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Can a speech-based tool improve early detection of memory problems in the NHS?

Submission date
10/08/2026

Recruitment status
Not yet recruiting

Registration date
28/08/2026

Overall study status
Ongoing

Last Edited
28/08/2026

Condition category
Nervous System Diseases

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

Plain English summary of protocol

Background and study aims
Nearly one million people in the UK have dementia, but only about two-thirds have been formally diagnosed. Early detection of memory problems is difficult in routine practice, and waiting times for specialist assessment are often very long — often exceeding 13 weeks when the recommended benchmark is 6 weeks. This puts pressure on NHS memory services, and delays care.

PuntoTest is a simple speech-based tool using artificial intelligence to screen for memory problems. It can be used by patients themselves or with support from a clinician, offering a flexible and accessible approach to early detection. The tool has already been tested in other countries with promising results. This study tests whether it works well in NHS memory clinics and GP practices, and whether it's practical to use in the UK.

Who can participate?
Patients aged 50 years or over who have concerns about their memory, mild memory problems, mild dementia, or no memory concerns (as a healthy comparison volunteer) and have had a recent memory assessment (ACE-III within the last 3 months), or can do this as part of the study

What does the study involve?
The study involves a single visit lasting about 30 minutes. Participants will answer a few basic questions about themselves at the start, then speak into a tablet to complete a simple memory screening tool, and also take a standard memory test (ACE-III) so we can compare results. No additional visits needed.

What are the possible benefits and risks of participating?
Benefits: Participation will help us understand whether PuntoTest could support earlier and more accurate memory assessments in the NHS. This could benefit many people with memory concerns in the future and help improve the way care is delivered. Taking part may not directly benefit participants personally. However, the ACE-III assessment, which is completed during the same visit, is already part of the standard care.

Risks: Minimal. There are no known medical risks associated with taking part. The assessment involves speaking into a tablet and completing a standard memory test. Both are low-risk activities. Some people may find a memory assessment slightly tiring or stressful, or may feel worried about the results. If participants find it difficult at any point, they can speak to the research team. Participants are free to stop at any time.

Where is the study run from?
The study is sponsored by PuntoHealth Ltd and conducted across four NHS sites in England.

When is the study starting and how long is it expected to run for?
The study is expected to start in September 2026, depending on site setup. Enrolment of participants is planned over approximately 12 months (from September 2026 to July 2027). Data analysis is anticipated to be completed by December 2027, although this date is indicative and may change depending on recruitment progress and data collection completion.

Who is funding the study?
1. The National Institute for Health and Care Research (NIHR) Invention for Innovation (i4i) FAST Programme.
2. The UK Science and Technology Facilities Council (STFC)-UK Research and Innovation (UKRI).

Who is the main contact?
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Additional identifiers

Integrated Research Application System (IRAS)
354094

Central Portfolio Management System (CPMS)
72001

National Institute for Health and Care Research (NIHR)
510914

UK Science and Technology Facilities Council (STFC)-UK Research and Innovation (UKRI) grant number
NHSPOC01

Study information

Scientific Title
PuntoTest: speech-based AI cognitive screening in NHS primary and secondary care

Acronym

PuntoTest

Study objectives
Primary Objective
To assess the feasibility of implementing PuntoTest within NHS primary and secondary care settings.

This includes:
1. The ability to recruit the target number of participants across sites
2. Participant completion rates of the PuntoTest assessment
3. The feasibility of recruitment pathways from both primary and secondary care

Secondary Objectives
1. To compare performance of PuntoTest with current gold standard cognitive assessment, ACE-III (Addenbrooke's Cognitive Examination-III) and further develop the model.
2. To assess variation in performance across demographic groups, including age, sex, and education
3. To explore participant experience and acceptability of the PuntoTest assessment through qualitative interviews
4. To generate preliminary health economics data to inform future NHS commissioning decisions and grant applications

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 04/08/2026, London - Stanmore Research Ethics Committee (2 Redman Place, Stratford, London, E20 1JQ, United Kingdom; -; stanmore.rec@hra.nhs.uk), ref: 26/LO/0440

Primary study design
Interventional

Allocation
Non-randomized controlled trial

Masking
Open (masking not used)

Control
Active

Assignment
Single

Purpose
Screening

Study type(s)

Health condition(s) or problem(s) studied
Early detection of memory problems

Interventions

Study Design
This is a multi-site feasibility study designed to assess the implementation of PuntoTest within NHS primary and secondary care settings. This includes embedded health economic assessments, as well as exploratory evaluation of performance against the current gold standard.

What Happens to Participants
Eligible participants are identified by clinical staff at each site as part of their routine care pathway. The Patient Information Sheet (PIS) is provided in advance by the treating clinician or GP, allowing participants at least 24 hours to consider participation and ask questions. If they are interested, a study visit is arranged, where a trained member of the research team will explain the study and obtain written informed consent prior to any study procedures.

At the clinic or GP visit:
1. The research nurse answers any questions and takes written informed consent (15-30 minutes).
2. The participant completes the 10-minute PuntoTest assessment on an iPad in the clinic room, which includes a brief collection of demographic information (such as age, sex, and education level) followed by the speech-based assessment.
3. The standard ACE-III assessment will then be administered by the clinician as part of routine care. No additional
appointments are required. At the GP site (Greenwich), Dr James Rogers will be trained in ACE-III administration for this study.
4. A subset of participants will be invited to take part in a qualitative interview, either in the form of an individual interview
or a focus group. These will be conducted by a qualitative PPIE expert from UCLP. Depending on the number of participants who opt in to participate. These will be delivered by either video call or in person, to explore their experience of using PuntoTest. They will be compensated £25 per hour for this additional optional qualitative component.

Number of Participants and Sites
- NHS participants: approximately 150 (spread across Oxleas Memory Service, Enfield Memory Service, Lewisham
Memory Service, and Greenwich GP Practice)

Patient and Public Involvement
A lived experience advisory panel were involved in the review of the protocol and patient consent materials, as part of a
series of PPIE workshops led by UCLPartners. Select members from this panel will also be invited to sit on the Steering Committee.

Co-design workshops will be held during study delivery to inform ongoing participant engagement and materials.

Intervention Type

Device

Phase

Not Applicable

Drug/device/biological/vaccine name(s)

PuntoTest

Primary outcome(s)
1. Feasibility Measure: Recruitment rate measured using participant enrolment data collection at each site, calculated at monthly time points and at the end of the recruitment period

2. Feasibility Measure: PuntoTest assessment completion rate measured using study database records, calculated as the proportion completing assessments, at the end of the study

3. Feasibility Measure: Recruitment pathway distribution measured using enrolment data, comparing the proportion recruited via primary vs secondary care, at the end of recruitment

Key secondary outcome(s)
1. PuntoTest performance measured using exploratory comparison of PuntoTest outputs with ACE-III scores at a baseline assessment, analysed at the end of data collection

2. Demographic variation in PuntoTest outputs measured using subgroup analysis by age, sex, education, and living status across all participants, analysed at the end of data collection

3. Participant acceptability measured using qualitative thematic analysis of interviews conducted post-assessment (optional interviews with ~15 participants), analysed at study completion

4. Health Economics: Healthcare resource use, service activity, and staff time associated with PuntoTest implementation measured using data collection on time to assessment, clinical staff involvement, and activities, analysed at the end of data collection

5. Health Economics: Service capacity indicators, including time to assessment and triage activity /duration measured using service activity data, analysed at the end of data collection

6. Health Economics: Implementation and staff-related costs associated with PuntoTest introduction measured using cost data collection, analysed at the end of data collection

7. Health Economics: Health economic evaluation data for PuntoTest to inform future NHS economic evaluation measured using resource use analysis, analysed at study completion

Completion date
17/12/2027

Eligibility

Key inclusion criteria
1. Adults aged > = 50 years
2. Capacity to provide informed consent
3. Individuals in one of the following groups, as determined through routine clinical assessment and application of the following criteria:
3.1. Subjective Cognitive Decline (SCD; also referred to as Subjective Memory Complaints, SMC). The following criteria will be used to define SCD (Jessen et al., 2014):
3.1.1. Self-experienced persistent decline in cognitive capacity compared with a previously normal status
3.1.2. Normal performance on standardised cognitive assessments
3.1.3. No significant impairment in activities of daily living

3.1.4. Absence of mild cognitive impairment or dementia
3.2. Mild Cognitive Impairment (MCI). An individual meeting the following diagnostic criteria will be identified as having MCI (Albert et al., 2011):
3.2.1. Concern regarding a change in cognition, whether reported by the self, informant, or clinician.
3.2.2. Objective evidence of impairment in one or more cognitive domains, typically including memory.
3.2.3. Preservation of independence in functional abilities.
3.2.4. Absence of dementia.
4. Mild dementia. An individual meeting the following diagnostic criteria will be identified as having mild dementia (DSM-5, 2013):
4.1. Evidence of cognitive decline from a previous level of performance, reported by the individual, an informant, or a clinician
4.2. Objective impairment in one or more cognitive domains (e.g. memory, attention, language, executive function)
4.3. Interference with independence in everyday activities (e.g. requiring assistance with complex tasks)
4.4. Not better explained by delirium or another mental disorder
5. Healthy controls. An individual meeting the following diagnostic criteria will be identified as a healthy control:
5.1. No self-reported cognitive concerns
5.2. Normal performance on a standardised cognitive assessment, defined as a score of > = 27 on the Mini-Mental State Examination (MMSE) (Molloy & Standish, 1997\)
5.3. No clinical diagnosis of mild cognitive impairment or dementia
5.4. Independent in activities of daily living
6. Availability of a recent ACE-III assessment (within the previous 3 months), or ability to complete the assessment as part of the study procedures
7. Sufficient proficiency in English to complete the study procedures and digital assessment

Healthy volunteers allowed
Yes

Age group
Mixed

Lower age limit
50 Years

Upper age limit
120 Years

Sex
All

Total final enrolment
0

Key exclusion criteria
1. Moderate or severe dementia, or any condition associated with lack of capacity to provide informed consent
2. Inability to complete the ACE-III assessment required for study participation

3. Severe sensory, motor, or cognitive impairments that would prevent completion of the study procedures, including use of the digital assessment tools, even with support
4. Acute or unstable physical or mental health conditions that, in the opinion of the clinical team, would make participation inappropriate

Date of first enrolment
28/09/2026

Date of final enrolment
31/07/2027

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
OXLEAS NHS Foundation Trust — Greenwich Memory Service
Memorial Hospital, Shooters Hill, Woolwich
London
England
SE18 3RG

Study participating centre
North London NHS Foundation Trust — Enfield Memory Service (EMS)
Chase Farm Hospital, The Ridgeway, Enfield
London
England
EN2 8JL

Study participating centre
South London and Maudsley NHS Foundation Trust — Lewisham Memory Service
91 Granville Park, Lewisham
London
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SE13 7DW

Study participating centre
Gallions Reach Health Centre
Bentham Road
London

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SE28 8BE

Sponsor information

Organisation
Punto Health Ltd

Funder(s)

Funder type
Government

Funder Name
National Institute for Health and Care Research

Alternative Name(s)
National Institute for Health Research, NIHR Research, NIHRresearch, NIHR - National Institute for Health Research, NIHR (The National Institute for Health and Care Research), NIHR

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United Kingdom

Funder Name
UK Research and Innovation

Alternative Name(s)
UKRI

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location

United Kingdom

Funder Name
Invention for Innovation Programme

Alternative Name(s)
NIHR Invention for Innovation Programme, i4i

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United Kingdom

Funder Name
Science and Technology Facilities Council

Alternative Name(s)
Science & Technology Facilities Council, STFC

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan

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