



Northumbria Healthcare
NHS Foundation Trust

Healthcare Navigation at Northumbria Healthcare

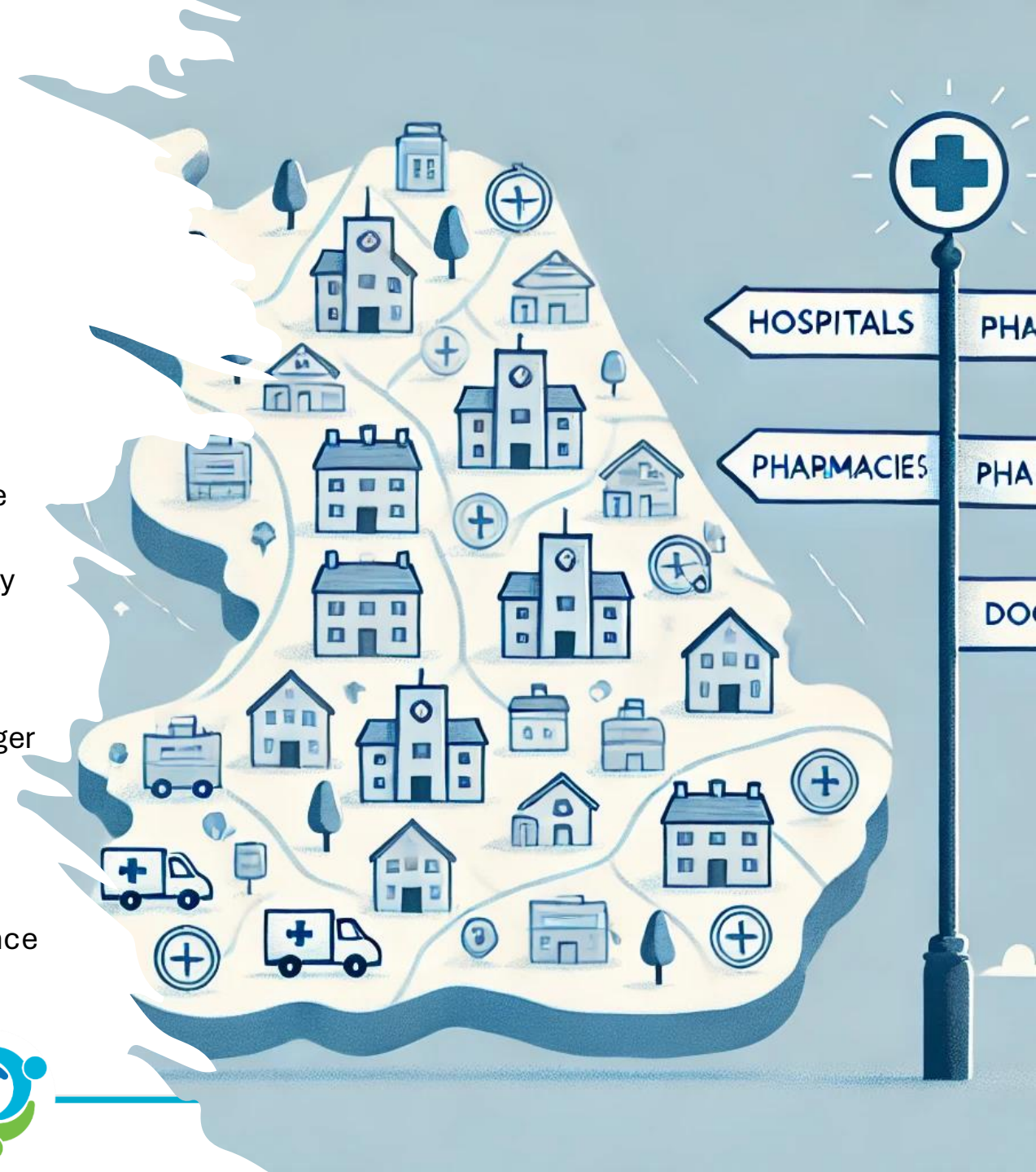
Louise Swash – Public Health Manager



The Northumbria Way
People Caring for People

Navigation is part of a range of measures to improve access, efficiency and address inequalities in outpatient appointments

- Attending hospital appointments is essential for patients to access the medical care they need to maintain and improve their health
- Rising rates of chronic diseases, long term conditions & multi morbidity contribute to diversity and complexity of health care need [Public Health Intelligence Resources :: Northumbria Healthcare Staff Portal](#)
- Healthcare systems can be difficult for patients to navigate
- Missed appointments contribute to waste, growing workloads and longer waiting times – **Impact Efficiency and Performance**
- Non-attendance at scheduled care can lead to increased use of emergency care, potential burden on system and is a risk marker for vulnerability and **poorer health outcomes**
- The health inequalities outpatient explorer highlights a gap in attendance between those living in IMD 1 and IMD 5
- Identifying solutions and contributing to evidence base supports our strategic priorities and population health.



What makes it harder for some patients to attend?

Getting to the appointment



Health need & circumstances – e.g. multiple appointments, difficult to remember



System challenges, e.g. delays, cancellations



Financial burden



Digital Exclusion



Accessible information



Appointment flexibility & choice



Delayed communication



Technology issues



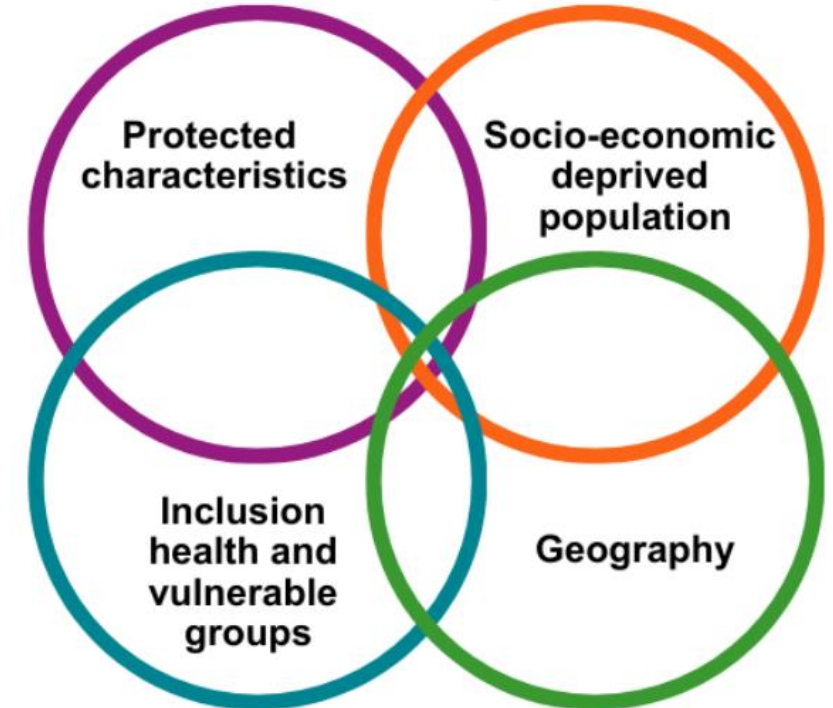
Fear and anxiety



Navigation supports our Legal Duty to address Healthcare Inequalities



Dimensions of Health Inequalities



Missed Appointments: Understanding Access based on deprivation levels (IMD)

95% confidence ($p < 0.05$)

9.5%

most deprived patients

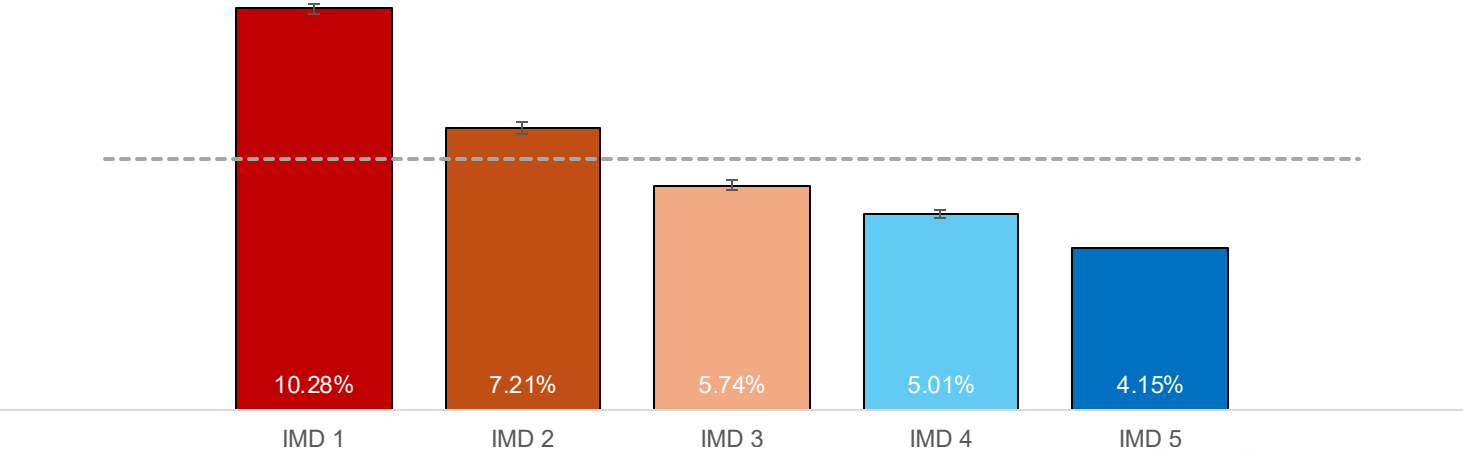
Gap: 5.6%

3.9%

least deprived patients

DNA rates in outpatient appointments
All specialties: Jan 2024 - Jun 2025

Deprivation is based on a measure calculated by the ONS called the 'Index of Multiple Deprivation', determined by where a person lives– specifically which 'Lower Super Output Area' (LSOA) a person lives in. This a small area of approx. 1500 people.



Pilot Methodology



USE PREDICTOR
TOOL TO
IDENTIFY HIGH-
RISK OF NON
ATTENDING
PATIENTS



USE SYSTEMS TO
TRACK, CALL,
AND LOG
INTERVENTION



SUPPORT
PATIENT IF
NEEDED;
UNDERSTAND
CHALLENGES;
AID MITIGATION;
ENSURE
UNDERSTANDING
OF APPOINTMENT



RECORD
OUTCOMES IN
ONEVIEW/MS
FORMS

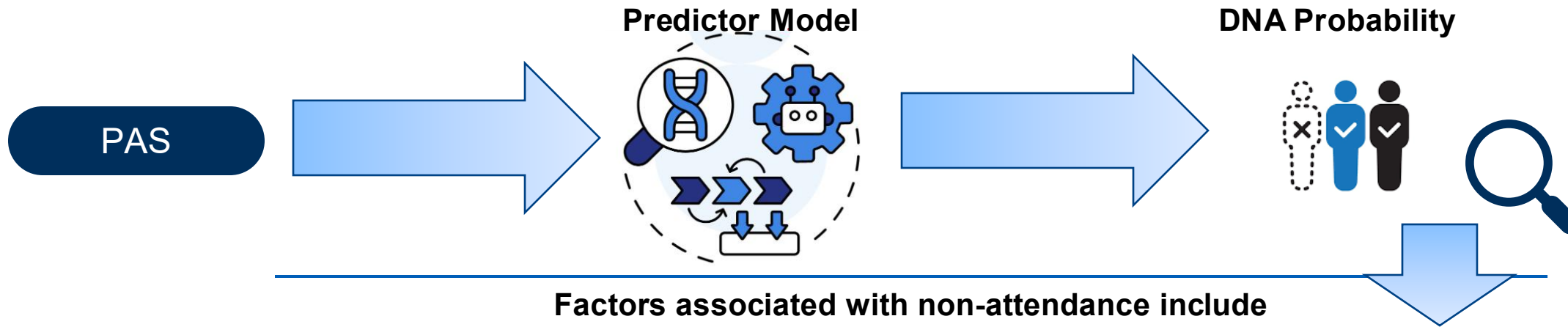


SUPPORT
EXTERNAL
EVALUATION

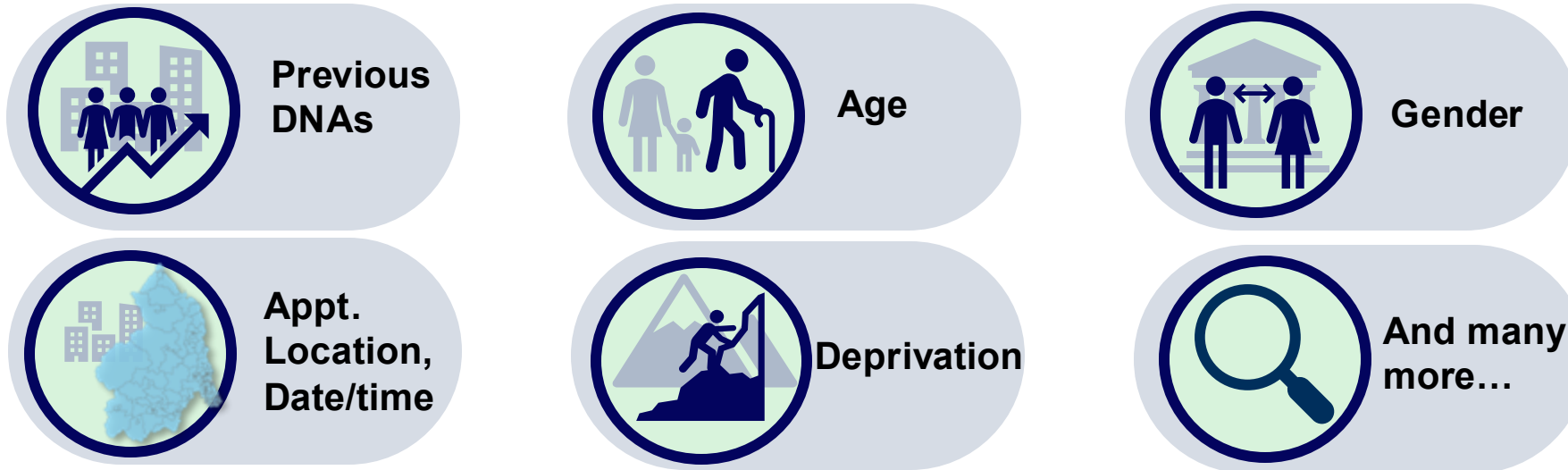


The Predictor Model

Data is passed into an XGBoost Machine Learning model, estimating patients' likelihood to DNA giving a breakdown of each factor's contribution to the overall probability



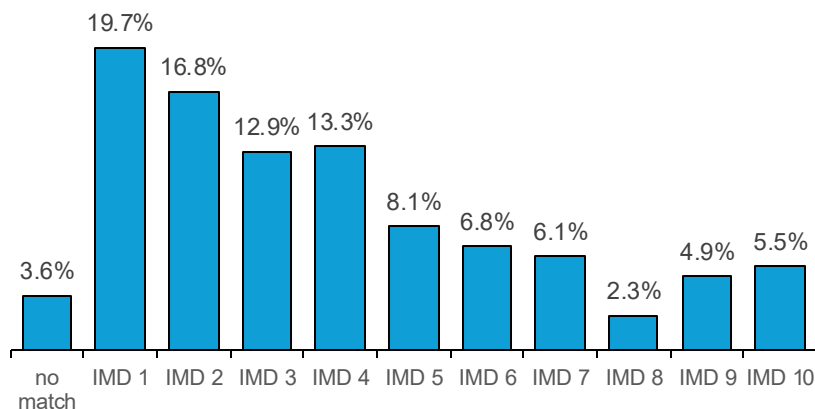
Factors associated with non-attendance include



Oral Surgery Healthcare Navigation Pilot

Oral surgery 'did not attend' (DNA) rate was 10.5% for period October 22 – September 23
Greater number of patients predicted as high-risk in IMD Deciles 1 & 2

High-risk of non-attendance patients by
IMD* Decile



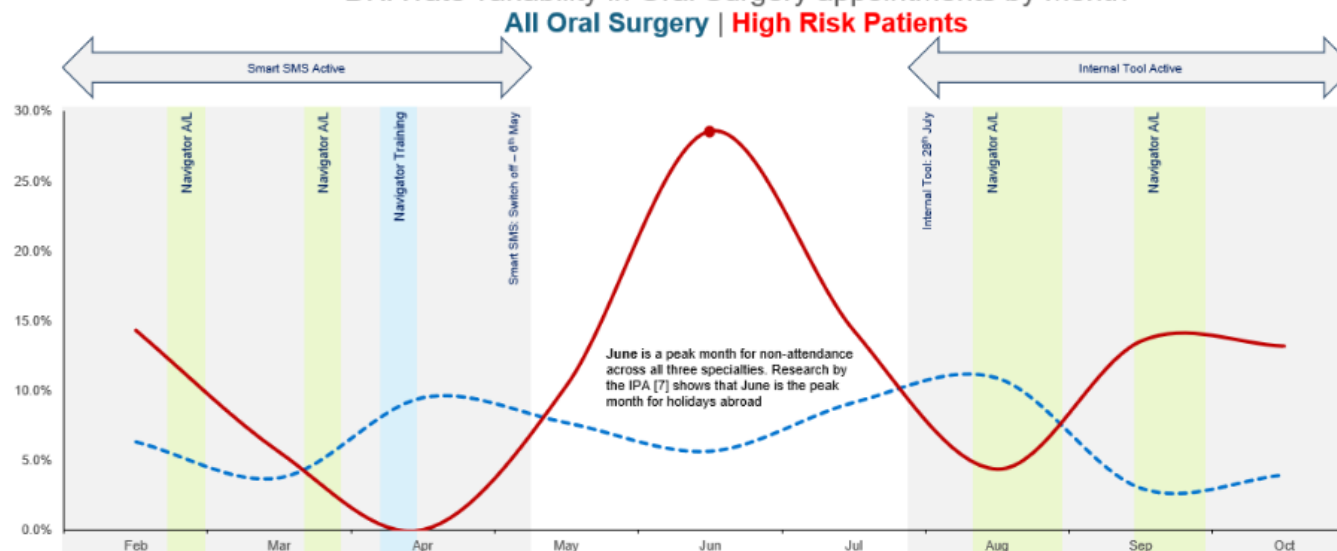
The Pilot

Developed the Predictor
Model

Pre-appointment calls
made between
February 2025 and
December 2025

Calls to help navigate
appointments, removed
barriers such as; patient
anxiety, patient
expectations and
understanding

DNA rate variability in Oral Surgery appointments by month



Results:

- Overall decrease in the non-attendance rate **6.3% to 3.9%** and in **high-risk patients 14.3% to 13.2%**.
- Most of the non-attendance occurred in the 21-40 years age group with males more likely to miss appointments.

Respiratory Healthcare Navigation Pilot

Respiratory Physiology 'did not attend' (DNA) rate was **11.9%** for period Oct 22 Sept 23
High-risk of non-attendance cohort; 60% male; 31 – 65 age-range; predominantly in areas of higher deprivation

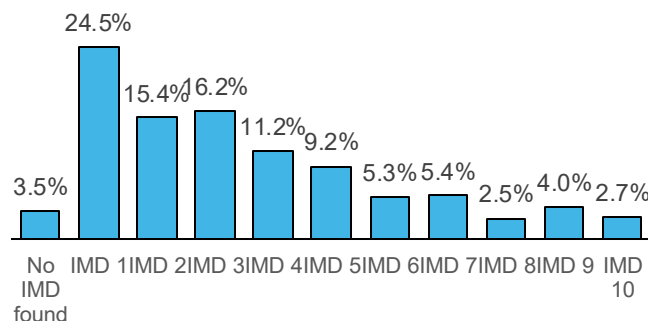
The Pilot

Developed the Predictor Model

Pre-appointment calls made between February 2025 and December 2025

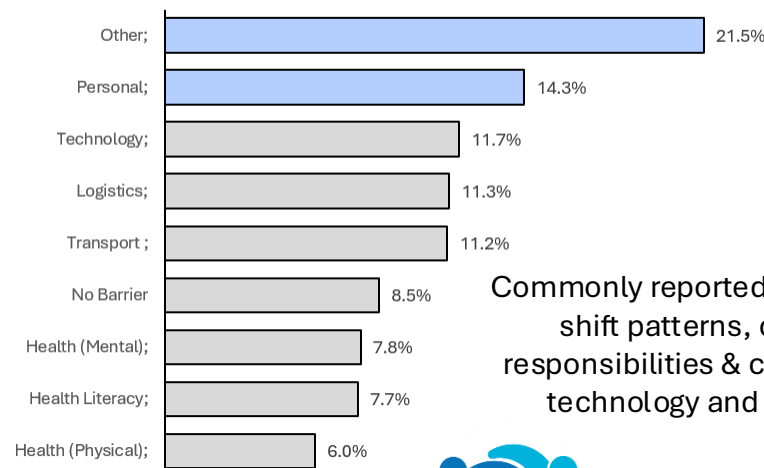
Calls to help navigate appointments, **removed barriers** such as; **patient anxiety, technology expectations and patient understanding**

High-DNA-risk cohort by IMD Decile

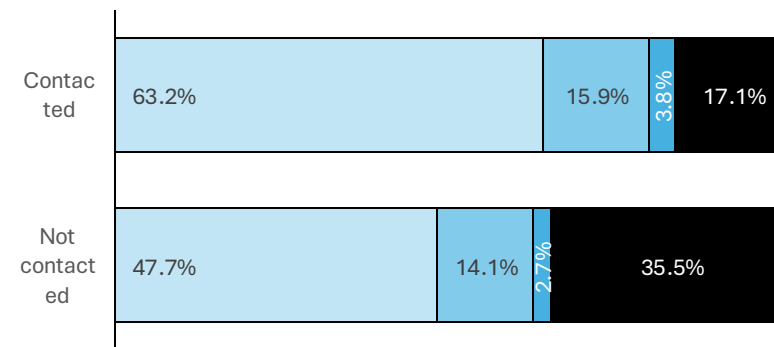
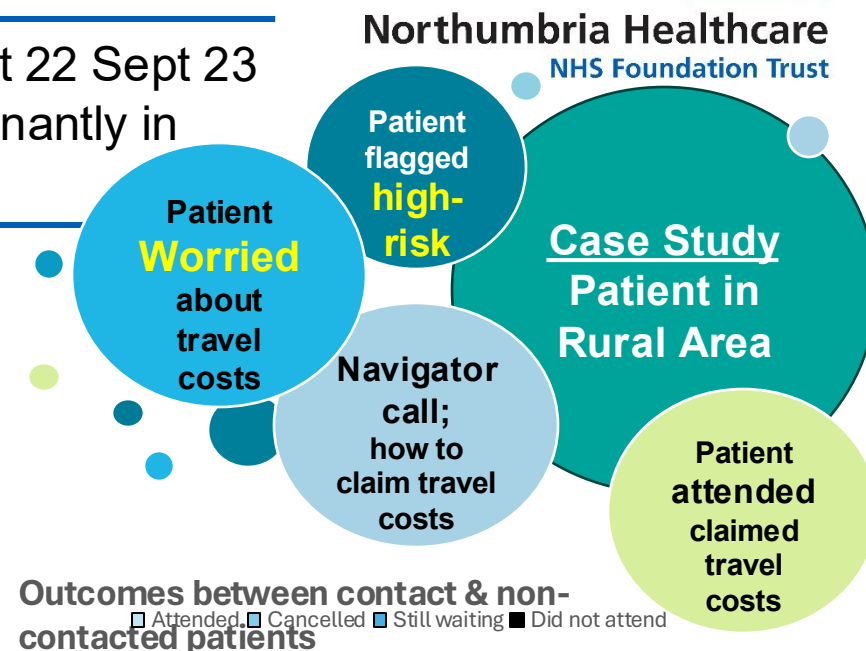


Clear **deprivation gradient** in high-risk cohort

Barriers to attendance identified by HCN



Commonly reported **barriers**:
shift patterns, carer responsibilities & childcare, technology and travel



Results:

- 63.2%** of contacted patients attended their appointments compared to just **47.7%** of non-contacted patients

Physical Health and Anxiety About Attendance (Lung Function Service)

A patient identified as high risk of non-attendance explained during contact that he did not plan to attend his upcoming lung function test. He described how even light physical activity leaves him exhausted and breathless for the rest of the day. He was also worried that the tests would make his condition worse and that he would struggle to get home afterwards.

Through the conversation, the Healthcare Navigator was able to explain what the appointment involved and reassure him that the tests measured breathing function, not physical fitness. The patient said this made it easier to make an informed decision about whether to attend. With his consent, the Navigator passed this information to the Lung Function team so they could provide additional support.

Without this proactive contact, the patient would likely have missed the appointment without the team ever knowing why. This example highlights how the Healthcare Navigator role bridges the gap between patients and clinical teams, allowing services to respond to patients' needs more effectively.



Case Study 2 – Financial and Transport Barriers (Sleep Studies)

A patient living in a rural area was flagged as high risk due to multiple previous DNAs and limited access to public transport. On contact, the Navigator found that the patient was unsure about claiming back travel costs and was worried about the expense of taxis. The patient had also been reluctant to cancel, fearing this might affect future appointments.

The Navigator explained the process for claiming travel expenses and supported the patient to make an informed choice about attending. Following the conversation, the patient confirmed they were able to arrange travel and successfully attended their appointment. The Navigator later checked that the patient had been able to claim back their travel costs, which provided reassurance and closure for both parties.

This example shows how addressing practical and financial barriers through short, proactive contact can make the difference between a missed appointment and successful attendance, while also improving patient confidence in navigating hospital processes.



Personalised texts prior to appointments through Patient Portal

Education around diagnostic tests, equipment, expectations

Health literacy around ‘telephone vs F2F’

Inclusive healthcare; Monitor patient flags

Discuss reasonable adjustments with patients prior to attendance (anxiety, physical health)

Collaborate with local communities to improve accessibility of service



Considerations



Navigation is just one element of patient support



Complexity of patients and appropriateness of navigation



DNA reduction as a quantitative measure of success (qualitative measures - patient experience)



Management of expectations



Opportunities for co-production of navigation model



Utilise a tiered approach to navigation – there are differing levels of intervention dependent on service need



Practicalities such as correct contact information and caller ID to improve likelihood of contact



Expected Outcomes

Better Patient Outcomes – Early diagnosis & timely treatment reduce complications & improve recovery

Reduced Health Inequalities – Ensures vulnerable populations receive care, addressing disparities

Lower Emergency Admissions – preventative care reduces strain on A&E departments

Cost Savings – efficient resource use lowers long term healthcare costs

Enhanced patient experience – reduced wait times and better communication improve satisfaction

Workforce Efficiency – healthcare staff can focus on delivering care rather than managing delays





Thank you