computers. This will be kept separate from the other information you supply during the project which will be stored anonymously with your unique code on a password protected and encrypted University of Plymouth

1 computer. Once we have finished the study, we will keep some of the data so we can check the results.
2
3 We will write our reports in a way that no-one can work out that you took part in the study. Anonymous
4
5 data collected from this study may be used to inform and support future research by the direct research
6
7 team and by other researchers, including Insignia Health. As this data would be anonymised and
8
9 shared using secure methods of data transfer, it would not be possible to identify you as a study
10
11 participant. At the end of the study all research information held on University of Plymouth computers
12
13 will be returned to the sponsor (Torbay and South Devon NHS Foundation Trust) who will store it for a
14
15 minimum of 5 years. All information will be handled in compliance with the General Data Protection
16
17 Regulations (2018).

18 **What are your choices about how your information is used?**

19
20 You can stop being part of the study at any time, without giving a reason, but we will keep information
21
22 about you that we already have. We need to manage your records in specific ways for the research to
23
24 be reliable. This means that we won't be able to let you see or change the data we hold about you.
25

26 **Where can you find out more about how your information is used?**

27
28 You can find out more about how we use your information at www.hra.nhs.uk/information-about-patients/ or by sending an email to peerconnect@plymouth.ac.uk. The NHS trust data protection
29
30 officer can be contacted by e-mail: dataprotection.tsdf@nhs.net. Telephone number 01803 654868.
31
32
33
34

35 **What will happen to the results of the research study?**

36
37 We will work with people with long term health conditions to ensure that the anonymised findings are
38
39 publicised as widely as possible and, if they are favourable, that a grant to conduct a multi-centre
40
41 randomised controlled trial is submitted to the National Institute of Health Research (NIHR). We will
42
43 publish the findings in scientific articles as well as in magazines that are read by the public and people
44
45 with long term conditions. We will also present the findings at local (Torbay), regional and national
46
47 meetings and at scientific conferences. A lay summary of the study findings will be made available to
48
49 you at the end of the study. We will therefore keep your contact details until the summary is available.
50

51 **Who is organising the research?**

52
53 The study is sponsored by and taking place at Torbay and South Devon NHS Foundation Trust in
54
55 collaboration with a team of researchers from the University of Plymouth. Dr Agne Straukiene
56
57 (consultant neurologist) is the chief investigator for the study. Her contact details are below.
58

Who has funded the research?

The study has been funded by Torbay Medical Research Fund, a local charity.

Who has reviewed the study?

The study has been reviewed by the Health Research Authority's (HRA) NHS Research Ethics Committee (REC), the HRA Approval programme and University of Plymouth REC. It has also received local approval from Torbay and South Devon NHS Foundation Trust.

What if there is a problem?

In the first instance please contact Dr Agne Straukiene using the details at the end of this form. If your concern is not resolved, you can use the normal National Health Service complaints mechanisms. The Patient Advice and Liaison Service (PALS) are there to help. If you have any concerns or complaints about the Ethical conduct of this study, please contact the Research Administrator, Faculty of Health Ethics Committee, John Bull Building, Tamar Science Park, Research Way, Plymouth, Devon, PL68BU, Email: FOHEthics@plymouth.ac.uk.

Patient Advice and Liaison Service

Feedback and Engagement Team

Torbay and South Devon NHS Foundation Trust. Torbay Hospital, Lowes Bridge Torquay TQ2 7AA. Telephone: 01803 655838. Email: tsdft.feedback@nhs.net

Contact for further information

Should you require any further information or have any further questions please contact;

Chief Investigator: Dr Agne Straukiene, MBChB, MMed, MRCP (London)

Consultant Neurologist, Department of Neurology, Torbay and South Devon NHS Foundation Trust, Lowes Bridge, Torquay, TQ2 7AA Secretary: 01803-654827, email: agne.straukiene@nhs.net

Or the trial study team email peerconnect@plymouth.ac.uk

Thank you for reading this information sheet



Information Sheet for Volunteer Coaches

PEER CONNECT: Peer Coaching for Long-Term Conditions

We would like to invite you to take part in a research study being conducted by the University of Plymouth and Torbay and South Devon NHS Foundation Trust. Before you decide whether to take part, it is important for you to understand why the study is being done and what it will involve. This information sheet tells you about the study. Please take time to read it carefully and discuss it with others if you wish. If there is anything that is unclear, or if you would like more information, please ask us. Your participation in this study is entirely voluntary.

Summary

NHS England estimates that 25-40% of patients have poor knowledge of their condition and poor skills and confidence to manage their health and wellbeing (termed here as low activation). People with less confidence and skills to manage their health condition are more likely to have unmet health needs, delay seeking healthcare and need emergency care. Peer coaching is a potential intervention that may help people to develop skills and confidence to manage their health but to date no research studies have been conducted in this group of patients.

Torbay and South Devon NHS Foundation Trust are funding a new volunteer peer coaching service for people with long-term conditions with low activation attending outpatient services. People reporting high levels of knowledge, skills, and confidence to manage their condition (high activation) are being trained to provide the coaching. This research study is focused on people from rheumatology, chronic pain, and multiple sclerosis clinics.

As a volunteer coach you will receive eight group training sessions via an online platform, each lasting 90 minutes (with a break). There will be two sessions a week for four consecutive weeks. Training will total a minimum of 15 hours and will include homework activities, practical sessions, and on-line training modules. Learning will include evidence-based ways to support someone change behaviour to improve their health and well-being, motivational strategies and communication techniques. In addition, you will have opportunities to practise your coaching skills and receive regular supervision through monthly group and/or individual sessions with the coach coordinators. Once you and the team feel you are ready to start coaching you will be matched with someone who would like to be coached (referred to

PEER CONNECT/Participant (coach) Information Sheet/Version 3.0 17 11 2021 IRAS ID: 301946 REC reference 21/LO/0715

1 as a peer). You will then be encouraged to meet together for short, focused conversations lasting from
2 15-60 minutes up to 14 times over a six-month period. These sessions will take part in a COVID-19
3 secure environment either on-line, by telephone or face-to-face if safe to do so. There will be
4 opportunity to coach more than one peer during the study if you would like to do so. Prior to starting
5 the coach training, all potential coaches will need to complete the Trust's mandatory volunteer training
6 and undergo a Disclosure and Barring Service (DBS) check.

7 This is a feasibility study; a small study run to see if our research works in practice and if the peer
8 coaching is acceptable to the people involved. As part of the process we are interviewing a number of
9 people who train to be coaches to find out their experiences of being a coach, their relationship with
10 their peer(s) and any impact coaching may have had on their health and well-being. If you are selected
11 for this part of the study we will ask you to sign a separate consent form. These individual interviews
12 (lasting up to an hour) will be recorded.

13 **Why have I been chosen?**

14 You have been chosen to take part in this research because you report to be managing your condition
15 well and may like to train to be one of the volunteer coaches.

16 **Do I have to take part?**

17 No, you do not have to take part. It is your decision whether to take part or not. If you decide not to
18 take part your usual healthcare will not be affected in any way.

19 **What will happen if I take part?**

20 If you decide you would like to take part we will firstly contact you by phone or email to discuss the
21 research study and ask you to sign a consent form agreeing to us asking you some questions to see if
22 you would be eligible to be a coach. This will include completing the Patient Activation Measure (PAM)
23 questionnaire. If you are eligible you will then be asked to sign another consent form to take part in the
24 main study. You will be given signed copies of the consent forms for your own records. Coaches will
25 then receive volunteer training and peer coaching training from the Trust as detailed above.

26 **What will happen next?**

27 If you are interested in the study please contact us using the information at the end of the sheet or by
28 completing and sending back the reply slip and we will contact you to discuss it further.

Will any expenses be paid?

Being a peer coach is a voluntary role therefore there is no payment. It is likely that interviews will take place on a web-based platform such as Zoom or Microsoft Teams and as such no payment is offered. If interviews are in-person, participants will be reimbursed for travel costs in-line with NIHR recommendations.

What are the other possible disadvantages and risks of taking part?

It is possible that providing coaching or discussing your experiences of coaching may cause you emotional distress. If this does occur we will ensure you have the opportunity to discuss your experiences further with someone from the peer coaching service.

What are the possible benefits of taking part?

We cannot guarantee any direct benefit to you taking part in this study. It is possible that training to be a coach and talking about your experiences of coaching will enhance your own knowledge, skills or confidence for managing your health and you may experience other positive benefits from contributing to research and service development processes.

How will we use information about you?

We will need to use information from you and your clinical team for this research project. This information will include your name, date of birth, contact details, diagnosis, GP and consultant names and contact details. Some members of the research team will use this information to do the research or to check your records to make sure that the research is being done properly (this may include the authorities governing UK research). Other members of the research team who do not need to know who you are will not be able to see your name or contact details. Your data will have a unique code number instead, so you cannot be identified. We will keep all information about you safe and secure. Your name and contact information will be stored on Torbay and South Devon NHS Trust computers. This will be kept separate from the other information you supply during the project which will be stored anonymously with your unique code on a password protected and encrypted University of Plymouth computer. Once we have finished the study, we will keep some of the data so we can check the results. We will write our reports in a way that no-one can work out that you took part in the study. Anonymous data collected from this study may be used to inform and support future research by the direct research team and by other researchers, including Insignia Health. As this data would be anonymised and shared using secure methods of data transfer, it would not be possible to identify you as a study

1 participant. At the end of the study all research information held on University of Plymouth computers
2 will be returned to the sponsor (Torbay and South Devon NHS Foundation Trust) who will store it for a
3 minimum of 5 years. All information will be handled in compliance with the General Data Protection
4 Regulations (2018).
5
6
7

8 **What are your choices about how your information is used?**

9
10
11
12 You can stop being part of the study at any time, without giving a reason, but we will keep information
13 about you that we already have. We need to manage your records in specific ways for the research to
14 be reliable. This means that we won't be able to let you see or change the data we hold about you.
15
16

17 **Where can you find out more about how your information is used?**

18
19
20 You can find out more about how we use your information at [www.hra.nhs.uk/information-about-](http://www.hra.nhs.uk/information-about-patients/)
21 [patients/](http://www.hra.nhs.uk/information-about-patients/) or by sending an email to peerconnect@plymouth.ac.uk. The NHS trust data protection
22 officer can be contacted by e-mail: dataprotection.tsdf@nhs.net. Telephone number 01803 654868.
23
24
25

26 **What will happen to the results of the research study?**

27
28
29 We will work with people with long-term health conditions to ensure that the anonymised findings are
30 publicised as widely as possible and, if they are favourable, that a grant to conduct a multi-centre
31 randomised controlled trial is submitted to the National Institute of Health Research (NIHR). We will
32 publish the findings in scientific articles as well as in magazines that are read by the public and people
33 with long-term conditions. We will also present the findings at local (Torbay), regional and national
34 meetings and at scientific conferences. A lay summary of the study findings will be made available to
35 you at the end of the study. We will therefore keep your contact details until the summary is available.
36
37
38
39
40
41

42 **Who is organising the research?**

43
44
45 The study is sponsored by and taking place at Torbay and South Devon NHS Foundation Trust in
46 collaboration with a team of researchers from the University of Plymouth. Dr Agne Straukiene
47 (consultant neurologist) is the chief investigator for the study. Her contact details are at the end of the
48 sheet.
49
50

51 **Who has funded the research?**

52
53
54 The study has been funded by Torbay Medical Research Fund, a local charity.
55
56

57 **Who has reviewed the study?**

1
2 The study has been reviewed by the Health Research Authority's (HRA) NHS Research Ethics
3 Committee (REC), the HRA Approval programme and University of Plymouth REC. It has also received
4 local approval from Torbay and South Devon NHS Foundation Trust.
5
6

7 **What if there is a problem?**

8
9
10 In the first instance please contact Dr Agne Straukiene using the details at the end of this form. If
11 your concern is not resolved, you can use the normal National Health Service complaints
12 mechanisms. The Patient Advice and Liaison Service PALS are there to help. If you have any
13 concerns or complaints about the Ethical conduct of this study, please contact the Research
14 Administrator, Faculty of Health Ethics Committee, John Bull Building, Tamar Science Park,
15 Research Way, Plymouth, Devon, PL6 8BU, Email: FOHEthics@plymouth.ac.uk.
16
17
18
19
20
21
22

23 **Patient Advice and Liaison Service**

24
25 Feedback and Engagement Team

26
27
28 Torbay and South Devon NHS Foundation Trust. Torbay Hospital, Lowes Bridge
29
30 Torquay TQ2 7AA. Telephone: 01803 655838. Email: tsdft.feedback@nhs.net
31
32
33
34
35

36 **Contact for further information**

37
38 Should you require any further information or have any further questions please contact;

39
40
41
42
43 Chief Investigator: Dr Agne Straukiene, MBChB, MMed, MRCP (London)

44
45
46 Consultant Neurologist, Department of Neurology, Torbay and South Devon NHS Foundation Trust,
47 Lowes Bridge, Torquay, TQ2 7AA
48
49

50 Secretary: 01803-654827, email: agne.straukiene@nhs.net

51
52
53 Or the trial study team email peerconnect@plymouth.ac.uk
54
55
56
57

58 Thank you for reading this information sheet



SPIRIT 2013 Checklist: Recommended items to address in a clinical trial protocol and related documents*

Section/item	Item No	Description
Administrative information		
Title	1	Descriptive title identifying the study design, population, interventions, and, if applicable, trial acronym Page 1
Trial registration	2a	Trial identifier and registry name. If not yet registered, name of intended registry Page 23
	2b	All items from the World Health Organization Trial Registration Data Set N/A
Protocol version	3	Date and version identifier Page 23
Funding	4	Sources and types of financial, material, and other support Page 24
Roles and responsibilities	5a	Names, affiliations, and roles of protocol contributors Pages 1 and 24
	5b	Name and contact information for the trial sponsor Page 24
	5c	Role of study sponsor and funders, if any, in study design; collection, management, analysis, and interpretation of data; writing of the report; and the decision to submit the report for publication, including whether they will have ultimate authority over any of these activities Page 24
	5d	Composition, roles, and responsibilities of the coordinating centre, steering committee, endpoint adjudication committee, data management team, and other individuals or groups overseeing the trial, if applicable (see Item 21 for data monitoring committee) Page 23
Introduction		
Background and rationale	6a	Description of research question and justification for undertaking the trial, including summary of relevant studies (published and unpublished) examining benefits and harms for each intervention Page 4-6
	6b	Explanation for choice of comparators page 10
Objectives	7	Specific objectives or hypotheses page 6

1
2 Trial design 8 Description of trial design including type of trial (eg, parallel group,
3 crossover, factorial, single group), allocation ratio, and framework (eg,
4 superiority, equivalence, noninferiority, exploratory) [page 7](#)
5
6
7

8 **Methods: Participants, interventions, and outcomes**
9

10 Study setting 9 Description of study settings (eg, community clinic, academic hospital)
11 and list of countries where data will be collected. Reference to where
12 list of study sites can be obtained [page 8](#)
13

14 Eligibility criteria 10 Inclusion and exclusion criteria for participants. If applicable, eligibility
15 criteria for study centres and individuals who will perform the
16 interventions (eg, surgeons, psychotherapists) [page 8](#)
17
18

19 Interventions 11a Interventions for each group with sufficient detail to allow replication,
20 including how and when they will be administered [pages 10-13](#)
21

22 11b Criteria for discontinuing or modifying allocated interventions for a
23 given trial participant (eg, drug dose change in response to harms,
24 participant request, or improving/worsening disease) [pages 10-13](#)
25

26 11c Strategies to improve adherence to intervention protocols, and any
27 procedures for monitoring adherence (eg, drug tablet return,
28 laboratory tests) [pages 10-13](#)
29
30

31 11d Relevant concomitant care and interventions that are permitted or
32 prohibited during the trial [pages 10-13](#)
33

34 Outcomes 12 Primary, secondary, and other outcomes, including the specific
35 measurement variable (eg, systolic blood pressure), analysis metric
36 (eg, change from baseline, final value, time to event), method of
37 aggregation (eg, median, proportion), and time point for each
38 outcome. Explanation of the clinical relevance of chosen efficacy and
39 harm outcomes is strongly recommended [pages 13-18](#)
40
41

42 Participant 13 Time schedule of enrolment, interventions (including any run-ins and
43 timeline washouts), assessments, and visits for participants. A schematic
44 diagram is highly recommended (see Figure) [Page 9](#)
45

46 Sample size 14 Estimated number of participants needed to achieve study objectives
47 and how it was determined, including clinical and statistical
48 assumptions supporting any sample size calculations [page 19](#)
49
50

51 Recruitment 15 Strategies for achieving adequate participant enrolment to reach
52 target sample size [pages 8-9](#)
53

54 **Methods: Assignment of interventions (for controlled trials)**
55

56 Allocation:
57
58
59
60

1			
2	Sequence	16a	Method of generating the allocation sequence (eg, computer-
3	generation		generated random numbers), and list of any factors for stratification.
4			To reduce predictability of a random sequence, details of any planned
5			restriction (eg, blocking) should be provided in a separate document
6			that is unavailable to those who enrol participants or assign
7			interventions page 9
8			
9			
10	Allocation	16b	Mechanism of implementing the allocation sequence (eg, central
11	concealment		telephone; sequentially numbered, opaque, sealed envelopes),
12	mechanism		describing any steps to conceal the sequence until interventions are
13			assigned page 10
14			
15	Implementation	16c	Who will generate the allocation sequence, who will enrol participants,
16			and who will assign participants to interventions page 9 and figure 3
17			
18	Blinding	17a	Who will be blinded after assignment to interventions (eg, trial
19	(masking)		participants, care providers, outcome assessors, data analysts), and
20			how page 10
21			
22			
23		17b	If blinded, circumstances under which unblinding is permissible, and
24			procedure for revealing a participant's allocated intervention during
25			the trial N/A
26			
27			

Methods: Data collection, management, and analysis

28			
29			
30	Data collection	18a	Plans for assessment and collection of outcome, baseline, and other
31	methods		trial data, including any related processes to promote data quality (eg,
32			duplicate measurements, training of assessors) and a description of
33			study instruments (eg, questionnaires, laboratory tests) along with
34			their reliability and validity, if known. Reference to where data
35			collection forms can be found, if not in the protocol pages 14-18
36			
37			
38		18b	Plans to promote participant retention and complete follow-up,
39			including list of any outcome data to be collected for participants who
40			discontinue or deviate from intervention protocols pages 14,15,17
41			
42	Data	19	Plans for data entry, coding, security, and storage, including any
43	management		related processes to promote data quality (eg, double data entry;
44			range checks for data values). Reference to where details of data
45			management procedures can be found, if not in the protocol page 22
46			
47			
48	Statistical	20a	Statistical methods for analysing primary and secondary outcomes.
49	methods		Reference to where other details of the statistical analysis plan can be
50			found, if not in the protocol page 19
51			
52			
53		20b	Methods for any additional analyses (eg, subgroup and adjusted
54			analyses) N/A
55			
56		20c	Definition of analysis population relating to protocol non-adherence
57			(eg, as randomised analysis), and any statistical methods to handle
58			missing data (eg, multiple imputation) N/A
59			
60			

Methods: Monitoring

Data monitoring	21a	Composition of data monitoring committee (DMC); summary of its role and reporting structure; statement of whether it is independent from the sponsor and competing interests; and reference to where further details about its charter can be found, if not in the protocol. Alternatively, an explanation of why a DMC is not needed page 22
	21b	Description of any interim analyses and stopping guidelines, including who will have access to these interim results and make the final decision to terminate the trial N/A
Harms	22	Plans for collecting, assessing, reporting, and managing solicited and spontaneously reported adverse events and other unintended effects of trial interventions or trial conduct page 21
Auditing	23	Frequency and procedures for auditing trial conduct, if any, and whether the process will be independent from investigators and the sponsor pages 22-23

Ethics and dissemination

Research ethics approval	24	Plans for seeking research ethics committee/institutional review board (REC/IRB) approval page 1
Protocol amendments	25	Plans for communicating important protocol modifications (eg, changes to eligibility criteria, outcomes, analyses) to relevant parties (eg, investigators, REC/IRBs, trial participants, trial registries, journals, regulators)
Consent or assent	26a	Who will obtain informed consent or assent from potential trial participants or authorised surrogates, and how (see Item 32) Page 9
	26b	Additional consent provisions for collection and use of participant data and biological specimens in ancillary studies, if applicable N/A
Confidentiality	27	How personal information about potential and enrolled participants will be collected, shared, and maintained in order to protect confidentiality before, during, and after the trial page 22
Declaration of interests	28	Financial and other competing interests for principal investigators for the overall trial and each study site page 25
Access to data	29	Statement of who will have access to the final trial dataset, and disclosure of contractual agreements that limit such access for investigators page 22
Ancillary and post-trial care	30	Provisions, if any, for ancillary and post-trial care, and for compensation to those who suffer harm from trial participation page 23

- 1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
- | | | |
|-------------------------|-----|---|
| Dissemination
policy | 31a | Plans for investigators and sponsor to communicate trial results to participants, healthcare professionals, the public, and other relevant groups (eg, via publication, reporting in results databases, or other data sharing arrangements), including any publication restrictions
page 23 |
| | 31b | Authorship eligibility guidelines and any intended use of professional writers N/A |
| | 31c | Plans, if any, for granting public access to the full protocol, participant-level dataset, and statistical code N/A |

16 Appendices

- 17
18
19
20
21
22
23
24
- | | | |
|-------------------------------|----|--|
| Informed consent
materials | 32 | Model consent form and other related documentation given to participants and authorised surrogates |
| Biological
specimens | 33 | Plans for collection, laboratory evaluation, and storage of biological specimens for genetic or molecular analysis in the current trial and for future use in ancillary studies, if applicable |

25 *It is strongly recommended that this checklist be read in conjunction with the SPIRIT 2013
26 Explanation & Elaboration for important clarification on the items. Amendments to the
27 protocol should be tracked and dated. The SPIRIT checklist is copyrighted by the SPIRIT
28 Group under the Creative Commons "[Attribution-NonCommercial-NoDerivs 3.0 Unported](https://creativecommons.org/licenses/by-nc-nd/3.0/)"
29 license.
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

BMJ Open

Protocol for a pragmatic feasibility randomised controlled trial of peer coaching for adults with long term conditions: PEER CONNECT

Journal:	<i>BMJ Open</i>
Manuscript ID	bmjopen-2021-059966.R1
Article Type:	Protocol
Date Submitted by the Author:	13-Jul-2022
Complete List of Authors:	Dennett, Rachel; Torbay and South Devon NHS Foundation Trust; University of Plymouth Thompson, T; University of Plymouth, Peninsula Medical School Faculty of Health Clyne, Wendy; University of Plymouth Straukiene, Agne; Torbay and South Devon NHS Foundation Trust Davies-Cox, Helen; Torbay and South Devon NHS Foundation Trust Hosking, Joanne; University of Plymouth Centre for Mathematical Sciences Bones, Krystina; Torbay and South Devon NHS Foundation Trust Weight, Olivia; Torbay and South Devon NHS Foundation Trust Elston, Julian; Torbay and South Devon NHS Foundation Trust; University of Plymouth
Primary Subject Heading:	Patient-centred medicine
Secondary Subject Heading:	Neurology, Rheumatology
Keywords:	Protocols & guidelines < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, Quality in health care < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, Neurology < INTERNAL MEDICINE, Rheumatology < INTERNAL MEDICINE

SCHOLARONE™
Manuscripts

1
2
3 1 Title: Protocol for a pragmatic feasibility randomised controlled trial of peer coaching for
4
5
6 2 adults with long term conditions: PEER CONNECT
7
8

9 3

10
11
12 4 Rachel Dennett^{1,2} 0000-0003-0400-0502
13

14
15 5 Tom Thompson² 0000-0002-6366-9743
16

17
18 6 Wendy Clyne ^{2,3} 0000-0003-1523-700
19

20
21 7 Agne Straukiene ¹
22

23
24 8 Helen Davies-Cox¹
25

26
27 9 Joanne Hosking ²
28

29
30 10 Krystina Bones ¹
31

32
33 11 Olivia Weight ¹
34

35
36 12 Julian Elston^{1,2} 0000-0003-1378-5030
37

38
39
40 13

41
42
43 14 ¹Torbay and South Devon NHS Foundation Trust, Torbay, UK
44

45
46 15 ²Faculty of Health, University of Plymouth, Plymouth, UK
47

48
49 16 ³NIHR Research Design Service (RDS) South West, UK
50

51
52 17
53

54
55 18 Corresponding author Rachel Dennett rachel.dennett@plymouth.ac.uk
56

57
58 19
59
60

1
2
3 20 **ABSTRACT**
4
5

6 21 **Introduction**
7
8

9 22 Patients with low levels of knowledge, skills, and confidence to manage their health and
10
11 23 wellbeing (activation) are more likely to have unmet health needs, delay seeking healthcare,
12
13 24 and need emergency care. NHS England estimates that this may be applicable to 25-40% of
14
15 25 patients with long-term health conditions. Volunteer peer coaching may support people to
16
17 26 increase their level of activation. This form of intervention may be particularly effective for
18
19 27 people with low levels of activation.
20
21
22
23

24 28 **Methods and analysis**
25
26

27 29 This single site, two-arm randomised controlled trial has been designed to assess the
28
29 30 feasibility of conducting a definitive trial of volunteer peer health and wellbeing coaching for
30
31 31 people with long-term health conditions (multiple sclerosis, rheumatoid arthritis or chronic
32
33 32 pain) and low activation. Feasibility outcomes include recruitment and retention rates, and
34
35 33 intervention adherence. We will measure patient activation, mental health and wellbeing as
36
37 34 potential outcomes for a definitive trial. These outcomes will be summarised descriptively
38
39 35 for each time point by allocated group and help to inform sample size calculation for the
40
41 36 definitive trial. Criteria for progression to a full trial will be used.
42
43
44
45
46
47

48 37 **Ethics and dissemination**
49
50

51 38 Ethical approval has been granted by the London - Surrey Research Ethics Committee,
52
53 39 reference 21/LO/0715. Results from this feasibility trial will be shared directly with
54
55 40 participants, presented at local, regional, and national conferences and published in an open
56
57 41 access journal.
58
59
60

42

43 Strengths and limitations of this trial

- 44 • It specifically targets patients with low levels of patient activation
- 45 • It utilises a novel, co-designed, volunteer peer coaching intervention for out-patients
46 with long-term conditions based on an evidence-based and manualised training
47 programme delivered online
- 48 • The research team includes academics, clinical service members and public
49 contributors
- 50 • As a single site study the transferability of the trial's findings to other sites may be
51 limited

52

53

54

55

56

57

58

59

60

61

62

63 INTRODUCTION

64 NHS England estimates that 25-40% of patients in England have low patient activation,
65 defined as poor knowledge, skills, and confidence to manage health and wellbeing (Level 1
66 or 2 on the Patient Activation Measure (PAM)).¹ These patients are more likely to have
67 unmet health needs, delay seeking healthcare, and need emergency care. Activation level is
68 a modifiable factor, and it is likely that people with low activation have most to gain from an
69 intervention designed to increase patient activation levels.² Supporting self-management in
70 people with a health condition is one of six key components of the National Health Service
71 (NHS) Personalised Care Model (PCM) to address low activation.³ The PCM focuses on an
72 individual's strengths and assets alongside working towards improvements in health
73 conditions based on a 'what matters to me' approach.

74 One emerging approach from the literature to support self-management is health and
75 wellbeing coaching.⁴ Nationally, programmes have been developed primarily to support
76 patients with lifestyle changes.⁵ These recommend health professionals deliver coaching
77 alongside their clinical work. However, national roll out and adoption of these programmes
78 has been slow, which may be in part due to increasing demand on services and lack of
79 resources due to stagnating budgets.⁶ An alternative approach to staff delivery of coaching
80 services is to involve patients with lived experience as coaches (peer coaches) especially if
81 they are highly activated (PAM Level 3 and 4). There is an expanding body of research
82 exploring the effectiveness of peer coaching provided via a range of delivery modes; in-
83 person^{7, 8}; telephone^{9, 10} and digital.¹¹ Recent randomised controlled trials of peer coaching
84 have included people with diabetes^{9, 12, 13} and chronic pain.^{8, 14, 15} These studies have
85 demonstrated improvements in perceived physical activity (PA)⁹, quality of life (QoL)^{9, 13},

1
2
3 86 pain⁹ and depression.^{12, 13} In contrast, Matthias and colleagues reported no statistically
4
5 87 significant between-group differences at six (estimate(SE) 0.01 (0.23), CI(-0.45,0.46)) or
6
7
8 88 nine-months (estimate(SE) 0.07 (0.24), CI(-0.40,0.54)) following their effectiveness trial of a
9
10 89 peer coach-delivered pain self-management intervention versus controls who received a
11
12
13 90 class on pain and pain self-management.⁸ However, several trials have reported barriers to
14
15 91 implementing this kind of intervention which guides towards methods to minimise or
16
17
18 92 overcome potential barriers.

19
20
21 93 A number of studies have highlighted potential challenges of peer coaching such as coach
22
23 94 wellbeing,¹⁴ low intervention adherence and high drop-out rates.^{8, 9, 13} A recent feasibility
24
25 95 RCT of peer mentorship for people with osteoarthritis in the UK reports a mixed picture with
26
27
28 96 challenges in matching coaches to peers and difficulties with coach retention alongside
29
30
31 97 positive reports of coach enjoyment and satisfaction.^{7, 16} We have not located any studies
32
33 98 of peer coaching that have targeted peer coaching interventions at patients reporting low
34
35 99 levels of activation. People with low levels of activation stand to benefit most from an
36
37
38 100 intervention designed to improve confidence, problem solving and ability to manage their
39
40
41 101 health care and wellbeing.² This may in turn impact use of health and social care resources,
42
43 102 and could feasibly be delivered by peers (others with long term conditions) with high levels
44
45 103 of activation to negate the issues of resource within the NHS.

46
47
48 104 This paper describes the trial protocol for the PEER CONNECT study, a two-arm randomised
49
50
51 105 controlled feasibility trial of peer coaching for people receiving out-patient care for one of
52
53 106 three long-term health conditions; multiple sclerosis, rheumatoid arthritis or chronic pain.
54
55
56 107 The peer coaching service will only be offered to people with low levels of patient
57
58 108 activation. It provides up to 14 coaching sessions delivered over six months which decrease
59
60

1
2
3 109 in frequency over time. Volunteer peer coaches (confirmed to have high levels of activation)
4
5
6 110 will attend a comprehensive training programme that follows a manualised coaching
7
8 111 approach and includes independent and group learning sessions delivered online. In
9
10 112 addition, they will receive regular individual and group supervision. The logic model for the
11
12
13 113 intervention is illustrated in Figure 1.

14
15
16 114 Figure 1 here

17 18 19 115 **Objectives**

20
21
22 116 Our research question is:

23
24
25 117 Is it feasible to undertake a future definitive multi-centre RCT to determine the
26
27
28 118 effectiveness of a targeted peer coaching intervention on the health and wellbeing of
29
30 119 people with long-term health conditions and low activation attending outpatient services?

31
32
33 120 Our trial feasibility objectives are:

- 34
35
36 121 1. Are we able to identify, recruit, retain and follow-up eligible volunteer coaches and
37
38 122 peers?
- 39
40
41 123 2. What is a sustainable number of peers per volunteer coach?
- 42
43
44 124 3. Are trial procedures acceptable to participants (peers and volunteer coaches)?
- 45
46
47 125 4. To estimate parameters needed to inform future sample size calculation
- 48
49
50 126 5. Are trial outcome measures acceptable to participants (peers)?
- 51
52
53 127 6. Does the trial demonstrate evidence to suggest that the coaching holds promise as
54
55
56 128 an effective intervention?
- 57
58
59
60 129

130 **Definitions**

131 Within this paper the following key definitions are used:

- 132 • Peers: Participants eligible to receive coaching
- 133 • Volunteer peer coaches: Participants eligible to train to deliver coaching to peers

134

135 **METHODS AND ANALYSIS**

136 **Study design**

137 This research is a single site, two-arm, pragmatic randomised controlled feasibility trial.
138 Eligible peers will be randomised 1:1 to either the intervention arm which includes (up to)
139 14 sessions of peer coaching over six months and their usual care, or the control arm who
140 receive usual care only. Embedded within this feasibility study is a qualitative component
141 that will include individual interviews with volunteer coaches and peers, clinic and peer
142 coaching staff, and people who decline to take part in the interventional aspect of the study.
143 All aspects of the trial protocol have been approved by the London - Surrey Research Ethics
144 Committee, reference 21/LO/0715.

145

146 **Participants**

147 **Eligibility criteria (peers and coaches)**

148 Eligible participants will:

- 149 • Be aged 18 years or older (peers and volunteer coaches)

- 1
2
3 150 • Attend a rheumatology, pain or multiple sclerosis out-patient clinic (peers and
4
5
6 151 volunteer coaches)
7
8 152 • Score PAM Level 1 or 2 (peers), PAM 3 or 4 (volunteer coaches)
9
10
11 153 • Be willing and able to engage in the six-month intervention (peers and volunteer
12
13 154 coaches)
14
15
16 155 • Be willing and able to commit to undertaking assessments at baseline, six and nine
17
18 156 months (peers).
19
20
21 157 • Have capacity to provide informed consent (peers and volunteer coaches)
22
23 158 • Have sufficient fluency in English to be able to engage with the intervention and trial
24
25 159 material (peers and volunteer coaches)
26
27
28 160 • Not be participating in any other observational or interventional research trial
29
30
31 161

32 33 162 **Recruitment**

34
35
36 163 This trial aims to recruit 15 volunteer coaches and 60 peers to take part in the intervention.
37
38
39 164 This feasibility sample size was selected by a team of experienced researchers and clinicians
40
41 165 and was based upon predicted recruitment within time frame and resource, parameters of
42
43 166 the population size, modelling of coach to peer matching and is in line with
44
45
46 167 recommendations.¹⁷ The sample size of 60 peers will allow overall retention rate to be
47
48
49 168 estimated to within a 95% confidence interval of approximately $\pm 13\%$. Coaches, peers, clinic
50
51 169 and service delivery staff, and people who decline to take part in the study will also be
52
53
54 170 invited to take part in the qualitative component of the research.
55
56

57 171

58 59 60 172 **Recruitment of volunteer coaches and peers**

1
2
3 173 Potential volunteer coaches and peers will be recruited from the multiple sclerosis,
4
5
6 174 rheumatology and chronic pain out-patient clinics at a single NHS Trust (Torbay and South
7
8 175 Devon NHS Foundation Trust (TSDFT)). In addition, the relevant study information will be
9
10 176 sent to patients with a recorded PAM score on the clinical team's database. Patients known
11
12
13 177 to multiple sclerosis, rheumatology and chronic pain clinics may also respond directly to
14
15 178 adverts placed at a range of healthcare and community venues. Recruitment is planned to
16
17
18 179 commence in November 2021 and continue for six months. Figures 2 and 3 indicate the
19
20 180 research journey of eligible participants. Following initial telephone screening potential
21
22
23 181 participants will provide consent to complete the PAM to confirm eligibility as a volunteer
24
25 182 coach or peer.
26
27
28
29
30

183

31 184 Figures 2 and 3 here
32
33

34 185 **Consent**

36
37 186 Participants will be offered a choice of four options for providing informed consent:
38
39

40
41 187 1. In-person signed form with scanned copy stored electronically on a TSDFT secure drive.
42

43
44 188 2. Video-recorded using MS Teams and stored securely as above.
45

46
47 189 3. Completed via Jisc (<https://www.onlinesurveys.ac.uk/>) with exported record stored
48
49 190 securely as above.
50

51
52 191 4. Postal signed consent form, scanned on receipt and stored as above.
53
54

192

58 193 **Randomisation**

1
2
3 194 Following baseline data collection, eligible peers will be randomised to either the
4
5
6 195 intervention or control arm on a 1:1 ratio using random permuted blocks, stratified by out-
7
8 196 patient clinic. The randomisation list will be generated and stored by a statistician not
9
10
11 197 involved in the trial, and allocation will be accessed through a web-portal hosted by the
12
13 198 University of Plymouth Peninsula Clinical Trials Unit.
14
15

16 199

20 200 **Blinding**

21
22 201 Blinding of participants will not be possible due to the nature of the intervention. Due to
23
24 202 restricted capacity not all members of the research team will be blinded. The trial
25
26 203 statistician will be blinded to allocation.
27
28
29

30 204

33 205 **Intervention and setting**

36 206 **Setting**

37
38
39 207 All participants will be recruited from TSDFT, a district general hospital in the South West of
40
41 208 the United Kingdom (UK).
42
43
44

45 209 **Control arm**

46
47
48 210 Usual care is defined as access to services and treatment provided as routine care, examples
49
50 211 of which include attending out-patient clinic appointments, referral to therapies, and
51
52 212 signposting to community or support services as required.
53
54
55

56 213 **Intervention arm**

57
58
59
60

1
2
3 214 The intervention includes up to 14 sessions with a volunteer coach delivered over six
4
5 215 months. Sessions are expected to last from 15-60 minutes and will be provided in a COVID-
6
7
8 216 19 secure environment either on-line, by telephone or face-to-face. A flexible framework for
9
10 217 the coaching will be used to facilitate a personalised approach with a suggested format of
11
12
13 218 one session per week for the first two months, followed by fortnightly sessions for two
14
15 219 months and monthly sessions thereafter. Peers will be supported to produce a coaching
16
17 220 plan with associated goals at the end of each session. A brief summary of the content,
18
19 221 duration, and mode of coaching delivery will also be recorded. Missed planned sessions
20
21 222 (non-attendance) will be recorded by the volunteer coach. In addition, peers will be asked to
22
23 223 report any adverse events (AEs) they have experienced and rate their experience of being
24
25 224 coached.
26
27
28
29
30
31
32
33

34 226 **Volunteer coach training**

35
36
37 227 Volunteer peer coach training will include eight structured 90-minute live sessions
38
39 228 supported by interactive online learning tasks (homework). Training will be delivered by the
40
41 229 TSDFT volunteer peer health and wellbeing coaching service, the 'Health Connect Coaching
42
43 230 Programme'. Sessions will draw on evidence-based behavioural change methods¹⁸,
44
45 231 motivational strategies¹⁹, and communication techniques. The content will also draw on
46
47 232 evidence-based materials to improve health and wellbeing such as Making Every Contact
48
49 233 Count (MECC)²⁰, Five Ways to Well Being²¹, and NHS health coaching programmes.⁵ The
50
51 234 intervention will emphasise:²²
52
53
54

- 57 235 • A patient-centred approach where patients determine their goals
- 58
59 236 • Active learning or self-discovery

- 1
2
3 237 • A problem-solving focus to work towards goals
4
5
6 238 • Regular peer feedback on implementing the coaching plan
7
8
9 239 Training will initially be completed virtually using Microsoft Teams, with a view to offer face-
10
11 240 to-face training in the future should COVID-19 restrictions allow. Each 90-minute session will
12
13 241 include a break. There will be two training sessions each week for four consecutive weeks.
14
15
16 242 Training will total a minimum of 15 hours for each volunteer coach (12 hours of live sessions
17
18 243 and around 3 hours homework) and will include practical sessions and on-line modules.
19
20
21
22 244 The training content covers:
23
24
25 245 • Background to personalised care and why it matters
26
27
28 246 • How this volunteer role has been developed and why
29
30
31 247 • Stages of behaviour change and how this relates to managing long-term condition(s)
32
33
34 248 • Exploring beliefs and boundaries
35
36
37 249 • Insight and awareness of the drama triangle and what impact this can have
38
39
40 250 • Exploring each of the core coaching skills (open questions, empathy, value of silence,
41
42 251 reflection, recognising change)
43
44
45
46 252 • Using confidence and/or importance scaling and practising how to embed use of
47
48 253 these in coaching conversations
49
50
51 254 • Skills practice throughout using pair and group activities
52
53
54 255 • Understanding the flow of coaching conversations
55
56
57 256 • How to use appropriate resource tools to support conversations
58
59
60

- 1
2
3 257 • Using Microsoft Teams and Patient Knows Best platforms
4
5
6 258 • Awareness of appropriate signposting and increasing confidence in how to signpost
7
8
9 259 well
10
11
12 260 • Goal setting and goal follow up
13
14
15 261

16
17
18 262 By the end of the course, volunteer coaches will be confident and competent to:

- 19
20
21 263 1. Understand their role, boundaries and how to seek help and guidance
22
23 264 2. Use technology to contact and engage with peers
24
25
26 265 3. Use health coaching conversational skills to work with peers on what matters to
27
28 266 them, to support motivation for positive behaviour change to improve their
29
30 267 health, wellbeing, and self-management of their condition
31
32
33 268 4. Be aware of local services and have the confidence to signpost to appropriate
34
35 269 services
36
37
38 270 5. Know when and how to use the Health Connect Coaching Programme
39
40 271 coordinators to support them in their role, and their peer on their journey.
41
42

43 272

44
45
46 273 Training will also include learning to use a range of behaviour change techniques which may
47
48 274 include supporting peers to self-monitor, develop healthy habits, focus on past successes
49
50 275 and set goals. Following successful completion of all training sessions and competence
51
52 276 assessment by the coach trainers, coaches will be carefully matched to a peer. Matching will
53
54 277 completed by the Programme Coordinators and will be based on criteria including: having a
55
56 278 shared or similar health condition or symptoms, social deprivation (based on postcode), and
57
58
59
60

1
2
3 279 other factors that peers feel are important to them which will be explored in an initial
4
5
6 280 telephone conversation with the Coordinator. Volunteer coaches will be supervised and
7
8 281 supported through monthly peer coaching group meetings and one-to-one supervision
9
10 282 sessions with the coach coordinators as required. All coaches will complete a Disclosure and
11
12
13 283 Barring Service (DBS) check prior to working with peers.
14
15

16 284

19 285 **Outcomes**

22 286 **Primary Outcomes**

25 287 The primary outcomes of this trial are feasibility outcomes.

28 288 **Recruitment**

31 289 Recruitment of peers and volunteer coaches will be calculated as follows:

34 290 Peer recruitment (%) = number of peers recruited/ potentially eligible cohort (indicated by
35
36
37 291 the number of information packs distributed) x100

39
40 292 Coach recruitment (%) = number of volunteer coaches recruited/ potentially eligible cohort
41
42
43 293 (indicated by the number of information packs sent or handed out) x100.
44

46 294 **Retention and follow-up**

48
49 295 Follow-up will be online. Peer retention and follow-up will be calculated as the proportion of
50
51 296 peers completing all questionnaires at six months (post-intervention) and nine months
52
53
54 297 (follow-up).
55
56
57
58
59
60

1
2
3 298 Coach retention will be calculated as the proportion of coaches who complete the training
4
5 299 programme and coach at least one peer (defined as providing at least two coaching
6
7
8 300 sessions).

9
10
11 301 **Adherence**

12
13
14 302 Adherence will be calculated as the number of sessions attended out of the total planned
15
16 303 and mutually agreed coaching sessions (as long as this is at least two sessions).

17
18
19
20 304 **Qualitative outcomes**

21
22
23 305 We will report themes relevant to the experience of participating in the trial from peers,
24
25 306 volunteer coaches and service provider staff, including feasibility of progressing to a full-
26
27 307 scale trial. These will include experience of: referral and recruitment to the trial,
28
29 308 randomisation, questionnaire completion, interview participation, and burden and reward
30
31 309 for participation in the trial. In addition, reasons for not wanting to take part will be collated
32
33 310 and reported where such information is provided on reply slips and/or in decliner
34
35 311 interviews.

36
37
38
39
40
41 312

42
43
44 313 **Secondary Outcomes**

45
46 314 Peers will complete a socio-demographic and health questionnaire (including items such as
47
48 315 diagnosis, time since diagnosis, co-morbidity, place of residence, level of mobility and
49
50 316 occupation) at baseline. The following health, wellbeing and resource use outcomes will be
51
52 317 completed at baseline, post-intervention (six months) and follow-up (nine months) time
53
54 318 points:

1
2
3 319 **Patient Activation Measure (PAM®):** This is a validated, 13-item licensed tool that has been
4
5
6 320 extensively tested in many studies.¹ It measures the spectrum of knowledge, skills and
7
8 321 confidence for managing health and healthcare.

9
10
11 322 **Warwick Edinburgh Mental Wellbeing Scale (WEMWBS):** This validated scale assesses
12
13 323 mental wellbeing within the adult population using 14 questions.²³ The scale measures
14
15 324 positive mental wellbeing in terms of both feeling good (hedonia) and functioning well
16
17
18 325 (eudaimonia).

19
20
21 326 **ICECAP-A:** The ICECAP-A is a measure of capability in the adult population that can be used
22
23 327 for economic evaluation.²⁴ It includes five items one for each domain: stability, attachment,
24
25 328 autonomy, achievement and enjoyment. Each item includes four possible responses. A tariff
26
27 329 value for an overall state is calculated using an ICECAP algorithm and is used to calculate
28
29 330 well-being adjusted life-years.

30
31
32
33
34 331 **Health Confidence Score (HCS):** The health confidence score is a short, generic, person-
35
36 332 reported measure of people's perceived confidence in managing aspects of their own health
37
38 333 and care. It has four items covering health knowledge, capability to self-manage, access to
39
40 334 help and shared decisions.²⁵

41
42
43
44 335 **Long-Term Conditions Questionnaire (LTCQ):** This 20-item questionnaire assesses outcomes
45
46 336 in patients with either single or multiple LTCs (physical and/or mental health condition(s)) in
47
48 337 health and social care contexts.²⁶ It measures across three broad concepts: impact of LTCs,
49
50 338 experience of services and support, and self-care.

51
52
53
54
55 339 **Resource use questionnaire:** Details of health service utilisation including health, social and
56
57 340 broader care provision and support (for example outpatient, A&E and GP visits, community
58
59
60

1
2
3 341 care worker visits, voluntary sector support, and informal care) will be captured using a
4
5
6 342 questionnaire developed by members of the research team for use in other trials.
7

8
9 343 **Session Rating Scale 3.0 (SRS).**²⁷ This is a four-item, client-completed measure of session
10
11 344 experience.
12

13 14 345 **Disease specific symptom measures**

15
16
17 346 Participants will additionally be asked to complete one disease specific questionnaire. This
18
19 347 will be selected based upon their clinical diagnosis from the five options below.
20
21

22
23 348 **Brief Pain Inventory (BPI):** The BPI includes 9 items and was developed to assess the
24
25 349 severity of pain and the impact of pain on functioning.²⁸
26
27

28
29 350 **Multiple Sclerosis Impact Scale (MSIS-29v2):** This is a 29-item condition specific measure of
30
31 351 health-related quality of life, devised specifically for people with multiple sclerosis.²⁹
32
33

34 352 **The EULAR Psoriatic Arthritis Impact of Disease: PsAID9 for clinical trials (PsAID9):** The 9-
35
36 353 item PsAID is a questionnaire validated to assess the impact of Psoriatic Arthritis on
37
38 354 patients' lives.³⁰
39
40
41

42 355 **The Bath AS Disease Activity Index (BASDAI):** This 6-item questionnaire assesses the impact
43
44 356 of the five major symptoms of Ankylosing Spondylitis.³¹
45
46
47

48 357 **Rheumatoid Arthritis Impact of Disease (RAID) questionnaire:** The rheumatoid arthritis
49
50 358 impact of disease (RAID) questionnaire comprises seven domains of disease impact.³²
51
52

53 359 **Qualitative secondary outcomes**

54
55
56 360 We will gather the views of peers and coaches about the volunteer coach training, matching
57
58 361 process, intervention, coach-peer relationship, perceived impact on health and wellbeing
59
60

1
2
3 362 and overall participation in the trial using a combination of semi-structured interviews,
4
5
6 363 observations, and analysis of coaching plans. Purposive sampling will ensure interviewees
7
8 364 are representative of the cohorts' range of demographic characteristics, degree of
9
10 365 engagement with the programme, and in the case of coaches, will include coaches who
11
12
13 366 coach a different numbers of peers and who use online or face-to-face delivery. We will also
14
15 367 capture barriers to trial participation by interviewing decliners, volunteer coaches and peers
16
17
18 368 who drop out. Peer, volunteer coach, staff and decliner interviews will explore the barriers
19
20 369 and facilitators of set up and delivering the peer coaching service, its active ingredients in
21
22
23 370 relation to the four elements of coaching outlined above and elements of the peer-coach
24
25 371 relationship that facilitate behavioural change.

26
27
28 372 We will observe the training and monthly coaching supervision to understand, explore, and
29
30 373 describe the intervention. Brief session notes will be recorded by the coach coordinators
31
32
33 374 who lead the supervision sessions that will be used by the research team to summarise
34
35 375 issues discussed. Analysis will be framed around a conceptual model of coaching adapted
36
37
38 376 from Matthias and colleagues which includes motivation, strategies and finding what
39
40 377 works.³³

41
42
43
44 378

45 46 47 379 **Patient and Public Involvement Statement**

48
49
50 380 To ensure procedures and intervention delivery are acceptable and relevant to participants,
51
52 381 they were developed with input from a Patient and Public Involvement (PPI) group that
53
54 382 included people with lived experience of the targeted conditions (n=7, 2 women). Members
55
56
57 383 of the group had either attended a TSDFT co-design event in 2019 and had continued to be
58
59 384 part of the intervention development or were recruited from local condition-specific

1
2
3 385 support groups. The group was established and convened twice during the set-up phase of
4
5
6 386 the trial. Key objectives of the PPI group include but are not limited to: trial materials
7
8 387 development; questionnaire design and delivery; disease specific questionnaire selection;
9
10 388 adaptations to intervention format, content, and delivery; data collection processes;
11
12
13 389 interview topic guide development; and the minimising of burden and maximising of
14
15 390 engagement and retention through identification of barriers and facilitators. Further
16
17
18 391 consultation is planned to consider the interpretation of findings, dissemination strategy
19
20 392 and the study's next steps. All PPI consultation has been, and will be completed in line with
21
22
23 393 the NIHR guidelines, including financial reimbursement.
24
25

26 394

29 395 **Data analysis**

32 396 **Quantitative**

35 397 A period of five months has been allocated for data analysis, write up and dissemination. A
36
37 398 detailed statistical analysis plan will be finalised before the trial database is locked. A
38
39
40 399 CONSORT diagram will show information from screening, recruitment and follow-up and
41
42 400 feasibility outcomes will be summarised with recruitment and retention rates presented
43
44 401 with 95% confidence intervals. All quantitative data for this feasibility trial is self-reported
45
46
47 402 and outcomes will be used and scored in line with author guidance. PAM scores will be
48
49
50 403 calculated using the algorithm from Insignia Health
51
52 404 (<https://www.insigniahealth.com/products/pam-survey>). Feasibility outcomes will be
53
54 405 summarised with recruitment and retention rates presented with 95% confidence intervals.
55
56
57 406 Descriptive statistics will be presented for secondary outcomes at baseline, six and nine
58
59 407 months by allocated group. Between group differences of the change in scores between
60

1
2
3 408 baseline and each follow-up time point will be presented but no inferential analysis will be
4
5
6 409 performed, in accordance with CONSORT guidance.³⁴
7
8
9 410

11 411 **Sample size estimation**

12
13
14
15 412 To inform sample size estimation for a future trial, we will calculate the standard deviations
16
17 413 of the secondary outcomes of patient activation, mental wellbeing and quality of life. To
18
19 414 estimate plausible between group differences for a primary outcome in a future definitive
20
21
22 415 trial, namely change in scores on key secondary outcome measures from pre- to post
23
24
25 416 intervention, we will calculate the between group difference (with 95% confidence
26
27 417 intervals) in change score between baseline and follow-up (nine months).
28
29

30 418

32 33 419 **Qualitative**

34
35
36 420 We will use thematic framework analysis³⁵ following the five steps of analysis
37
38 421 (familiarisation, identifying a thematic framework, indexing, charting, and mapping and
39
40 422 interpretation) to explore qualitative data with themes identified and discussed between a
41
42
43 423 minimum of two researchers. The process will use a combination of inductive and deductive
44
45
46 424 framing, using the conceptual model of the intervention as a guide. Analysis will be
47
48
49 425 completed using NVivo Version 12 (QSR International Pty Ltd, 2018). PPI input will help
50
51 426 clarify and interpret identified themes within the framework.
52
53

54 427

56 57 428 **Progression criteria**

1
2
3 429 At the end of this feasibility trial the following criteria, developed in line with Avery et al³⁶
4
5
6 430 will be used to determine progression to a full trial application. We shall progress to a full
7
8 431 trial application if minimum success criteria are achieved in key feasibility areas. These
9
10 432 criteria will be discussed with the Trial Management Group (TMG) and Trial Steering
11
12
13 433 Committee (TSC), but may include:
14
15
16 434 • Target peer population (n=60) plus sufficient coaches recruited within 9-month
17
18 435 recruitment window (<60% stop, 60-80% discuss, 80+% go)
19
20
21 436 • Adherence (a 'dose' of coaching is defined as attending at least two of the mutually
22
23 437 agreed number of coaching sessions³⁷ (which may range from two to 14 sessions) of
24
25 438 participants randomised to coaching (<40% of peers attend stop, 40-60% discuss,
26
27 439 60%+ go)
28
29
30 440 • Completion of outcome measures (scored PAM at nine-month follow-up) (<60%
31
32 441 stop, 60-80% discuss, 80+% go)
33
34
35 442 • Evidence to suggest efficacy i.e. that the coaching holds promise as an effective
36
37 443 intervention (indicated by examination of the confidence intervals of the between
38
39 444 group differences in PAM at nine months and qualitative data).
40
41
42

43 445 Any issues that arise during this feasibility trial will be discussed with our PPI group
44
45 446 members to consider possible action. Changes may be implemented within this feasibility
46
47 447 trial or be evident upon trial completion which will inform the feasibility, and optimum
48
49 448 delivery, for a potential definitive trial.
50
51
52

53
54 449

57 450 **ETHICS AND DISSEMINATION**

58
59
60

1
2
3 451 **Safety monitoring**
4
5

6 452 Throughout the trial, all possible precautions will be taken to ensure participant safety and
7
8 453 wellbeing. Experienced professional coaches will deliver the volunteer coaching training and
9
10 454 will ensure that volunteer coaches are trained and supervised to an appropriate level in
11
12 455 order to deliver the coaching independently and safely. All Adverse events (AEs) will be
13
14 456 reported by participants to the health connect coaching coordinators via their volunteer
15
16 457 coach. This information will be shared with the research team who will assess any relation
17
18 458 to the intervention. All serious adverse events (SAEs) will be reported to the CI within 24
19
20 459 hours of identification and the trial sponsor will be informed. All AEs and SAEs will be
21
22 460 reported to the TMG on a monthly basis. In addition, a summary of this information will be
23
24 461 shared with the TSC every six months.
25
26
27
28
29
30

31 462

32
33
34 463 **Data management and monitoring**
35

36
37 464 **Confidentiality**
38

39
40 465 Any identifiable information will be stored in a shared drive on TSDFT computers. All self-
41
42 466 reported data will be collected via Jisc platform (<https://www.onlinesurveys.ac.uk/>). This
43
44 467 anonymised data will be exported to and stored on a password protected and encrypted
45
46 468 University computer. Interview recordings will be transcribed with any identifiable
47
48 469 information removed. The recordings will be destroyed after transcription and the
49
50 470 transcripts containing non-identifiable information will be retained. At the end of the trial all
51
52 471 anonymized research information held on University computers will be returned to the
53
54 472 sponsor (NHS trust) for storage on a TSDFT drive for a minimum of five years. As members
55
56
57
58
59
60

1
2
3 473 of the research team also hold honorary contracts with TSDFT no other data sharing
4
5
6 474 agreements are necessary. All information will be handled in compliance with the General
7
8 475 Data Protection Regulations (2018).
9

10 11 476 **Data monitoring** 12

13
14 477 Data will be managed independently from the Sponsor and research funder. As this is a
15
16 478 feasibility trial a Data Monitoring Committee has not been deemed necessary, as there will
17
18 479 be insufficient data to establish benefits or harms of the intervention worthy of invoking
19
20 480 early stopping rules.
21
22

23 24 25 481 **Trial management and oversight** 26

27
28 482 Two committees are involved in the set up and management of this trial.
29

30
31 483 The **Trial Management Group** comprises the university research team and members of the
32
33 484 NHS Trust peer coaching service. It will meet monthly throughout the course of the trial via
34
35 485 web-based platforms such as Microsoft Teams or face-to-face should COVID-19 restrictions
36
37 486 allow. The group is responsible for development of the protocol and other trial
38
39 487 documentation and ensuring smooth and safe running of the trial.
40
41
42

43
44 488 **The Trial Steering Committee** is made up of an independent chair, an independent
45
46 489 statistician, a person with lived experience and an independent health economist. The role
47
48 490 of the group is to provide overall supervision for the trial on behalf of the Sponsor and
49
50 491 Funder and to ensure that the trial is conducted according to the rigorous standards set out
51
52 492 in the Department of Health's Research Governance Framework for Health and Social Care
53
54 493 and the Guidelines for Good Clinical Practice. The group will continue to meet twice a year
55
56 494 across the trial timeline.
57
58
59
60

1
2
3 495 **Post-trial care**
4
5

6 496 Participants in the control arm will be offered priority access to the intervention after final
7
8 497 data collection has taken place. All participants will have access to their usual health care as
9
10
11 498 routine practice.
12
13

14 499 **Dissemination**
15
16

17 500 Results from this feasibility trial will be shared directly with participants once they are
18
19 501 available. In addition, results will be presented at local, regional, and national conferences.
20
21 502 Further, the protocol and trial findings will be published in an open access journal and a final
22
23 503 report will be presented to the funders and sponsor.
24
25
26
27

28 504 **Trial registration**
29
30

31 505 This trial is registered with the ISRCTN. ISRCTN12623577
32
33
34 506 Protocol version 1.0, 24/08/2021
35
36

37 507 **Funding statement**
38
39

40 508 This work is funded by Torbay Medical Research Fund grant number project 137. The Funder
41
42 509 has no role in trial design, conduct, data analyses and interpretation, manuscript writing, or
43
44 510 dissemination of results.
45
46
47

48 511 **Contributorship Statement**
49
50

51 512 AS, JE, WC, TT, JH, HDC developed the study. RD, AS, JE, WC, TT, JH, HDC, KB and OW are
52
53 513 responsible for the conduct of the study. Each of the named authors contributed to the
54
55 514 reporting of this work.
56
57
58
59
60

1
2
3 515 This trial is sponsored by Torbay and South Devon NHS Foundation Trust
4
5
6 516 tsdft.researchgovernance@nhs.net. The Sponsor has no direct role for trial design, conduct,
7
8 517 data analysis and interpretation, manuscript writing or dissemination of the results.
9

10 11 518 **Acknowledgements** 12

13
14 519 The authors would like to acknowledge Annette Thom for her assistance with the initial
15
16 520 literature review. In addition, the study PPI group and trial steering committee for their
17
18 521 involvement in the design of this study.
19
20

21 22 522 **Competing interests** 23

24
25 523 The authors declare no conflicts of interest.
26
27

28
29 524
30

31 32 525 **Figure legends** 33

34
35 526 Figure 1: Volunteer peer coaching logic model
36

37 527 Figure 2: Trial flow diagram: volunteer coach
38

39 528 Figure 3: Trial flow diagram- Peer
40
41

42 529
43

44
45 530
46

47
48 531
49

50
51 532
52

53
54 533
55

56
57 534
58
59
60

535 **REFERENCES**

- 536 1. Hibbard, J. and Gilbert, H. 2014: Development of the Patient Activation Measure (PAM):
537 Conceptualizing and Measuring Activation in Patients and Consumers. *Health Serv Res.*
538 2004;39(4):1005-1026 <https://doi.org/10.1111/j.1475-6773.2004.00269.x>
- 539 2. Hibbard, J. and Greene, J. What The Evidence Shows About Patient Activation: Better
540 Health Outcomes And Care Experiences; Fewer Data On Costs. *Health Aff.* 2013: 32(2)207-
541 14 <https://doi.org/10.1377/hlthaff.2012.1061>
- 542 3. NHS England: Comprehensive model of personalised care. 2019. Accessed at:
543 <https://www.england.nhs.uk/personalisedcare/comprehensive-model-of-personalised-care/>
- 544 4. Sforzo G, Kaye M, Todorova I, et al. Compendium of the Health and Wellness Coaching
545 Literature. *Am J Lifestyle Med.* 2018;12(6):436-447 <https://doi:10.1177/1559827617708562>
- 546 5. NHS England and NHS Improvement 2020: Health Coaching. Implementation and Quality
547 Summary Guide Support self-management. Accessed at:
548 [https://www.england.nhs.uk/publication/health-coaching-summary-guide-and-technical-](https://www.england.nhs.uk/publication/health-coaching-summary-guide-and-technical-annexes/)
549 [annexes/](https://www.england.nhs.uk/publication/health-coaching-summary-guide-and-technical-annexes/)
- 550 6. Robertson R, Wenzel L, Thompson J. et al. Understanding NHS financial pressures: how
551 are they affecting patient care? *The Kings Fund.* 2017. Access at:
552 <https://www.kingsfund.org.uk/publications/understanding-nhs-financial-pressures>
- 553 7. Anderson AM, Lavender EC, Dusabe-Richards E, et al. Peer mentorship to improve self-
554 management of hip and knee osteoarthritis: a randomised feasibility trial. *BMJ Open*
555 2021;11:e045389 [https://doi: 10.1136/bmjopen-2020-045389](https://doi:10.1136/bmjopen-2020-045389)

- 1
2
3 556 8. Matthias MS, Bair MJ, Ofner S, et al. Peer Support for Self-Management of Chronic Pain:
4
5
6 557 the Evaluation of a Peer Coach-Led Intervention to Improve Pain Symptoms (ECLIPSE) Trial. *J*
7
8 558 *Gen Intern Med*. 2020a Dec;35(12):3525-3533 [https://doi: 10.1007/s11606-020-06007-6](https://doi.org/10.1007/s11606-020-06007-6).
9
10 559 Epub 2020a Jul 22.
- 11
12
13 560 9. Andreae, S. J. Andreae, L. J., Richman, J. S. et al. Peer-Delivered Cognitive Behavioral
14
15
16 561 Training to Improve Functioning in Patients With Diabetes: A Cluster-Randomized Trial. *Ann*
17
18 562 *Fam Med*. 2020 Jan;18(1):15-23 [https://doi: 10.1370/afm.2469](https://doi.org/10.1370/afm.2469).
- 19
20
21 563 10. Small N, Blickem C, Blakeman T, et al. Telephone based self-management support by 'lay
22
23
24 564 health workers' and 'peer support workers' to prevent and manage vascular diseases: a
25
26
27 565 systematic review and meta-analysis. *BMC Health Serv Res*. 2013 Dec 27;13:533 [https://doi:](https://doi.org/10.1186/1472-6963-13-533)
28
29 566 [10.1186/1472-6963-13-533](https://doi.org/10.1186/1472-6963-13-533).
- 30
31
32 567 11. Fortuna, K. L., Naslund, J. A., Lacroix, J. M., et al. Digital Peer Support Mental Health
33
34
35 568 Interventions for People With a Lived Experience of a Serious Mental Illness: Systematic
36
37 569 Review. *JMIR Ment Health*. 2020 Apr 3;7(4):e16460 [https://doi: 10.2196/16460](https://doi.org/10.2196/16460).
- 38
39
40 570 12. Andreae, S. J. Andreae, L. J., Richman, J. S. et al. Peer-delivered Cognitive Behavioral
41
42
43 571 Therapy-based Intervention Reduced Depression and Stress in Community Dwelling Adults
44
45 572 With Diabetes and Chronic Pain: A Cluster Randomized Trial. *Ann Behav Med*.
46
47 573 2021.55(10)970-980 [https://doi: 10.1093/abm/kaab034](https://doi.org/10.1093/abm/kaab034)
- 48
49
50 574 13. Khodneva, Y., Safford, M. M., Richman, J. Volunteer peer support, diabetes, and
51
52
53 575 depressive symptoms: Results from the ENCOURAGE trial. *J Clin Transl Endocrinol* 2016 4:
54
55 576 38-44
56
57
58
59
60

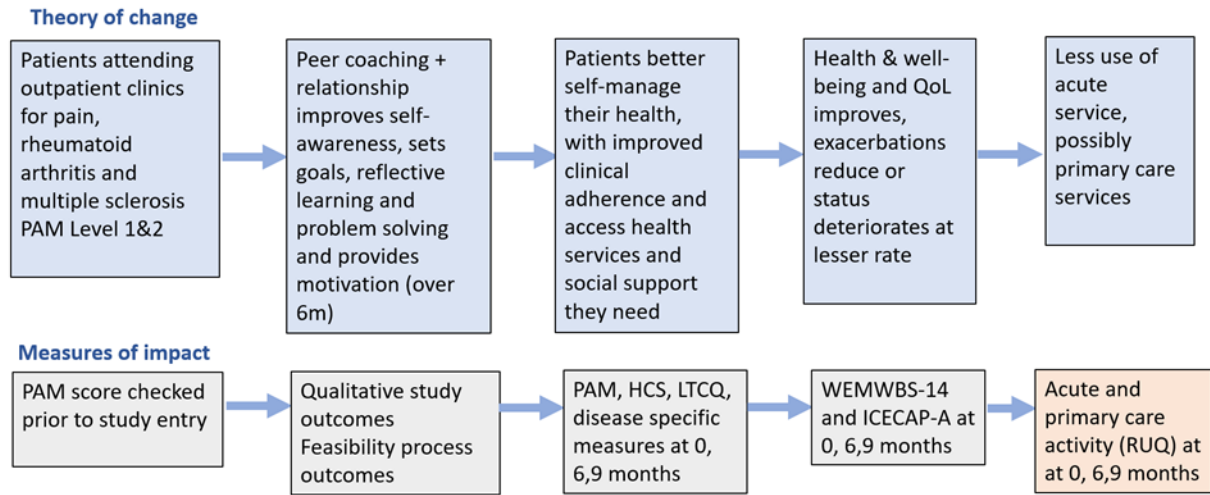
- 1
2
3 577 14. Matthias Ms, Daggy J, Ofner S, t al. Exploring peer coaches' outcomes: Findings from a
4
5
6 578 clinical trial of patients with chronic pain. *Patient Educ Couns*. 2020b, (103), 1366-1372
7
8 579 <https://doi:10.1016/j.pec.2020.02.007>
9
10
11 580 15. Shue, McGuire, AB and Matthias, M. Facilitators and Barriers to Implementation of a
12
13
14 581 Peer Support Intervention for Patients with Chronic Pain: A Qualitative Study. *Pain Med*.
15
16 582 2019 20 (7) 1311-1320 [https://doi: 10.1093/pm/pny229](https://doi:10.1093/pm/pny229)
17
18
19 583 16. Lavender, E., Dusabe-Richards, E., Anderson, A. et al. Exploring the feasibility,
20
21
22 584 acceptability and value of volunteer peer mentors in supporting self-management of
23
24 585 osteoarthritis: a qualitative evaluation. *Disabil Rehabil* 2021 [https://doi:](https://doi:10.1080/09638288.2021.1964625)
25
26 586 [10.1080/09638288.2021.1964625](https://doi:10.1080/09638288.2021.1964625)
27
28
29 587 17. Sim J., Lewis M. The size of a pilot study for a clinical trial should be calculated in relation
30
31
32 588 to considerations of precision and efficiency. *J Clin Epidemiol* 2012;65:301-308
33
34 589 <https://doi.org/10.1016/j.jclinepi.2011.07.011>
35
36
37 590 18. Simmons, L. A. and Wolever, R. Q. 2013: Integrative Health Coaching and Motivational
38
39
40 591 Interviewing: Synergistic Approaches to Behavior Change in Healthcare. *Global Adv Health*
41
42 592 *Med*, (2), 28-35.
43
44
45 593 19. Lundahl, B. W., Kunz, C., Brownell, C., et al. A Meta-Analysis of Motivational
46
47
48 594 Interviewing: Twenty-Five Years of Empirical Studies. *Res Soc Work Pract*. 2010 (20), 137-
49
50 595 160. [https:// doi:10.1177/1049731509347850](https://doi:10.1177/1049731509347850)
51
52
53 596 20. Health Education England. Making Every Contact Count. Accessed at
54
55
56 597 <https://www.makeeverycontactcount.co.uk/>
57
58
59
60

- 1
2
3 598 21. Aked J, Marks N, Cordon C. et al. Five ways to wellbeing; communicating the evidence.
4
5
6 599 Accessed at: <https://neweconomics.org/2008/10/five-ways-to-wellbeing>
7
8
9 600 22. Wolever, R. Q., Simmons, L. A., Sforzo, G. A., et al. A Systematic Review of the Literature
10
11 601 on Health and Wellness Coaching: Defining a Key Behavioral intervention in Healthcare.
12
13 602 *Glob Adv Health Med.* 2013 Jul;2(4):38-57. [https://doi: 10.7453/gahmj.2013.042](https://doi:10.7453/gahmj.2013.042).
14
15
16 603 23. Putz, R., O'hara, K., Taggart, F. et al. Using WEMWBS to measure the impact of your
17
18 604 work on mental wellbeing: A practice-based user guide. 2012. Warwick Medical School,
19
20 605 Coventry City Council, NHS Coventry.
21
22
23
24 606 24. Al-Janabi H, Flynn TN, Coast J. Development of a self-report measure of capability
25
26 607 wellbeing for adults: the ICECAP-A. *Qual Life Res.* 2012;21(1):167-176
27
28 608 <https://doi:10.1007/s11136-011-9927-2>
29
30
31
32 609 25. Benson T, Potts HWW, Bark P, et al. Development and initial testing of a Health
33
34 610 Confidence Score (HCS)*BMJ Open Quality* 2019;8:e000411 [https://doi: 10.1136/bmjopen-](https://doi:10.1136/bmjopen-2018-000411)
35
36 611 2018-000411
37
38
39
40 612 26. Potter CM, Batchelder L, A'Court C, et al. Long-Term Conditions Questionnaire (LTCQ):
41
42 613 initial validation survey among primary care patients and social care recipients in England.
43
44 614 *BMJ Open* 2017;7:e019235 <https://doi:10.1136/bmjopen-2017-019235>
45
46
47
48 615 27. Miller SD, Duncan BL, Johnson LD (2000). The session rating scale 3.0. Chicago, IL:
49
50 616 Authors
51
52
53
54 617 28. Cleeland CS, Ryan KM. Pain assessment: global use of the Brief Pain Inventory. *Ann Acad*
55
56 618 *Med Singap.* 1994 Mar;23(2):129-38. PMID: 8080219.
57
58
59
60

- 1
2
3 619 29. Hobart JC, Lamping DL, Fitzpatrick R, et al. The Multiple Sclerosis Impact Scale (MSIS-29):
4
5
6 620 a new patient-based outcome measure. *Brain*. 2001;124:962-73
7
8 621 <https://doi:10.1093/brain/124.5.962>
9
10
11 622 30. Gossec L, de Wit M, Kiltz U, et.al. A patient-derived and patient-reported outcome
12
13 623 measure for assessing psoriatic arthritis: elaboration and preliminary validation of the
14
15
16 624 Psoriatic Arthritis Impact of Disease (PsAID) questionnaire, a 13-country EULAR initiative.
17
18 625 *Ann Rheum Dis*. 2014 Jun;73(6):1012-9 [https://doi: 10.1136/annrheumdis-2014-205207](https://doi:10.1136/annrheumdis-2014-205207).
19
20
21 626 31. Garrett S, Jenkinson T, Kennedy LG, et. Al. A new approach to defining disease status in
22
23 627 ankylosing spondylitis: the Bath Ankylosing Spondylitis Disease Activity Index. *J Rheumatol*.
24
25 628 1994 Dec;21(12):2286-91. PMID: 7699630.
26
27
28
29 629 32. Duarte C, Santos EJF, Ferreira RJO, et al. Validity and reliability of the EULAR instrument
30
31 630 RAID.7 as a tool to assess individual domains of impact of disease in rheumatoid arthritis: a
32
33 631 cross-sectional study of 671 patients *RMD Open* 2021;7:e001539. [https://doi:](https://doi:10.1136/rmdopen-2020-001539)
34
35 632 [10.1136/rmdopen-2020-001539](https://doi:10.1136/rmdopen-2020-001539)
36
37
38
39 633 33. Matthias, M. S., Daggye, J., Adamsa, M. et al. Evaluation of a peer coach-led intervention
40
41 634 to improve pain symptoms (ECLIPSE): Rationale, study design, methods, and sample
42
43 635 characteristics. *Contemp Clin Trials*. 2019 Jun;81:71-79.
44
45 636 <https://doi:10.1016/j.cct.2019.04.002>.
46
47
48
49 637 34. Eldridge, S. M., Chan, C. L., Campbell, M. J., et al. CONSORT 2010 statement: extension
50
51 638 to randomised pilot and feasibility trials. *BMJ* 2016: 355:i5239
52
53 639 <https://doi.org/10.1136/bmj.i5239>
54
55
56
57
58
59
60

- 1
2
3 640 35. Ritchie, J. and Spencer, L. (1994) Qualitative Data Analysis for Applied Policy Research.
4
5
6 641 In: Bryman, A. and Burgess, R., Eds., *Anal. Qual. Data*, Routledge, London, 173-194.
7
8
9 642 36. Avery KNL, Williamson PR, Gamble C, et al. Informing efficient randomised controlled
10
11 643 trials: exploration of challenges in developing progression criteria for internal pilot studies.
12
13
14 644 *BMJ Open* 2017;7:e013537 <https://doi:10.1136/bmjopen-2016-013537>
15
16
17 645 37. Taylor A., Thompson TP., Ussher M, et al. Randomised controlled trial of tailored support
18
19 646 to increase physical activity and reduce smoking in smokers not immediately ready to quit:
20
21
22 647 protocol for the Trial of physical Activity-assisted Reduction of Smoking (TARS) Study *BMJ*
23
24
25 648 *Open* 2020;10:e043331. [https://doi: 10.1136/bmjopen-2020-043331](https://doi:10.1136/bmjopen-2020-043331)
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Figure 1: Volunteer peer coaching logic model



Abbreviations: PAM: Patient Activation Measure, m: months, QoL: Quality of Life, HCS: Health Confidence Score, LTCQ: Long-Term Conditions Questionnaire, WEMWBS: Warwick Edinburgh Mental Wellbeing Scale, ICECAP-A: ICEpop CAPability measure for Adults, RUQ: Resource use questionnaire

Figure 2: Trial flow diagram- Volunteer Coach

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

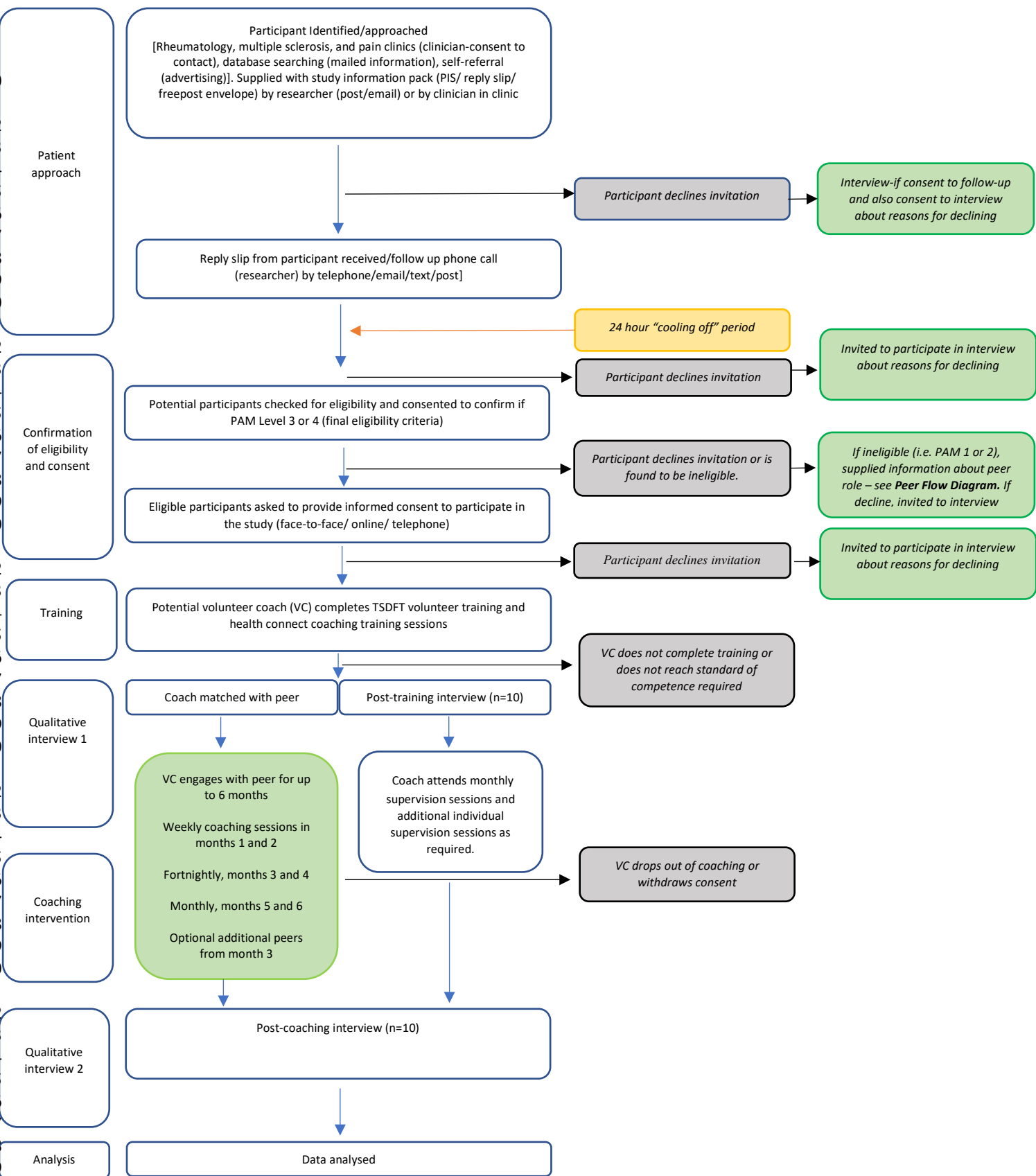
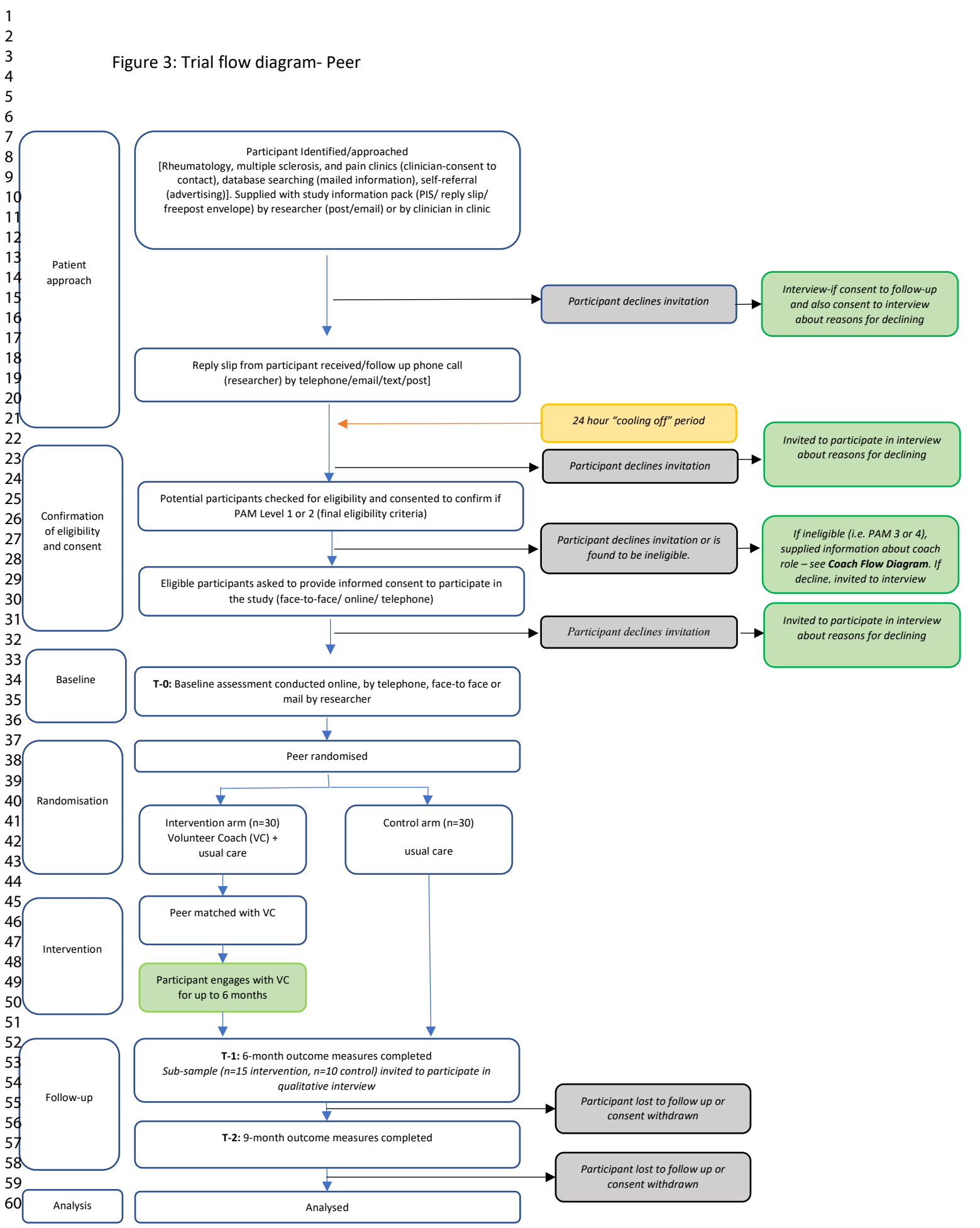


Figure 3: Trial flow diagram- Peer





SPIRIT 2013 Checklist: Recommended items to address in a clinical trial protocol and related documents*

Section/item	Item No	Description
Administrative information		
Title	1	Descriptive title identifying the study design, population, interventions, and, if applicable, trial acronym Page 1
Trial registration	2a	Trial identifier and registry name. If not yet registered, name of intended registry Page 23
	2b	All items from the World Health Organization Trial Registration Data Set N/A
Protocol version	3	Date and version identifier Page 23
Funding	4	Sources and types of financial, material, and other support Page 24
Roles and responsibilities	5a	Names, affiliations, and roles of protocol contributors Pages 1 and 24
	5b	Name and contact information for the trial sponsor Page 24
	5c	Role of study sponsor and funders, if any, in study design; collection, management, analysis, and interpretation of data; writing of the report; and the decision to submit the report for publication, including whether they will have ultimate authority over any of these activities Page 24
	5d	Composition, roles, and responsibilities of the coordinating centre, steering committee, endpoint adjudication committee, data management team, and other individuals or groups overseeing the trial, if applicable (see Item 21 for data monitoring committee) Page 23
Introduction		
Background and rationale	6a	Description of research question and justification for undertaking the trial, including summary of relevant studies (published and unpublished) examining benefits and harms for each intervention Page 4-6
	6b	Explanation for choice of comparators page 10
Objectives	7	Specific objectives or hypotheses page 6

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Trial design	8	Description of trial design including type of trial (eg, parallel group, crossover, factorial, single group), allocation ratio, and framework (eg, superiority, equivalence, noninferiority, exploratory) page 7
--------------	---	--

Methods: Participants, interventions, and outcomes

Study setting	9	Description of study settings (eg, community clinic, academic hospital) and list of countries where data will be collected. Reference to where list of study sites can be obtained page 8
---------------	---	---

Eligibility criteria	10	Inclusion and exclusion criteria for participants. If applicable, eligibility criteria for study centres and individuals who will perform the interventions (eg, surgeons, psychotherapists) page 8
----------------------	----	---

Interventions	11a	Interventions for each group with sufficient detail to allow replication, including how and when they will be administered pages 10-13
---------------	-----	--

	11b	Criteria for discontinuing or modifying allocated interventions for a given trial participant (eg, drug dose change in response to harms, participant request, or improving/worsening disease) pages 10-13
--	-----	--

	11c	Strategies to improve adherence to intervention protocols, and any procedures for monitoring adherence (eg, drug tablet return, laboratory tests) pages 10-13
--	-----	---

	11d	Relevant concomitant care and interventions that are permitted or prohibited during the trial pages 10-13
--	-----	---

Outcomes	12	Primary, secondary, and other outcomes, including the specific measurement variable (eg, systolic blood pressure), analysis metric (eg, change from baseline, final value, time to event), method of aggregation (eg, median, proportion), and time point for each outcome. Explanation of the clinical relevance of chosen efficacy and harm outcomes is strongly recommended pages 13-18
----------	----	--

Participant timeline	13	Time schedule of enrolment, interventions (including any run-ins and washouts), assessments, and visits for participants. A schematic diagram is highly recommended (see Figure) Page 9
----------------------	----	---

Sample size	14	Estimated number of participants needed to achieve study objectives and how it was determined, including clinical and statistical assumptions supporting any sample size calculations page 19
-------------	----	---

Recruitment	15	Strategies for achieving adequate participant enrolment to reach target sample size pages 8-9
-------------	----	---

Methods: Assignment of interventions (for controlled trials)

Allocation:

1			
2	Sequence	16a	Method of generating the allocation sequence (eg, computer-
3	generation		generated random numbers), and list of any factors for stratification.
4			To reduce predictability of a random sequence, details of any planned
5			restriction (eg, blocking) should be provided in a separate document
6			that is unavailable to those who enrol participants or assign
7			interventions page 9
8			
9			
10	Allocation	16b	Mechanism of implementing the allocation sequence (eg, central
11	concealment		telephone; sequentially numbered, opaque, sealed envelopes),
12	mechanism		describing any steps to conceal the sequence until interventions are
13			assigned page 10
14			
15	Implementation	16c	Who will generate the allocation sequence, who will enrol participants,
16			and who will assign participants to interventions page 9 and figure 3
17			
18	Blinding	17a	Who will be blinded after assignment to interventions (eg, trial
19	(masking)		participants, care providers, outcome assessors, data analysts), and
20			how page 10
21			
22			
23		17b	If blinded, circumstances under which unblinding is permissible, and
24			procedure for revealing a participant's allocated intervention during
25			the trial N/A
26			
27			

Methods: Data collection, management, and analysis

28			
29			
30	Data collection	18a	Plans for assessment and collection of outcome, baseline, and other
31	methods		trial data, including any related processes to promote data quality (eg,
32			duplicate measurements, training of assessors) and a description of
33			study instruments (eg, questionnaires, laboratory tests) along with
34			their reliability and validity, if known. Reference to where data
35			collection forms can be found, if not in the protocol pages 14-18
36			
37			
38		18b	Plans to promote participant retention and complete follow-up,
39			including list of any outcome data to be collected for participants who
40			discontinue or deviate from intervention protocols pages 14,15,17
41			
42	Data	19	Plans for data entry, coding, security, and storage, including any
43	management		related processes to promote data quality (eg, double data entry;
44			range checks for data values). Reference to where details of data
45			management procedures can be found, if not in the protocol page 22
46			
47			
48	Statistical	20a	Statistical methods for analysing primary and secondary outcomes.
49	methods		Reference to where other details of the statistical analysis plan can be
50			found, if not in the protocol page 19
51			
52			
53		20b	Methods for any additional analyses (eg, subgroup and adjusted
54			analyses) N/A
55			
56		20c	Definition of analysis population relating to protocol non-adherence
57			(eg, as randomised analysis), and any statistical methods to handle
58			missing data (eg, multiple imputation) N/A
59			
60			

Methods: Monitoring

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	Data monitoring	21a	Composition of data monitoring committee (DMC); summary of its role and reporting structure; statement of whether it is independent from the sponsor and competing interests; and reference to where further details about its charter can be found, if not in the protocol. Alternatively, an explanation of why a DMC is not needed page 22
25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	Harms	22	Plans for collecting, assessing, reporting, and managing solicited and spontaneously reported adverse events and other unintended effects of trial interventions or trial conduct page 21
	Auditing	23	Frequency and procedures for auditing trial conduct, if any, and whether the process will be independent from investigators and the sponsor pages 22-23

Ethics and dissemination

26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	Research ethics approval	24	Plans for seeking research ethics committee/institutional review board (REC/IRB) approval page 1
	Protocol amendments	25	Plans for communicating important protocol modifications (eg, changes to eligibility criteria, outcomes, analyses) to relevant parties (eg, investigators, REC/IRBs, trial participants, trial registries, journals, regulators)
	Consent or assent	26a	Who will obtain informed consent or assent from potential trial participants or authorised surrogates, and how (see Item 32) Page 9
		26b	Additional consent provisions for collection and use of participant data and biological specimens in ancillary studies, if applicable N/A
	Confidentiality	27	How personal information about potential and enrolled participants will be collected, shared, and maintained in order to protect confidentiality before, during, and after the trial page 22
	Declaration of interests	28	Financial and other competing interests for principal investigators for the overall trial and each study site page 25
	Access to data	29	Statement of who will have access to the final trial dataset, and disclosure of contractual agreements that limit such access for investigators page 22
	Ancillary and post-trial care	30	Provisions, if any, for ancillary and post-trial care, and for compensation to those who suffer harm from trial participation page 23

- 1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
- | | | |
|-------------------------|-----|---|
| Dissemination
policy | 31a | Plans for investigators and sponsor to communicate trial results to participants, healthcare professionals, the public, and other relevant groups (eg, via publication, reporting in results databases, or other data sharing arrangements), including any publication restrictions
page 23 |
| | 31b | Authorship eligibility guidelines and any intended use of professional writers N/A |
| | 31c | Plans, if any, for granting public access to the full protocol, participant-level dataset, and statistical code N/A |

16 Appendices

- 17
18
19
20
21
22
23
24
- | | | |
|-------------------------------|----|--|
| Informed consent
materials | 32 | Model consent form and other related documentation given to participants and authorised surrogates |
| Biological
specimens | 33 | Plans for collection, laboratory evaluation, and storage of biological specimens for genetic or molecular analysis in the current trial and for future use in ancillary studies, if applicable |

25 *It is strongly recommended that this checklist be read in conjunction with the SPIRIT 2013
26 Explanation & Elaboration for important clarification on the items. Amendments to the
27 protocol should be tracked and dated. The SPIRIT checklist is copyrighted by the SPIRIT
28 Group under the Creative Commons "[Attribution-NonCommercial-NoDerivs 3.0 Unported](https://creativecommons.org/licenses/by-nc-nd/3.0/)"
29 license.
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60