

# An examination of the social acceptability of novel cancer detection technologies: Affect matters

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## Introduction

Members of the public play a crucial role in early cancer detection efforts, as their perspectives are essential for the social acceptability and uptake of detection technologies. In clinical trials, social acceptability is often measured with simple 'satisfaction' and 'willingness to repeat' scores, which can obscure the diverse factors influencing acceptability and individual variability in patient responses.

## Objective

This qualitative study examined patient perspectives on the acceptability of the Cytosponge, a novel early cancer detection test, during a 2021 implementation trial in secondary care settings in the UK.

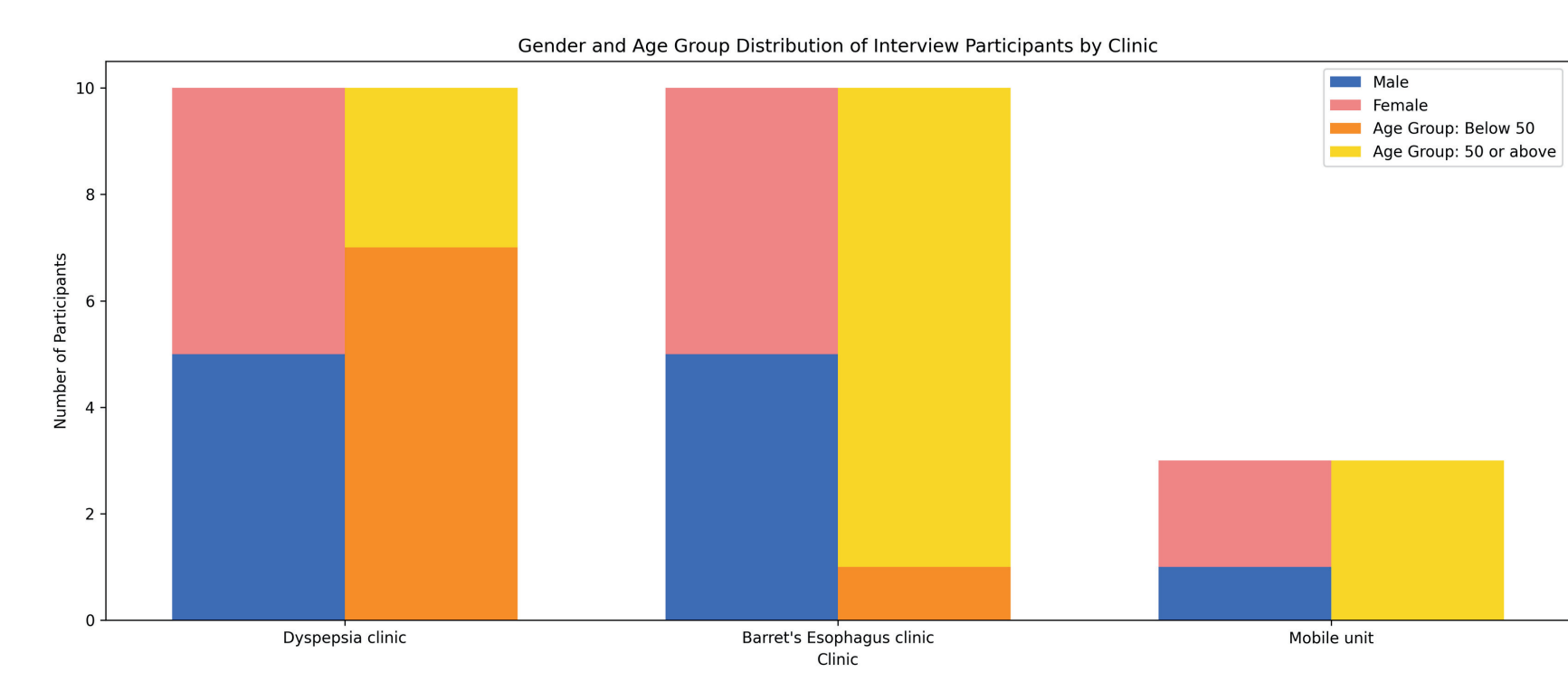
## Methodology

This study draws on anthropological fieldwork conducted between January and August 2021, during COVID-19-related clinical service reductions and social distancing.

Data collection included:

- **Observations** were conducted across 19 Cytosponge clinics (81 attempts), providing care to patients with dyspepsia, heartburn, or Barrett's esophagus (secondary care).
- **Two rounds of semi-structured interviews** with 23 symptomatic participants undergoing the test, conducted online, by phone, or in person. Interviews took place soon after the appointment and weeks later, following the test results.
- **Fieldnotes** capturing contextual and non-verbal details during clinic visits and participant interactions.

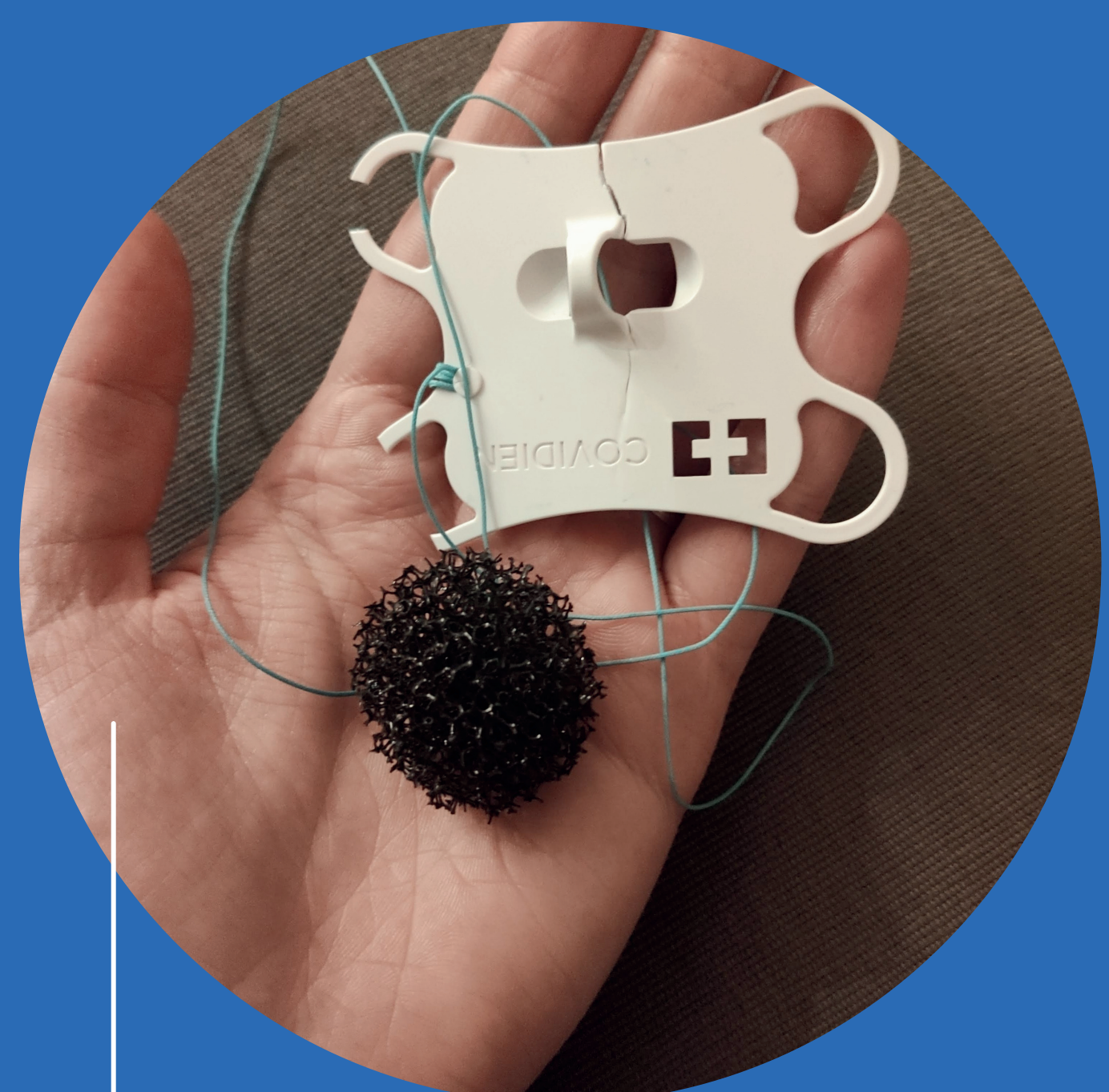
## Participants



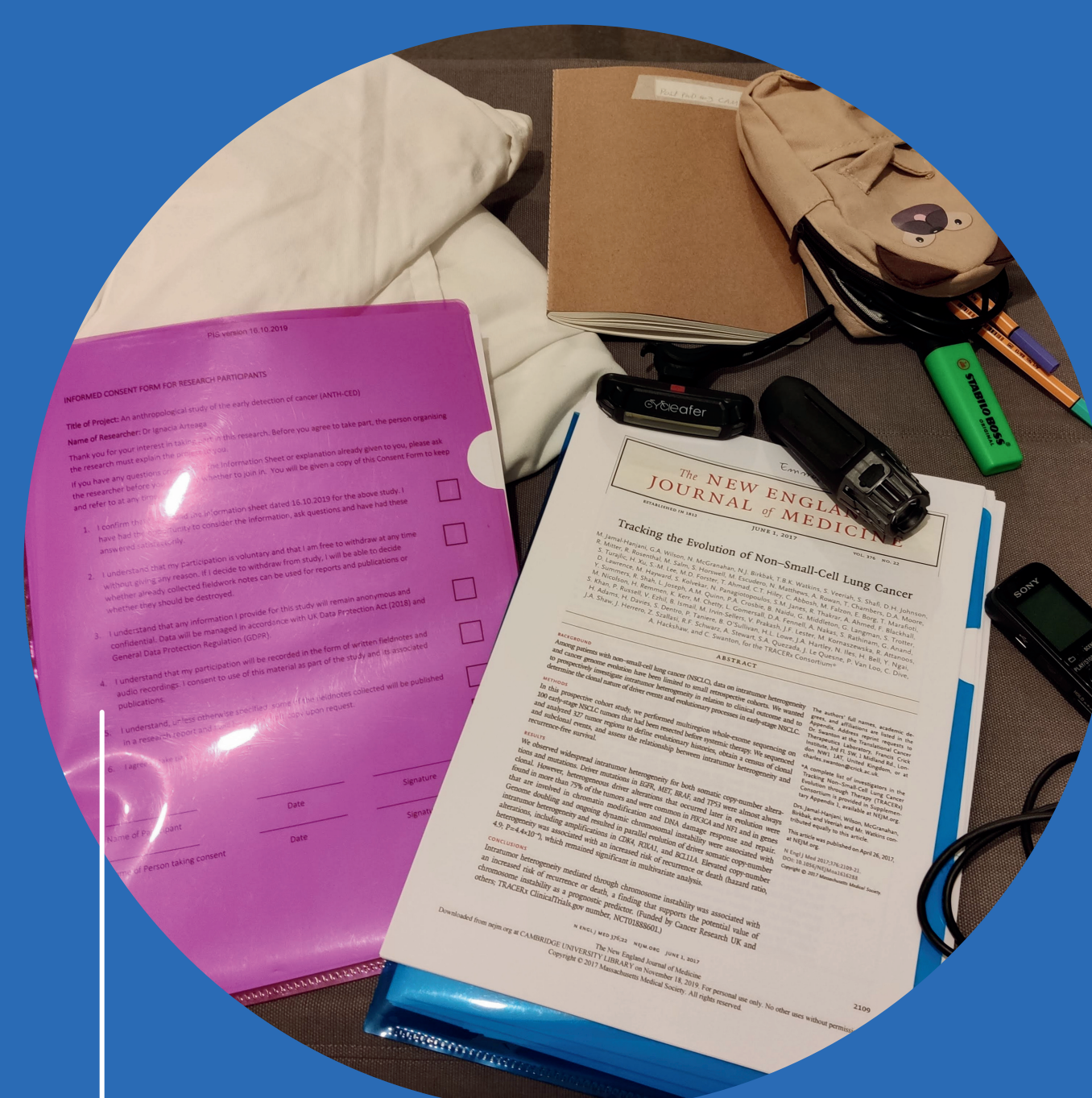
Interview participants per clinic

Participants valued the **Cytosponge triage test** for its efficiency in healthcare, but its ability to provide **diagnostic reassurance** or 'peace of mind' varied.

Factors like inconclusive results, difficulties completing the test, and **unresolved concerns**—despite clear results—left some participants seeking further answers from primary care



**Technology**  
The cytosponge capsule once it has expanded



**Fieldwork**  
Tools and materials for anthropological fieldwork



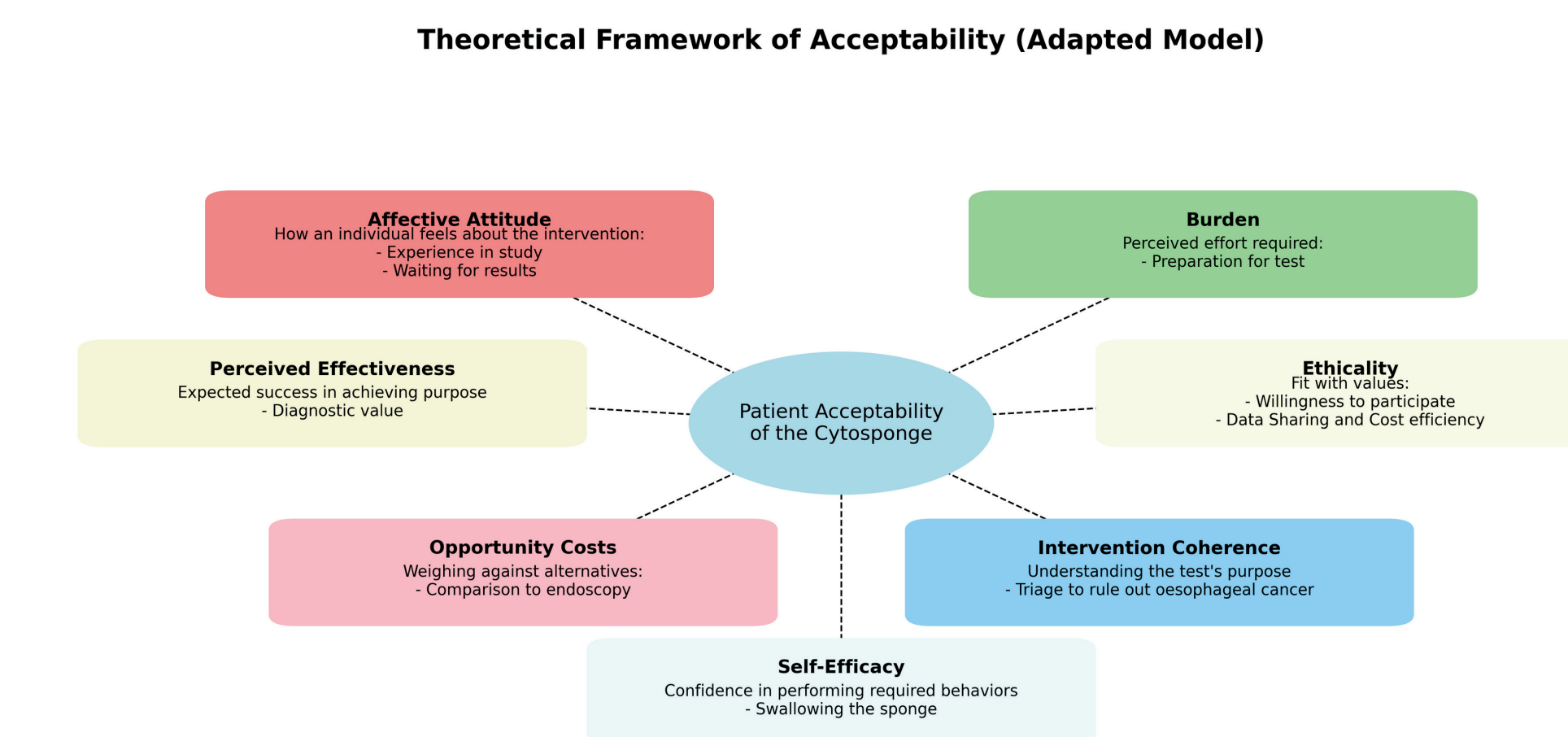
**Clinic**  
Observation at a Cytosponge clinic



**Pandemic context**  
Interviews in public spaces to allow for social distancing

## Analysis

Interviews and field notes from observations were transcribed verbatim and analyzed using reflexive thematic coding, guided by the Theoretical Framework of Acceptability (Sekon et al, 2017), to identify key themes in the anonymized data.



**High Patient Acceptability:** Participants generally found the Cytosponge highly acceptable.

- **Low Burden:** The test was easy to undergo, with minimal physical or logistical effort required.
- **Ethicality:** No significant concerns about data sharing were reported, though this may reflect self-selection bias.
- **High Self-Efficacy:** Most participants were confident in their ability to complete the test, except for a few who had trouble swallowing it.
- **Better Opportunity Costs:** The Cytosponge was viewed as a much more favorable alternative to endoscopy in terms of time and discomfort.
- **Mixed Intervention Coherence:** Understanding of the test's purpose varied; many only fully grasped it after further explanation during interviews.

## Significant Psychological Burden:

- **Affective Attitude:** Waiting for results often caused worry and anxiety, affecting participants' overall experience.

## Diagnostic Value was Inconsistent:

- **Perceived Effectiveness:** Confidence in the test's diagnostic value varied, especially for those with inconclusive results, family history of cancer, or persistent symptoms despite clear findings.

## Discussion

The analysis using the Theoretical Framework of Acceptability showed that while the **Cytosponge test was generally well-accepted**, achieving diagnostic reassurance was inconsistent.

**Diagnostic reassurance**, or the relief from knowing a test rules out serious conditions, was not always felt, especially when results were inconclusive or symptoms persisted. Enhancing communication and providing additional support may help address these concerns.

Beyond the framework, the analysis also highlights that acceptability depends on patients' experiences navigating the healthcare system. Many participants faced **challenges accessing follow-up care**, underscoring the need to integrate new tests into existing pathways to ensure ongoing support and better patient outcomes.

## Funding

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