ISRCTN11185706 https://doi.org/10.1186/ISRCTN11185706

# Problem adaptation therapy for depression in dementia (PATHFINDER)

**Submission date**
22/05/2018

**Recruitment status**
Suspended

**Registration date**
31/05/2018

**Overall study status**
Completed

**Last Edited**
12/07/2022

**Condition category**
Nervous System Diseases

[X] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[ ] Record updated in last year

## Plain English summary of protocol

Background and study aims
Depression is very common in people with Alzheimer's disease and other dementias, causing them distress as well as reducing their quality of life and that of their carers. Unfortunately, antidepressant drugs do not have clear effectiveness in these patients and it appears that the most commonly available psychological therapies such as cognitive behavioural therapy or CBT are also not useful. Psychological therapy based upon the principle of problem-solving therapy, in which patients and their carers are helped to find ways to compensate for memory difficulties and to change their environment, relationships and engagement in activity in order to support a positive mood state, has been reported to be helpful in the very early stages of dementia. However, this has only been shown so far in an American university-based healthcare setting, with people who were mildly affected by dementia and with the use of experienced and expensive therapists. The aim of this study is to investigate whether this approach can be successfully applied in an NHS setting and with patients who are representative of those seen with dementia and depression in the NHS. Working with the Alzheimer's Society and NHS staff from the memory services and community mental health teams who already work with people who are mildly and moderately affected by dementia, an existing form of problem-solving therapy called Problem Adaptation Therapy (PATH) will be adapted. The two most important adaptations are to develop a form of PATH that can be delivered by existing NHS staff rather than specialist psychological therapists and to make the therapy available in a form that is helpful for people who are mildly and moderately affected by dementia because this is the group who have the greatest need for an effective depression treatment in the NHS.

Who can participate?
Patients aged over 50 with mild to moderate dementia and depression

What does the study involve?
In the first phase of the study a manual is developed that can be used by carers, under the supervision and guidance of NHS staff, to apply the principles of PATH to the person with dementia that they live with or care for. The acceptability of this and the willingness of patients and their carers to be involved in a subsequent trial are tested. In the second phase participants are randomly allocated to either 12 weeks of the modified PATH treatment or current treatment offered as usual within the NHS. Outcomes are measured at 0, 3, 6 and 12 months. The most

important outcome is improvement in symptoms of depression at 6 months in participants with dementia, and quality of life, activities of daily living, cognitive function, anxiety symptoms, satisfaction with therapy and cost-effectiveness of the intervention are also measured, along with mental health and perceptions of burden in carers.

What are the possible benefits and risks of participating?
If the intervention is successful at reducing depression in people with mild and moderate dementia, this would be the first evidence-based effective treatment available for this important problem, which could quickly be rolled out within NHS services and made available to patients. The possible benefits of participation for those allocated to the PATH arm would include access to a potentially effective treatment for depression in Alzheimer's disease. All participants may benefit from the additional assessments and support offered as part of the study. The possible risks would include time involved in study procedures and travel and consequent fatigue. It is also required that participants do not access alternative psychological therapies during their involvement with the study, so potentially they may be missing out on this.

Where is the study run from?
1. Camden and Islington NHS Trust (UK)
2. Oxford Health NHS Foundation Trust (UK)
3. Northumberland Tyne and Wear NHS Foundation Trust (UK)
4. Sussex Partnership NHS Foundation Trust (UK)
5. Norfolk and Suffolk NHS Foundation Trust (UK)
6. Birmingham and Solihull Mental Health NHS Foundation Trust (UK)
7. Cambridgeshire and Peterborough NHS Foundation Trust (UK)

When is the study starting and how long is it expected to run for?
September 2018 to December 2022

Who is funding the study?
Health Technology Assessment Programme (UK)

Who is the main contact?
Prof. Robert Howard

# Contact information

### Type(s)
Scientific


### Contact name
Prof Robert Howard

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# Additional identifiers

### Integrated Research Application System (IRAS)
238724

### Protocol serial number
HTA 16/155/01, IRAS 238724

# Study information

### Scientific Title
Problem adaptation therapy for individuals with mild to moderate dementia and depression: the PATHFINDER trial

### Acronym
PATHFINDER

### Study objectives
The principal aims are to develop an adapted PATH intervention, suitable for use with people with mild and moderate dementia for delivery within the NHS, and to design and conduct a trial to answer the question posed by the HTA's commissioning brief: What is the clinical and cost-effectiveness of problem solving therapy for depression adapted for older adults with mild to moderate dementia?

The aim is to answer this question by developing a manualised problem-solving therapy intervention for depression specifically for people with mild and moderate dementia, examining accessibility, acceptability, credibility and feasibility with patients, carers and health professionals, and assessing its effectiveness within an RCT.

The specific objectives are to:
1. Adapt and manualise PATH so that it is accessible and acceptable to people with mild and moderate dementia and their carers and can be delivered by existing staff in NHS secondary care (memory services and older people's community mental health teams) and IAPTs.
2. Obtain quantitative estimates of the accessibility, acceptability, credibility and feasibility of the PATH intervention.
3. Use qualitative approaches to explore the intervention's acceptability to people with dementia and their carers, as well as therapists delivering the intervention.
4. Establish the clinical and cost-effectiveness of adapted PATH plus usual multidisciplinary care compared to usual multidisciplinary care alone in a 6-centre, single-blind, parallel, 2-arm RCT, with an internal pilot in the first 12 months to assess feasibility of recruitment and acceptability of randomisation.

### Ethics approval required
Old ethics approval format

### Ethics approval(s)

Approved 14/06/2018, Pwyllgor Moeseg Ymchwil Cymru 4 (Wales Research Ethics Committee 4, Wrexham, Health and Care Research Wales Support Centre, Castlebridge 4, 15-19 Cowbridge Road East, Cardiff, CF11 9AB, UK; +44 (0)2920 785736; tracy.biggs@wales.nhs.uk), REC ref:18/WA/0209

## Study design
Multi-centre single-blind parallel two-arm randomised controlled feasibility trial

## Primary study design
Interventional

## Study type(s)
Treatment

## Health condition(s) or problem(s) studied
Depression in Alzheimer's disease

## Interventions
This is a 6-centre, single-blind, parallel, 2-arm randomised controlled feasibility trial to assess the clinical and cost-effectiveness of adapted PATH for depression in mild and moderate dementia with a 12-month internal pilot to assess feasibility of recruitment and acceptability of randomisation.

This is a two phased trial. Phase one will conduct focus groups involving professionals with the experience of delivering interventions to people with dementia in order adapt and manualise the PATH intervention for use by the caregivers of people with mild to moderate dementia, and will be followed by an internal pilot of the intervention at month X.

Phase two is the randomised controlled feasibility trial, comparing 12 weeks of the modified PATH treatment with current treatment offered as usual within the NHS. We will measure outcomes at 0, 3, 6 and 12 months. The most important outcome of the trial will be improvement in symptoms of depression at 6 months in participants with dementia, but we will also measure quality of life, activities of daily living, cognitive function, anxiety symptoms, satisfaction with therapy and cost-effectiveness of the intervention. In addition, we will examine mental health and perceptions of burden in carers. Our PPI co-applicants suggested that the primary outcome should be at 6 months rather than 3 months (immediately after the intervention ends) as benefits would need to be seen at this later time point in order to justify the investment of time and energy required from participating carers in PATH. Assessments at 3 months to look for immediate post-intervention mood improvement and at 12 months to examine whether and how potential benefits are maintained.

It is anticipated (subject to change based on the results of Phase 1) that the intervention will:
(1) Consist of 10 manualised, face-to-face sessions of PATH and delivered over 12 weeks (delivered approximately weekly), each session lasting up to 1 hour, and comprising 2 assessment sessions, 7 sessions focused on problem solving using PATH tools, and 1 review session
(2) Be supplemented by a personalised therapy booklet for patients and carers, developed so that it addresses each person’s individual needs, and a detailed manual for therapists
(3) Be supplemented by booster 1 hour sessions at 6 and 9 months (i.e. 3 and 6 months post-intervention), which will review key problem-solving and emotional regulation strategies used in PATH

A selection of therapy sessions will be recorded using encrypted digital voice recorders in order to monitor adherence to the intervention manual.

An integral part of the PATH intervention developed by the Cornell group for use with depressed patients with mild to moderate cognitive impairment has been the involvement of the patient's carer as a co-therapist in both the situational and environmental assessments and subsequent day-to-day delivery of the active change components of PATH. The carer's role as a co-therapist may involve any of the following: (1) helping to identify problems that are hypothesised to maintain the person with dementia's depression, (2) helping to identify meaningful pleasurable activities that the person with dementia currently enjoys or has previously enjoyed, (3) helping to identify solutions to the problems, (4) helping the person with dementia to use PATH tools (e.g. environmental adaptations to help overcome physical and behavioural limitations) to overcome these problems and engage in pleasurable activities. The involvement of the carer will be adapted to each patient's level of cognitive ability such that some people with dementia will require more input from their carer than others. The carers will participate in each therapy session.

The internal pilot will provide a "Go" signal to proceed to the full RCT if 125 participants have been randomised after 12 months' recruiting (75% of estimated number needed to hit full recruitment at 24 months, assuming recruitment numbers vs. time graph is linear), with >70% of mean intervention sessions attended.

## Intervention Type
Behavioural

## Primary outcome(s)
The change in Cornell Scale for Depression in Dementia (CSDD) (26) score between baseline and 6 months post-randomisation. This is a 19-item scale on which each item is rated 0 (absent), 1 (mild or intermittent) or 2 (severe) and a total score of 8 or more suggests significant depressive symptoms. The CSDD differs from rating scales for assessing depressed mood in people without dementia through inclusion of a combination of observed and informant-based questions rather than simply analysing differences in the phenomenology of depression in dementia. Taking up to 30 minutes to complete (20 minutes with the carer and 10 minutes with the patient), the scale covers 5 main areas of symptoms and signs of depression: (1) Mood-Related Signs (anxiety, sadness, lack of reactivity to pleasant events and irritability), (2) Behavioural Disturbance (agitation, retardation, multiple physical complaints, loss of interest in usual activities in last month), (3) Physical Signs (appetite loss, weight loss, lack of energy in last month), (4) Cyclic Functions (diurnal variation in mood, difficulty falling asleep, multiple awakenings during sleep, early morning awakening), (5) Ideational Disturbance (suicidal thoughts or attempts, poor self-esteem, pessimism, mood-congruent delusions). The CSDD was the primary outcome measure in HTA-SADD and we will use the same regimen of initial and refresher training, together with regular group exercises to assess reliability of research workers that we developed for HTA-SADD.

## Key secondary outcome(s))
1. Change in CSDD score between baseline and 3 and 12 months post-randomisation.
2. Change in disease-specific health-related quality of life (HRQL) measured with the DEMQOL and DEMQOL-proxy and generic quality of life with the EQ-5D. DEMQOL (28 items) and DEMQOL-Proxy (31 items) are interviewer-administered measures which obtain self and informant reports of the HRQL of people with dementia; items cover the feelings, memory, and everyday life of the person with dementia in the last week and Likert-scale responses (a lot

/quite a bit/a little/not at all) are used with higher overall total scores reflecting better HRQL. The EQ-5D is a 5-item self-report measure of health-related quality of life used to calculate utility scores for use in economic evaluations. Each of the 5 items is rated on a 5-point scale from no problem to extreme problems. Measured at baseline, 6 and 12 months.
3. Functional abilities with the Bristol Activities of Daily Living Scale, a 20-item scale completed with the carer and covering everyday daily living activities (food preparation, eating, drink preparation, drinking, dressing, personal hygiene, cleaning teeth, bathing/showering, toileting, transfers, mobility, orientation to time, orientation to place, communication, use of telephone, housework/gardening, shopping, finances, games/hobbies and transport) that has excellent psychometric properties across the mild to moderate dementia severity range. Measured at baseline, 6 and 12 months.
4. General cognitive function with the SMMSE, a more objective and valid version of the traditional MMSE, that takes between 5 and 10 minutes to administer to a patient. Measured at baseline, 6 and 12 months.
5. Anxiety, measured with the Rating Anxiety in Dementia scale, a 20-item scale assessing worry about physical health, cognitive performance, family problems, false beliefs, items considered trivial by others, level of frightfulness, noise sensitivity, sleep disturbance, irritability, trembling, motor tension, restlessness, fatigability, palpitations, autonomic symptoms, hyperventilation, dizziness, sweating, phobia and panic attacks. Individual items are scored from 0 (absent) to 3 (severe) and a total score of 11 or more indicates clinically significant anxiety. It takes 20 minutes to complete; 10 minutes with the carer and 10 minutes with the patient. Measured at baseline, 6 and 12 months.
6. Resource use, collected using the Client Service Receipt Inventory (CSRI) for Health and Social Care Resource Use. This is a measure of service utilisation used to calculate patient and carer costs, which we will modify for the patient group with mild to moderate dementia, and will use to record other forms of psychological therapy and pharmacotherapy received outside of the study. Measured at baseline, 6 and 12 months.
7. Measures specifically collected from carers about their own burden and wellbeing will include the Zarit Burden Inventory, a well-validated 22-item self-report measure of caregiver burden, and carer mental health assessed with the GHQ-12, a short version of the General Health Questionnaire that is sensitive in the detection of minor psychiatric disorder through assessment of a respondent’s current state and how this differs from their usual state. Measured at baseline, 6 and 12 months.
8. Satisfaction with the PATH intervention in people with dementia and their carers, measured with the Client Satisfaction Questionnaire. This was used to assess satisfaction with PATH in the original study by the Cornell group, and so has been validated in this population. Measured at 3 months.

### Completion date
31/12/2022

## Eligibility

### Key inclusion criteria
1. Diagnosis of probable AD or mixed AD and vascular dementia using NIA-AA criteria
2. Mild to moderate dementia severity, defined by an SMMSE score >10
3. Clinically significant depression, defined by score of 8+ on the Cornell Scale for Depression in Dementia
4. Aged >50 years

5. Sufficiently fluent in English to engage with the PATH intervention
6. Identified family carer who spends >1 hour per day on at least 3 days per week with participant and agrees to act as co-therapist for intervention

### Participant type(s)
Patient

### Healthy volunteers allowed
No

### Age group
Senior

### Sex
All

### Total final enrolment
336

### Key exclusion criteria
1. Diagnosis of rarer dementias, including dementia with Lewy bodies, Parkinson's disease dementia and frontotemporal dementia
2. Initiation of prescription or change in dose of antidepressant or other psychotropic medication in previous 4 weeks or plan to change treatment during the next 12 weeks
3. Those currently engaged in formal psychological therapy
4. Those requiring treatment for a severe psychiatric disorder such as schizophrenia or bipolar disorder
5. Are severely depressed and expressing suicidal ideation with active plans/suicidal behaviours and intent, as other forms of treatment and support would be indicated

### Date of first enrolment
01/09/2019

### Date of final enrolment
22/02/2022

## Locations

### Countries of recruitment
United Kingdom

England

### Study participating centre
**Camden and Islington NHS Trust**
United Kingdom
NW1 0PE

**Study participating centre**
**Oxford Health NHS Foundation Trust**
United Kingdom
OX4 2GX

**Study participating centre**
**St Nicolas Hospital**
Jubilee Road
Gosforth
Newcastle upon Tyne
United Kingdom
NE3 3XT

**Study participating centre**
**Sussex Partnership NHS Foundation Trust**
United Kingdom
PO19 1BX

**Study participating centre**
**Norfolk and Suffolk NHS Foundation Trust**
United Kingdom
NR6 5BE

**Study participating centre**
**Birmingham and Solihull Mental Health NHS Foundation Trust**
United Kingdom
B1 3RB

**Study participating centre**
**Cambridgeshire and Peterborough NHS Foundation Trust**
United Kingdom
CB21 5EF

# Sponsor information

**Organisation**

NOCLOR

# Funder(s)

**Funder type**
Government

**Funder Name**
Health Technology Assessment Programme

**Alternative Name(s)**
NIHR Health Technology Assessment Programme, Health Technology Assessment (HTA), HTA

**Funding Body Type**
Government organisation

**Funding Body Subtype**
National government

**Location**
United Kingdom

# Results and Publications

**Individual participant data (IPD) sharing plan**
The data sharing plans for the current study are unknown and will be made available at a later date.

**IPD sharing plan summary**
Data sharing statement to be made available at a later date

**Study outputs**

| Output type | Details | Date created | Date added | Peer reviewed? | Patient-facing? |
|---|---|---|---|---|---|
| HRA research summary | | | 28/06/2023 | No | No |
| Participant information sheet | Participant information sheet | 11/11/2025 | 11/11/2025 | No | Yes |