Health Innovation
Kent Surrey Sussex

Unity
Insights

Surrey Innovation for Healthcare Inequalities Programme (InHIP)

Evaluation summary report

March 2024

Contents

Executive summary

Introduction

The Surrey Heartlands InHIP project's primary aim was to increase access to high cholesterol and familial hypercholesterolaemia (FH) screening and associated treatments in the community, focusing on populations from deprived areas, Black and Asian minority ethnic groups, and those ineligible for NHS health checks, largely due to age.

The aim of this evaluation was to support local quality improvement efforts, contribute to the national evaluation workstream, and inform future projects addressing inequalities by sharing valuable insights and learnings. Findings from this evaluation will aim to support in improving access, experience and outcomes to health care innovations for people in the most deprived areas of the UK and those people considered to be in 'inclusion' groups (Core20PLUS5).

The following questions were identified for the purposes of the evaluation

1) How effective has the project been at reaching hard-to-reach groups (Core20PLUS5)?
2) What effect has the project had on outputs or outcomes across the target groups?
3) What has been the monetary impact of the InHIP programme?
4) Is the approach a feasible option for future initiatives?

Methodology

Quantitative:
Datasets were shared by the ABC and YMCA to Unity Insights, containing demographic and metric data. There were 74 individuals who were included in the initial startup phase, and 475 in the established programme phase. Health outcomes included: cholesterol, hypertension, diabetes, QRISK, BMI, family history, heart age, and referral status.

Qualitative:
There were five interviews in total, lasting up to 45 minutes. Interviews were held over Microsoft Teams during February 2024. Participants were prompted on eight interview questions. Thematic analysis was conducted on the interview transcripts to organise the analysis by each theme.

Benefit forecast modelling:
The number of patients engaged was multiplied by treatment escalation rates, associated risk reductions in adverse events and their associated costs to estimate total five-year savings to health and social care.

Executive summary

Results

- The programme reached more individuals under 40 and more individuals from ethnic minority groups in the established programme phase compared to the initial startup.
- Analysis suggests that the patients within the pathway came from Core20 postcodes and that the programme reached individuals with higher levels of deprivation compared to the broader Surrey population, even though the Surrey region is largely not deprived.
- Across both clinics, 267 individuals with health indicators of clinical conditions were provided health education and 183 were escalated to a GP for further care.
- Interviews revealed that staff praised the programme for the positive work it had achieved in reaching these target groups, and participants emphasised the difference they had been able to make in people's lives, but acknowledged some challenges. They noted managers in other services playing gate keeping roles to some communities, and mismatched priorities between some health care providers.
- Despite the teething troubles, participants felt strongly that their work should continue. Building on existing relationships were suggested as the most effective way forwards.

Summary of findings

How effective has the project been at reaching hard-to-reach groups (Core20PLUS5)?

- Results suggest the project was effective in increasing engagement with ethnic minorities, under 40s and Core20 group (although this rise was marginal).

What effect has the project had on outputs or outcomes across the target groups?

- The project improved identification of individuals at risk for CVD within some of the target groups (ethnic minority groups) as the project matured, this could enable early management of their conditions and potentially prevent adverse outcomes.

What has been the monetary impact of the InHIP programme?

- The Benefit forecast results show that there is a potential benefit to health and social care within the Surrey Heartlands ICB geography of £101k over 5 years. The size of the monetisable benefit, plus the likely scale of the unmonetisable benefits, presents a business case for continued investment and scale-up of the project. Costs were not incorporated into this analysis.

Is the approach a feasible option for future initiatives?

- Interviews revealed staff recognise the significance and importance of the programme, felt it had a positive impact on upstream pressures and felt strongly that their work should continue. They did acknowledge some limitations of the current design but suggested some ideas to address these challenges.

Introduction

Introduction

Cardiovascular disease in Surrey

Cardiovascular disease (CVD) affects around seven million people in the UK and is a significant cause of disability and death, with health and social care costs estimated at £7.8 billion per year. Hypercholesterolemia is recognised as one of the most significant risk factors for CVD. Effective management of these conditions can lead to a significant reduction in the risk of having a cardiovascular event, but low detection and limited awareness of risks and treatment options in primary care present barriers to effective management. Two thirds of those at risk of developing CVD are undertreated, with areas of deprivation experiencing a greater treatment gap.

Innovation for Healthcare Inequalities Programme (InHIP)

NHS England's Innovation for Healthcare Inequalities Programme (InHIP) is a unique collaboration between the Accelerated Access Collaborative (AAC), NHS England's National Healthcare Inequalities Improvement Programme and the Health Innovation Network, formerly Academic Health Science Network (AHSN Network), and delivered in partnership with Integrated Care Systems (ICSs). The primary aim is to address local healthcare inequalities experienced by deprived and other under-served populations. Project teams (comprising of clinical and non-clinical expertise) from across England are working together with their local communities to identify, address, and minimise healthcare inequalities through projects to improve access to the latest health technologies and medicines.

Introduction

Project aims

The Surrey Heartlands InHIP project's primary aim was to increase access to high cholesterol and familial hypercholesterolaemia (FH) screening and associated treatments in the community, focusing on populations from deprived areas, Black and Asian minority ethnic groups, and those ineligible for NHS health checks, largely due to age. While many services cannot be delivered outside a healthcare setting, in this project screening established programmes were taken out of traditional healthcare settings and into communities. This can start to build trust and relationships with healthcare services, as well as increase detection of FH, and other CVD diseases.

ABC and YMCA

Delivery was led by the Alliance for Better Care (ABC) GP Federation Outreach Team, serving a large part of the Core20 communities as defined by the Index of Multiple Deprivation (IMD) definitions in Surrey and YMCA (a third sector partner) to maximise reach and reduce primary care workforce pressures, overseen by the Surrey Heartlands ICB Public Health team. The YMCA attended targeted groups and meetings tailored to the cohort population, whereas the ABC GP Federation approach was twofold, to attend community events and fairs in the geographical areas that form part of the Core 20% most deprived communities, and to attend venues where targeted services are offered such as domestic abuse refuges and homeless shelters.

HI KSS & Unity Insights

Health Innovation Kent Surrey Sussex (HI KSS) and Unity Insights, which HI KSS commissioned on behalf of Surrey Heartlands, worked together to provide an independent evaluation examining the screening established programme's effectiveness at reaching underserved populations. Specifically, focusing on populations from deprived areas, Black, and Asian minority ethnic groups, and those ineligible for NHS health checks.

Introduction

Aims of the evaluation

The aim of this evaluation was to support local quality improvement efforts, contribute to the national evaluation workstream, and inform future projects addressing inequalities by sharing valuable insights and learnings. Findings from this evaluation will aim to support in improving access, experience and outcomes to health care innovations for people in the most deprived areas of the UK and those people considered to be in ‘inclusion’ groups (Core20PLUS5).

Evaluation questions

The following questions were identified for the purposes of the evaluation, with evidence generated from the quantitative analysis conducted by Unity Insights and qualitative analysis conducted by HI KSS:

1) How effective has the project been at reaching hard-to-reach groups (Core20PLUS5)?
2) What effect has the project had on outputs or outcomes across the target groups?
3) What has been the monetary impact of the InHIP programme?
4) Is the approach a feasible option for future initiatives?

See appendix A for definitions

REDUCING HEALTHCARE INEQUALITIES

The **Core20PLUS5** approach is designed to support Integrated Care Systems to drive targeted action in healthcare inequalities improvement

CORE20
The most deprived **20%** of the national population as identified by the Index of Multiple Deprivation

PLUS
ICS-chosen population groups experiencing poorer-than-average health access, experience and/or outcomes, who may not be captured within the Core20 alone and would benefit from a tailored healthcare approach e.g. inclusion health groups

Target population

CORE20 PLUS 5

Key clinical areas of health inequalities

1. **MATERNITY** ensuring continuity of care for **75%** of women from BAME communities and from the most deprived groups
2. **SEVERE MENTAL ILLNESS (SMI)** ensuring annual health checks for **60%** of those living with SMI (bringing SMI in line with the success seen in Learning Disabilities)
3. **CHRONIC RESPIRATORY DISEASE** a clear focus on Chronic Obstructive Pulmonary Disease (COPD), driving up uptake of Covid, Flu and Pneumonia vaccines to reduce infective exacerbations and emergency hospital admissions due to those exacerbations
4. **EARLY CANCER DIAGNOSIS** **75%** of cases diagnosed at stage 1 or 2 by 2028
5. **HYPERTENSION CASE-FINDING** and optimal management and lipid optimal management

SMOKING CESSATION
positively impacts all 5 key clinical areas

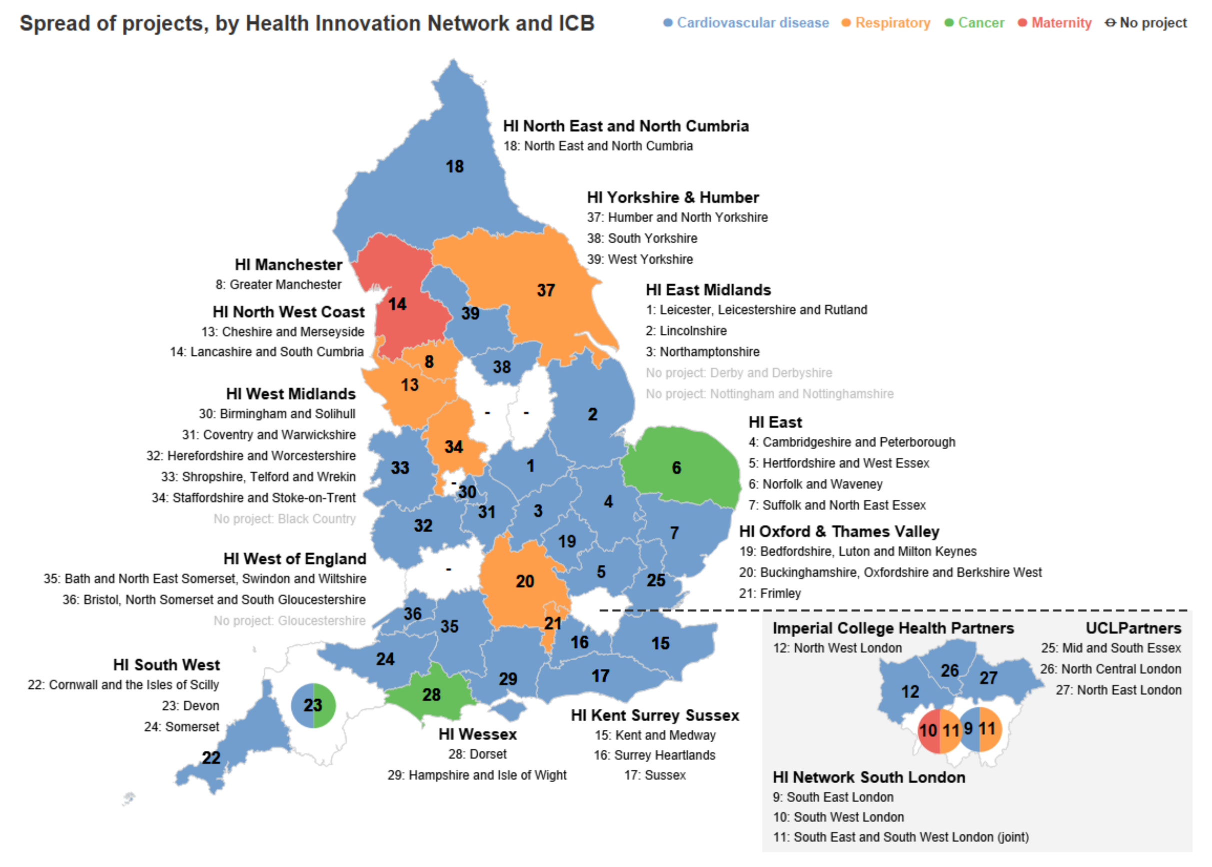
Introduction

How InHIP supports the Core20PLUS5 aim

InHIP has two desired outcomes:

1) Increase NHS awareness of evidence-based innovations that can also reduce healthcare inequalities in the corresponding clinical areas
2) Increase the adoption of these innovations – this could be by improving access, experience and/or outcomes for Core20PLUS5 populations with associated conditions in the clinical areas

Working closely with ICS partners, Health Innovation Network and the AAC has supported 39 different InHIP projects pieces of work covering 38 ICS footprints since December 2022. Further, 25 aim to improve services focusing on cardiovascular diseases prevention, 2 focus on maternity, 8 are in respiratory, and 3 cover cancer services.



Spread of projects, by Health Innovation Network and ICB

Methodology

Methodology summary

Provided by Unity Insights

Quantitative methods

Collection method

established programme: 01/01/2023
initial startup: available data pre 18/12/22

Datasets were shared by the ABC and YMCA to Unity Insights, containing demographic and health outcome data.

Overall, there were 74 individuals who were included in the initial startup phase, and 475 in the established programme phase.

Health outcomes included: cholesterol, hypertension, diabetes, QRISK, BMI, family history, heart age, and referral status.

Provided by HI KSS

Qualitative methods

Interviews

There were five interviews in total, lasting up to 45 minutes. Interviews were held over Microsoft Teams during February 2024.

Participants were prompted on eight interview questions. An inductive approach was taken, where themes were drawn from their answers after the interview. Thematic analysis was conducted on the interview transcripts to organise the analysis by each theme.

Provided by Unity Insights

Benefit forecast modelling

Benefits forecast model

Benefits were estimated for each patient based on the prevention of adverse events, using NICE resource impact estimates.

Benefit streams included prevention of adverse events such as stroke, transient ischaemic attack, myocardial infarction and others.

No costs were included in the analysis.

Methodology

Quantitative insights

Data collection

- Datasets were shared by the ABC and YMCA to Unity Insights containing demographic and health outcome data.
- The data is segmented into two phases: the **initial start-up (IS) phase** and the more **established phase (EP)** of the programme. This segmentation allows for comparison between the programme's early implementation stage and its later, more mature phase, considering the differences often observed during these periods of a new programme's development. This decision was made due to a noticeable increase in care escalations as the project reached maturity and coincides with the dates provided for the 'start' of the project.
- There were 74 individuals who were included in the initial startup phase, and 475 in the established programme phase.

Data analysis

Evaluating the Surrey Heartlands InHIP programmes impact on addressing health inequalities involved a comprehensive analysis of datasets provided by ABC and YMCA, as curated by Unity Insights. These datasets encompassed both demographic information and specific health metrics, facilitating a detailed examination of various cohorts pre-defined in the project plan, including:

- Core20 (IMD score 1-2)
- Ethnic Minorities
- Ineligible for NHS health check (under 40)

Methodology

Quantitative insights

- This targeted approach enabled a focused comparison between the Core20PLUS5 groups and the broader programme population within two community outreach projects against key health metrics.
- The demographics chosen for analysis allowed comparison of the Core20PLUS5 groups with the remainder of the programme population in Surrey for each metric. The demographic variables analysed are detailed in Table 1.

Table 1: Demographic included in analysis and rationale.

Demographic	Rationale
Gender	Research suggests there are sex/gender inequalities in the CVD pathway
Age	To answer evaluation questions for cohort 3
IMD score	To answer evaluation questions for cohort 1
Ethnicity	To answer evaluation questions for cohort 2 and 4

Methodology

Quantitative insights

- The rationale behind selecting each metric was directly linked to its relevance in assessing CVD management, risk, and established programme efficacy, as detailed in Table 2.

Table 2: Metrics included in analysis and rationale.

Metric	Rationale
Non-HDL cholesterol	Patients with a non-HDL cholesterol level > 2.5 are classified as being ‘sub-optimally managed'
Blood pressure (Hypertension)	Patients with > 140/90 are classified as hypertensive
BMI	Patients that are overweight or obese have increased risk of CVD
QRISK scores	Patients with QRISK scores between 10 and 20 and > 20 for QRISK2 and QRISK3
Diabetes (HbA1c)	Patients that have HbA1C levels > 48 are classified as diabetic
Lifestyle education received	Whether a patient received lifestyle education (broken down by education type)
Onward referrals	Whether a patient was onward referred (broken down by referral type)

Methodology

Quantitative insights

- To address the evaluation questions, quantitative analyses were performed. These analyses involved a comparative review of healthcare metrics for the Core20PLUS5 groups against those of the wider practice population. The purpose was to explore variations in healthcare metrics among these groups to understand how they vary. This will help assess variations in access, treatment, quality of care, and outcomes between these priority groups, where this data was available.

- Where initial startup and established programme periods were specified, both periods were assessed for variation individually and compared against each other.

Methodology

Quantitative insights

Limitations
Quantitative insights posed the following limitations:

The YMCA dataset did not provide appointment data from before the established programme period, meaning there is no initial startup data to provide comparison with.

The YMCA dataset contains relatively few answers regarding gender identity, providing little room for analysis.

Both data sets had limited information on referrals or treatments, meaning analysis had to use some assumptions for health outcomes.

The YMCA data set did not contain service user IMD scores, meaning postcode IMD scores were used as a proxy.

Methodology

Qualitative insights

Sample and data collection method

- To gather lived experiences, deep reflection, and insights on the work, key delivery members of the local InHIP project were approached to ask if they could participate in a one-to-one interview via Microsoft Teams.
- The snowball sampling approach was then adopted to ensure wider members of the team were identified who would be willing to share their experiences and enable a rounded view of the project. A total of five people were interviewed, working across the InHIP delivery team.
- Interviews used open-ended questions to ensure participants were not led in their responses and could explore their thoughts and motivations in detail relating to the work, underpinned by using the same explanation script and questions to ensure all participants received the same information to minimise researcher bias.

Methodology

Qualitative insights

- The interviews were conducted via Microsoft Teams meetings set up by HI KSS during working hours that met participants availability and lasted up to 45 minutes. Interviews were conducted during February 2024 to provide a complete experience of the entire project, as delivery concluded in December 2023.
- Interviews were transcribed and recorded using a voice recorder to allow for the transcription to be checked for errors. Each interview was then individually analysed to identify the main themes for each question from that interview. If themes were identified in subsequent interviews that had not been identified previously, the previous transcript was rechecked to ensure there had been no human errors in missing words that could be linked to the newly identified theme.
- Every relevant quote from each interview was finally included in a master table to compare themes and the frequency each theme arose.

Methodology

Qualitative insights

The overarching themes were derived from the sub-themes after all interview responses had been coded. The themes were labelled **Infrastructure, People and Planning.** The sub-themes were broadly defined as follows:

- **Infrastructure:**
    - **Data -** anything data/measurement related
    - **Project -** anything relating to activity locally or nationally
    - **System -** comments around national links or partnership working, and so on
    - **Physical access -** GP appointment times/venue, and so on
- **People:**
    - **Lived experience -** anything about the patients/communities
    - **Relationships -** building trust with delivery people and communities/people
    - **Dialogue -** communication/conversations
- **Planning:**
    - **Next steps -** where they want to build on/improve
    - **Resources -** roles/reallocating work or redistributing professional boundaries

Methodology

Qualitative insights

Limitations

Quantitative insights posed the following limitations:

Interviewer bias during data gathering and analysis
The interviewer was known to most participants, largely due to the relationships that had been formed during over the InHIP project duration between members of the InHIP team and HI KSS. It is known that interviewer presence can affect responses (Ross and Bibler Zaidi, 2018), but conversely this may have resulted in a more open discussion taking place due to the shared lived experience of the project.

Hindsight bias from respondents
The interviews took place when delivery of the project had finished, and there may be an element of bias from participants reviewing their experiences that occurred months prior to the interviews.

Data volume
The volume of data makes analysis and interpretation time consuming. There is also the potential for a lack of rigour, as it is difficult to demonstrate this when analysing qualitative data (Denzin and Lincoln, 1994), largely due to the small numbers of people who were interviewed.

Methodology

Qualitative insights

Limitations

Quantitative insights posed the following limitations:

Lack of generalisability
The interviews are relevant to the specifics of the Surrey InHIP project and the members of the team who were interviewed, so are unlikely to be replicable. Therefore, it is not possible to draw generalisations or statistically significant conclusions from the data presented (Miles and Huberman, 1984).

Human error
There is the chance of human error being introduced when quality checking transcripts and transferring data between multiple platforms.

Limited interpretations
The data often deviated from the original question, as they were designed to be open-ended and subject to the participants own interpretation with minimal interviewer interference. During analysis, the researcher could have introduced their own bias from knowledge of the programme and recollections of body language during the interviews, to place additional emphasis on quotes (Smith and Noble, 2014).

Methodology

Benefit forecast modelling

The evaluation used health economic techniques to generate benefit streams, where monetisable, in relation to the project. These were informed and estimated through quantitative analysis and were monetised using available unit costs or available information from literature. Only those benefits that can be measured and that are monetisable have been included in this analysis.

These benefits are likely to represent a reduction in health and social care activity, thus generating a non-cash releasing saving to the NHS or social care. Unit costs have been sourced from NICE resource impact reporting on lipids management (NICE, 2024) and hypertension management (NICE, 2022). Unit benefits will be taken from the primary data, where available and where these are monetisable, but some degree of extrapolation based on literature is likely to be required to construct monetisable benefits.

The estimated benefits have also been presented as estimated benefits for five-year total savings. They are not adjusted for inflation or net present value. All benefits are associated with a reduction in the following events occurring as result of appropriate care escalation.

The following benefit streams have been analysed:
- Stroke
- Transient ischaemic attack
- Myocardial infarction
- Stable angina
- Unstable angina
- Coronary revascularisation
- Non coronary revascularisation
- Heart failure

Methodology

Benefit forecast modelling

Scenario analysis:

Scenario analysis is used to understand the impact of the project if it were to be expanded further. As a result, two scenarios were modelled:

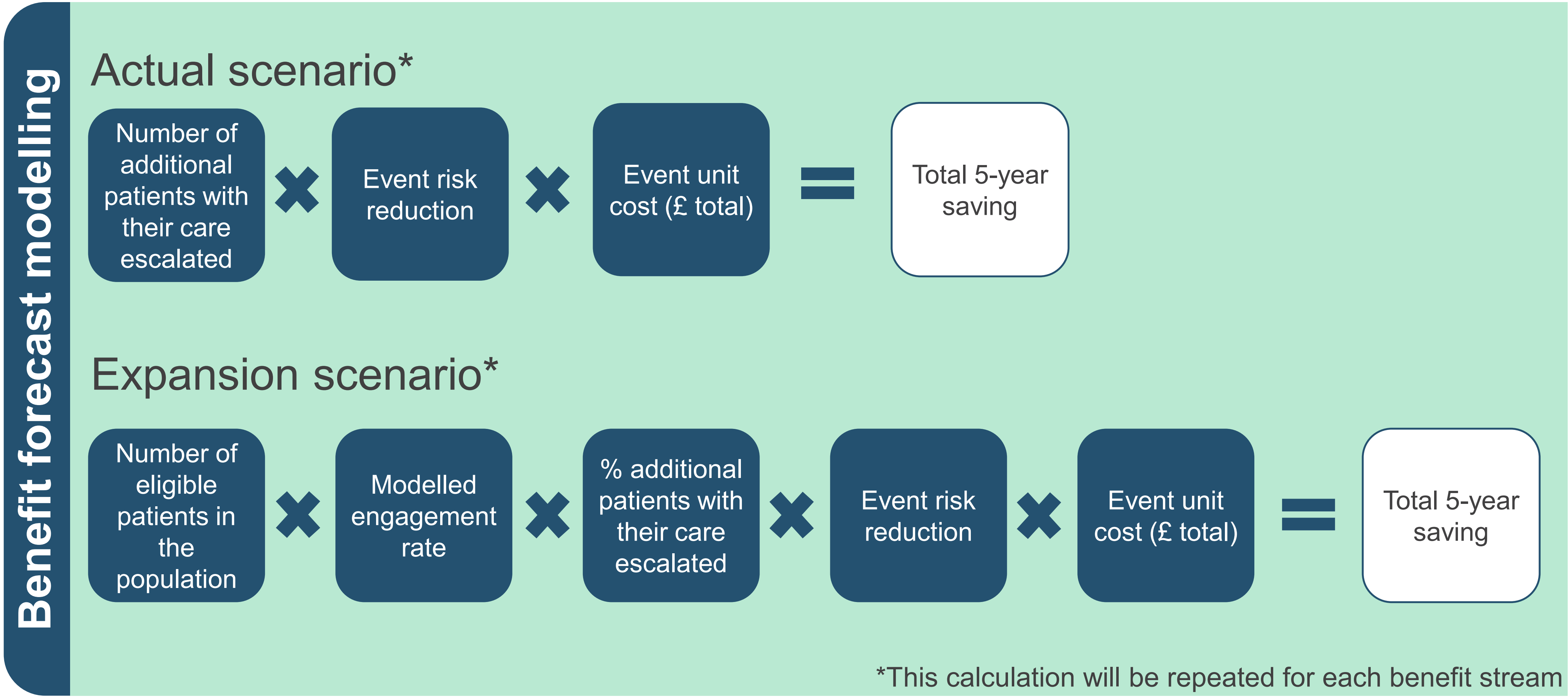
1. **Actual scenario**

Analysis based on what occurred in the InHIP project to-date, based on all project data available.

2. **Expansion scenario**

Forecast analysis based on what might occur if the InHIP project is replicated and expanded across a larger geography in Surrey. The analysis utilised data from the ‘Established Project’ phase only, to demonstrate the potential value and under the assumption that any start-up phase could be shortened in future implementations based on learnings from the project.

Methodology



Benefit forecast modelling

Actual scenario*

Number of additional patients with their care escalated × Event risk reduction × Event unit cost (£ total) = Total 5-year saving

Expansion scenario*

Number of eligible patients in the population × Modelled engagement rate × % additional patients with their care escalated × Event risk reduction × Event unit cost (£ total) = Total 5-year saving

*This calculation will be repeated for each benefit stream

Methodology

Benefit forecast modelling

Assumptions:

- 100% of patients that were escalated were assumed to be managed in accordance with NICE guidance.
- Adherence to treatment/medication post-escalation was expected to be 100% for simplicity.
- Inflation was estimated at 2.5% annually, in order to update unit costs to 2024 prices.
- If an individual was escalated (referred onto a healthcare service) and they were both hypertensive and had cholesterol levels >2.5 mmol/L, this individual was assumed to have had treatment in line with NICE guidance, and derive the benefits thereof, for both pathways simultaneously.

Limitations:

- Costs were not included in the model, the analysis is benefits-only.
- The exact number of patients who were managed in accordance with NICE guidance and remained adherent is unknown.

Unmodelled benefits:

The following benefits were either unable to be measured or monetised as part of the analysis:

- Benefits beyond a 5-year time horizon
- Improvements in quality of life for patients
- Benefits from health education
- Benefits from referrals to social prescribers
- Benefits from escalating management of diabetes, in addition to management of CVD risk

Results

Quantitative insights: Access

Age

Of the 549 individuals (74 in initial startup and 475 in established programme) who were recorded for the current evaluation, figure 1 shows their ages grouped by if they were under or over 40 years of age.

Individuals who are ineligible for a health check (under 40) are a target group for this programme. In the initial startup phase this group made up 35.1% (*n* = 26) and in the established programme they made up 41.3% (*n* = 196).

This shows that as the programme developed, it was able to reach more individuals under 40 compared to when it initially began.

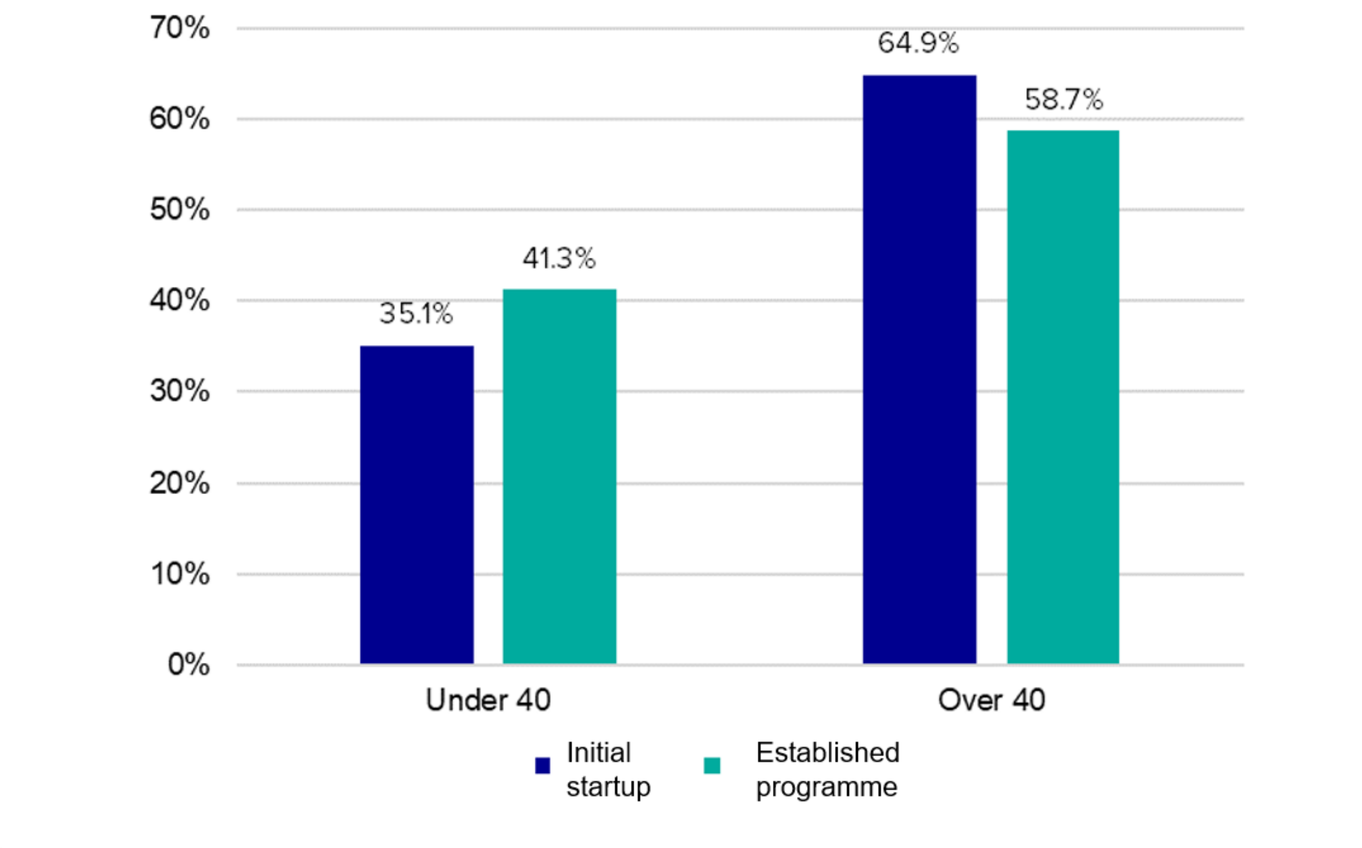


Figure 1: Service user age in established programme and initial startup phases

Qualitative Insights: Access

Age

Interviewees were asked to provide their opinion on the success of the programme. One participant (of five) emphasised that they felt the programme was very significant for the NHS, noting its role in revealing previously unnoticed health issues among individuals under 40 years old. The participant described instances where individuals were identified with high blood pressure, diabetes, and other conditions during health checks, which might have been overlooked by their GP due to age-based screening criteria.

> “we were actually showing the impact and going to sites and seeing people that would not have had a health check because they are under 40 and actually they are having high blood pressure, diabetes, and all of these things that would be missed by the GP”.

This was supported by another participant who spoke of the identification of individuals under 40 years old with significant risk factors for cardiovascular disease who were subsequently referred to primary care services. They expressed satisfaction with the programme's ability to empower patients through education on topics such as diet and diabetes prevention, and highlighted the impact that preventive healthcare measures can have on health outcomes.

> “our nurses have been able to talk about diet, diabetes prevention and signposts into other things in the community. So I think it's been really, really empowering because (we have been) information sharing and letting patients know about what else is out there to help them”

Quantitative insights: Access

Demographic breakdown

Figure 2 shows the gender split of the cohort. The programme reached more women than men in both the initial startup phase 62.2% (*n* = 46) and established programme phase 55.5% (*n* = 264). Surrey Heartlands population data shows an even split between men and women. Data was not available on the transgender population alone.

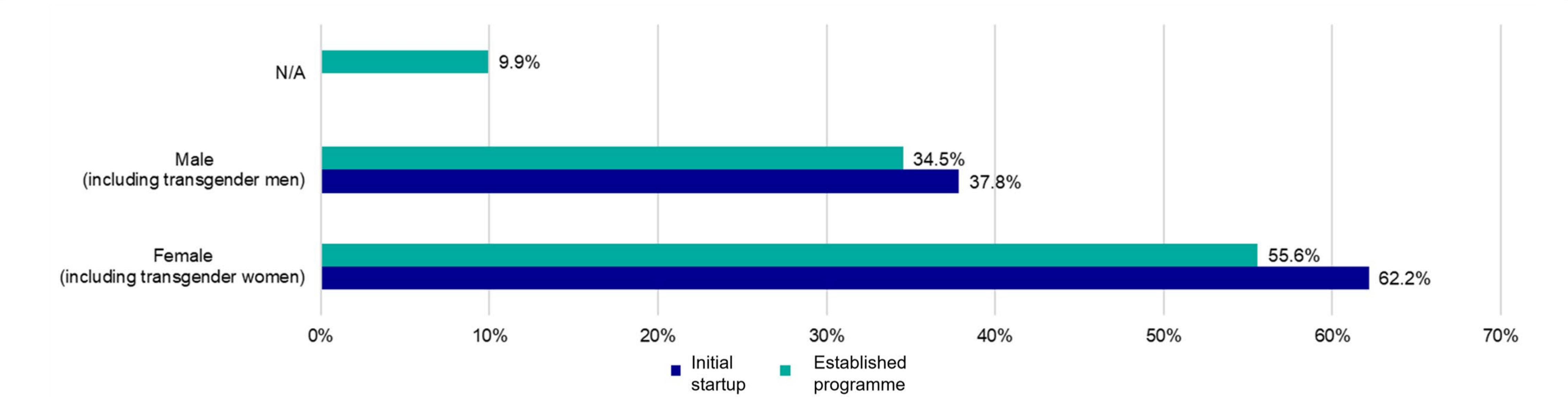


Figure 2: Service users' gender in established programme and initial startup phases

Qualitative Insights: Access

Gender

The interviews provide some insight to why more females attended the health screenings compared to men. One participant spoke of their approach involving visiting mosques. They felt it was difficult for someone who is white British and female to go into these spaces to reach groups, especially to reach men.

> “accessing mosques etc, you know it wasn’t necessarily appropriate for a white female to go in necessarily…it’s like (considering) cultural awareness I was thinking would this work better if I was Asian or Muslim, you know, would they have trusted me?”

Quantitative insights: Access

Ethnic minorities

Figure 3 shows the ethnicity breakdown of service users in both the initial startup and established programme phase.

Service users from White British backgrounds made up 21.6% (*n* = 16) of the initial startup phase, but in the established programme phase, this had decreased to 15.2% (*n* = 72).

Conversely, more individuals from Asian ethnic groups (19.6%, *n* = 93), Black ethnic groups (11.6%, *n* = 55), and British or mixed British ethnic groups (20.2%, *n* = 96) were reached during the established programme phase compared to the initial startup phase.

This suggests the programme reached more individuals from ethnic minority groups as the programme developed.

Notably, there was a decrease in the proportion of patients that had their ethnicity data absent, from 41.9% in the initial startup to 6.8% in the established programme period. This is important since changes across the periods may not be accurately represented due to patients lacking ethnicity data.

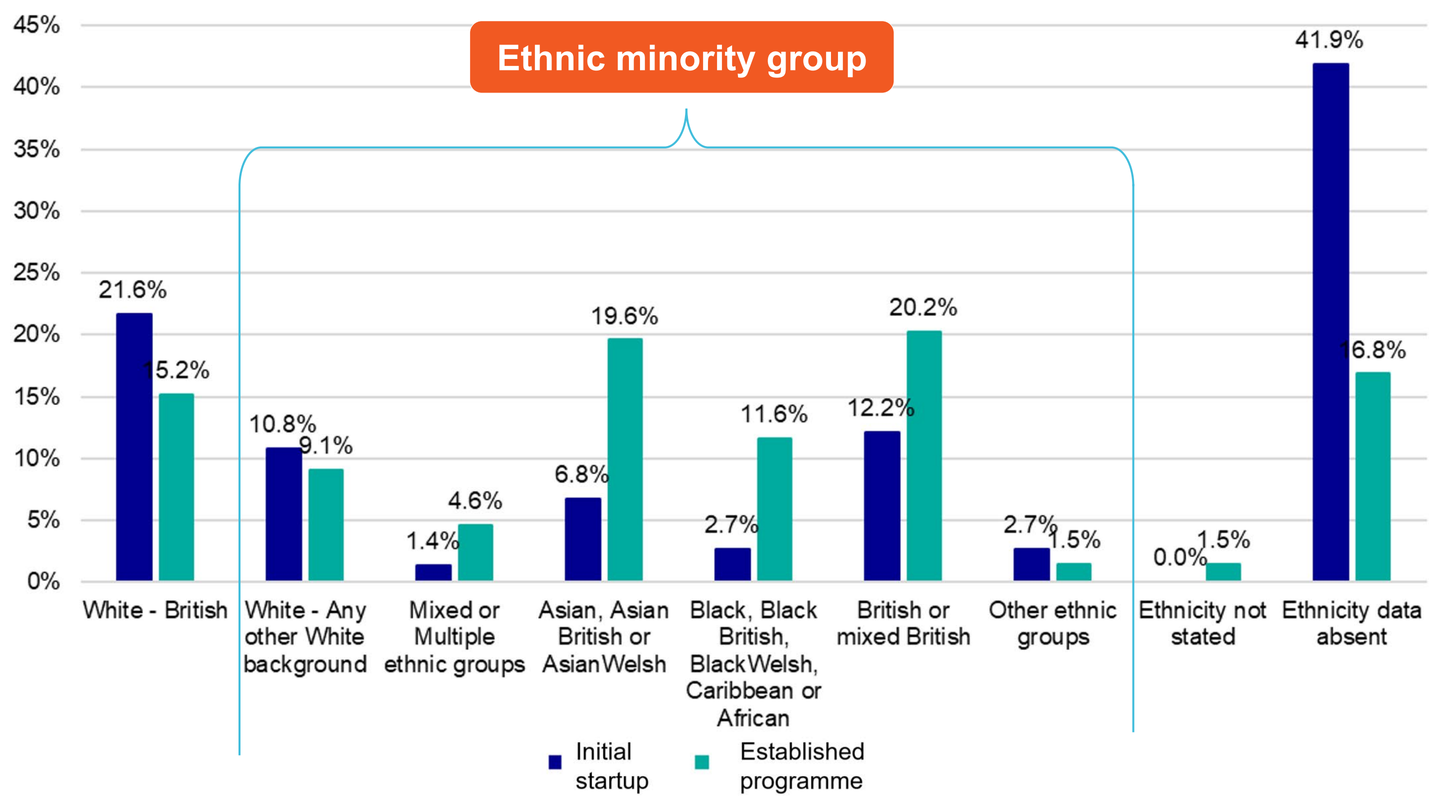


Figure 3: Breakdown of service users' ethnicity in established programme and initial startup phases.

Quantitative insights: Access

Ethnic minorities

Figure 4 is a summary of the data shown in figure 3 (on slide 32). This shows that in both initial startup and established programme phases, there were more service users reached from ethnic minority backgrounds (*n* = 27; *n* = 316) compared to White British (*n* = 16; *n* = 72).

During the established programme phase, the programme reached fewer people from White British backgrounds (18.6%; *n* = 17), while there was a significant increase in those from ethnic minority backgrounds (81.4%; *n* = 237).

When comparing these findings to the Surrey Heartlands population, three quarters of Surrey residents reported that they identified as White British in 2021, alongside 8.9% who reported that they were 'White Other' and 14.5% who reported that they identified as ethnicities which were not White (Surrey Council census, 2021).

More specifically, the ABC clinic dataset suggests the programme reached more individuals from ethnic minority groups as the programme matured and developed.

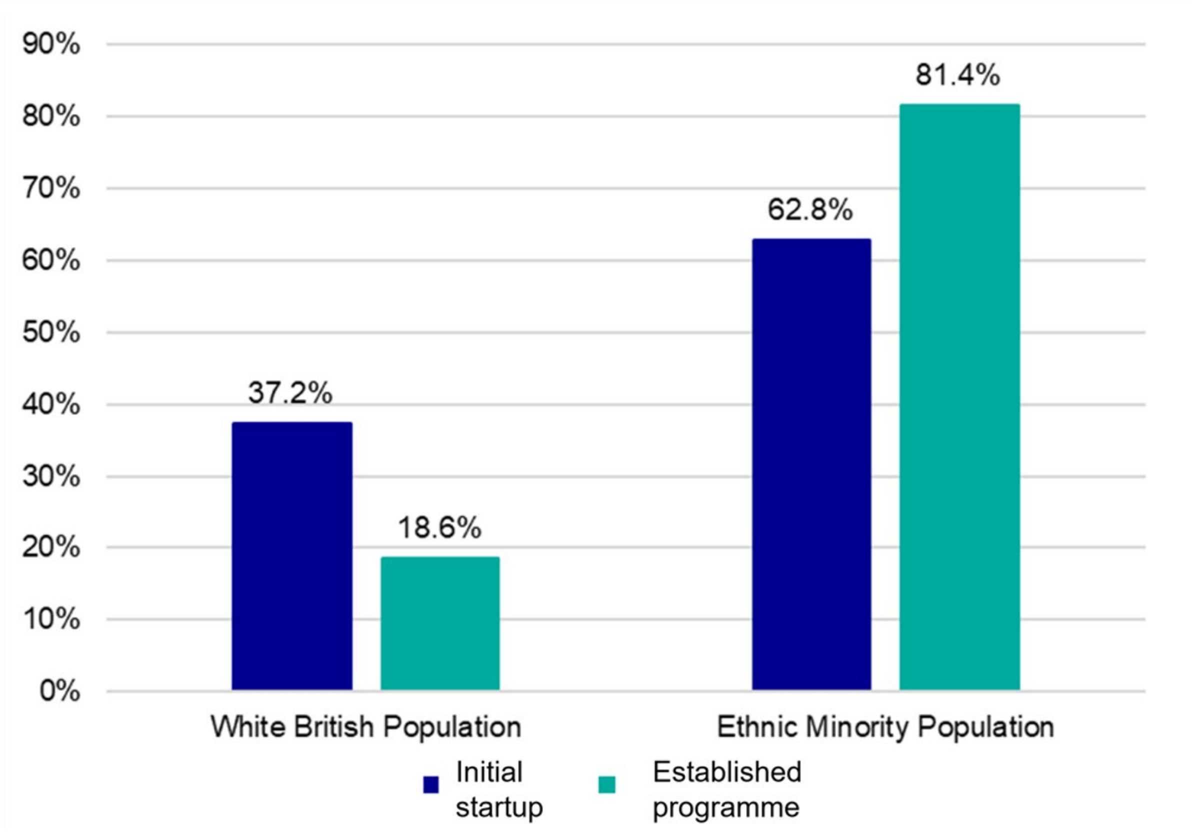


Figure 4: Summary showing the percentage of service users in their respective ethnic groups in established programme and initial startup phases.

Quantitative insights: Access

Ethnic minorities

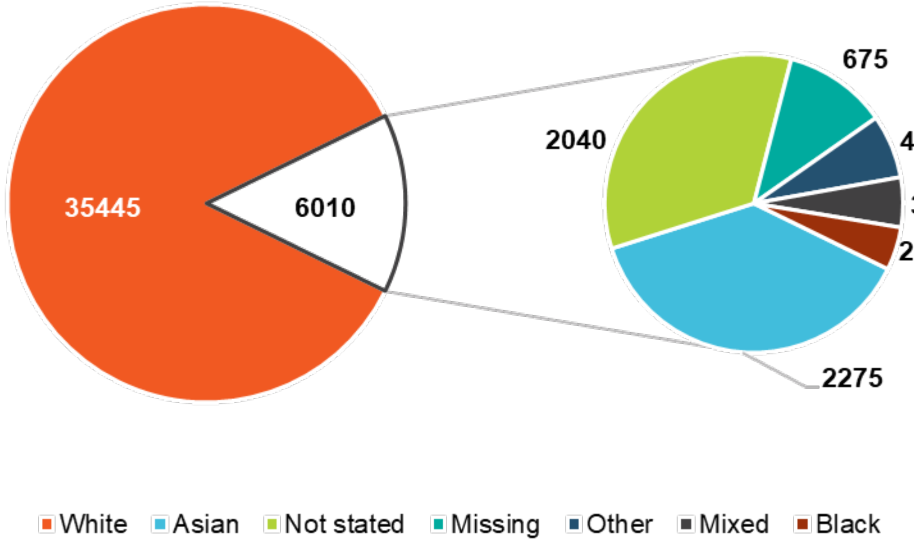
The analysis of CVDPREVENT data presents a useful comparative perspective on the results found in the ABC and YMCA clinic datasets.

The ethnic minority population accounts for 8.5% (= 3295 / 38740) of the total known population (excluding not-stated and missing data). Furthermore, the Asian population makes up 69.0% (= 2275 / 3295) of the ethnic minority population in Surrey Heartlands ICB, whereas the Black ethnic groups makes up only 8.5% (= 280 / 3295) of the ethnic minority population in Surrey Heartlands ICB.

This breakdown of the wider population shows that each practice was reaching a larger proportion of the ethnic minority population during the initial startup period than may have been expected for the Surrey Heartlands.

Moreover, this shows that the programme was especially successful at reaching the Black ethnic groups given they make up 11.6% (Figure 5) of the established programme population but only 0.68% (= 280/41455) across the Surrey Heartlands ICB region. The same is also true for the Asian ethnic groups, making up 19.6% of the established programme population from 5.5% across the ICB.

Figure 5: Summary showing the actual population split of ethnic groups within the Surrey Heartlands ICB population.



Source: CVDPREVENT, 2023. CVDPREVENT Data Extract [Website].
URL: https://www.cvdprevent.nhs.uk/data-extract

Total population (excluding 'Not stated' and 'Missing'): **n = 38740**

Total ethnic minority population (excluding 'Not stated' and 'Missing'): **n = 3295**

Quantitative insights: Access

Core20 population

Figure 6 shows the percentage of service users from the ABC data set in their respective IMD scores compared to the total Surrey Heartlands population.

In total, 16 (2.9%) of the 549 service users are in the Core20 IMD (an IMD of 1 or 2) population.

In the initial startup phase, only one person (1.4%) was in the IMD Core20 group. In the established programme phase, 15 individuals (3.8%) were in the IMD Core20 group.

When comparing these findings to the 1,041,337 registered patients in the Surrey Heartlands population, 1% (n = 6,652) fall into the Core20 and 30% (n = 314,517) are in the least deprived deprivation decile (IMD 10) compared to 13% of the established programme phase group.

This shows the programme reached individuals with higher levels of deprivation compared to the broader Surrey population.

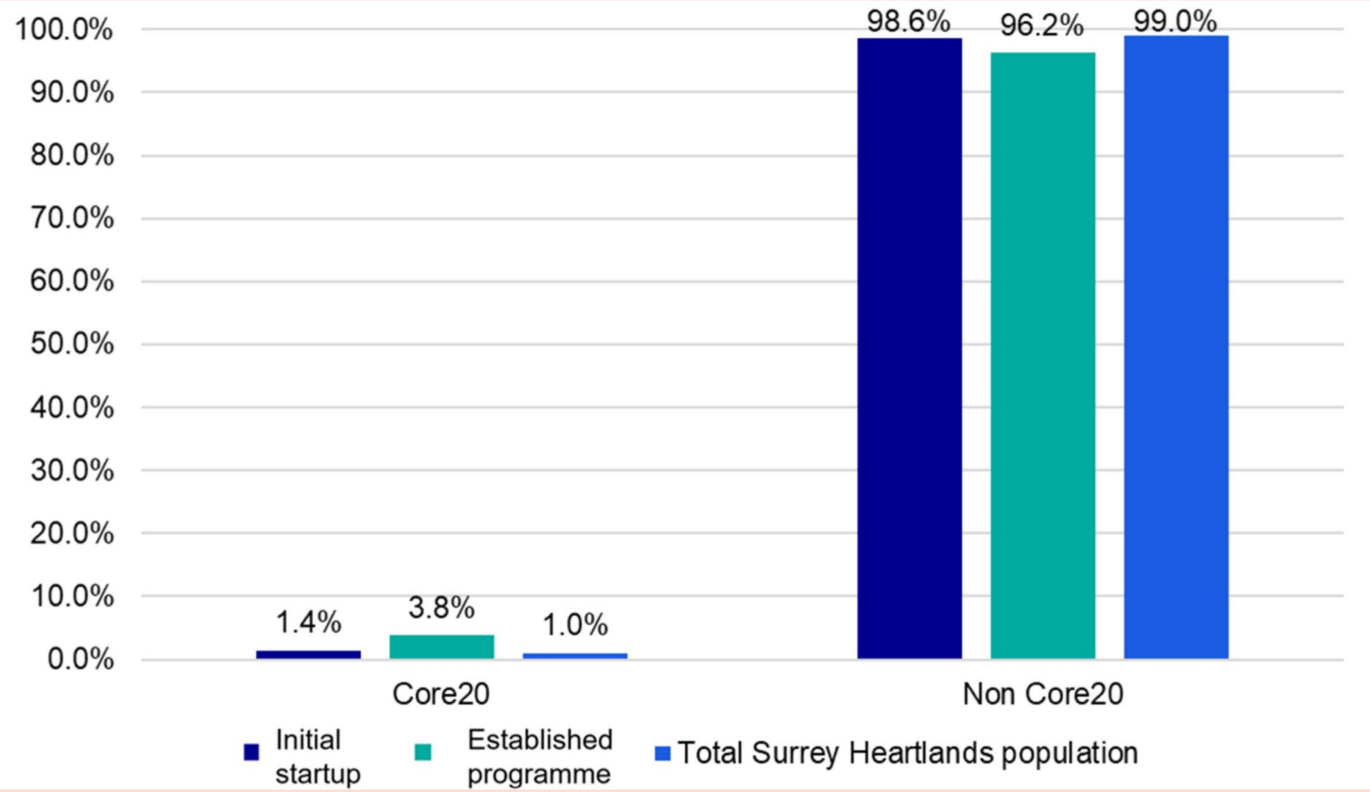


Figure 6: Percentage of service users in the Core20 IMD score for the ABC data set, established programme and initial startup compared to the total Surrey population.
Note: IMD scores for service users were not provided in the YMCA dataset
Note: Total Surrey Heartlands population figures are from 2021

Quantitative insights: Access

Estimation of Core20 IMD population

1007

Total number of postcode areas within RH1

27

Total number of postcode areas within RH1 that are within Core20 IMD

2.68%

% of postcode areas within RH1 that are within Core20 IMD

64

Total number of service users within the pathway

51

Total number of service users within the pathway in RH1 postcode area

1

Number of service users within the pathway in Core20 group
(51 multiplied by 2.68%)

Core20 assumption

Within the YMCA dataset, the proportion of postcode areas that are part of the Core20 (relative to their stated postcode districts), is similar to the proportion of patients within the pathway from those same postcode districts. This analysis could suggest that the patients within the pathway come from Core20 postcodes even though the Surrey region is largely not deprived.

For full IMD by postcode breakdown see Appendix 1.

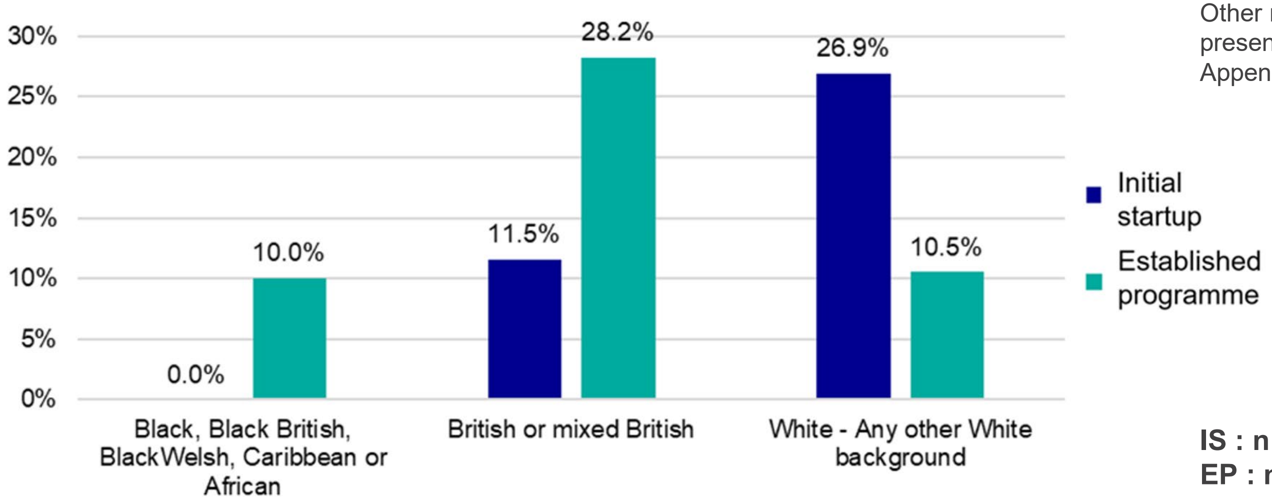
Quantitative insights: Casemix

Cholesterol – Clinical condition

Elevated cholesterol levels can lead to hardening and narrowing of arteries putting people at increased risk of cardiac events such as heart attack and stroke. The best preventative measures are early detection and management of the condition. These findings highlight successful identification of individuals with sub-optimally managed cholesterol who might have otherwise gone unnoticed.

ABC Clinic

A notable rise was found in the proportion of patients with sub-optimally managed cholesterol (non-HDL >2.5mmol/L) among the British or Mixed British ethnic group (+16.7%), Black ethnic group (+10.0%) (Figure 7), and the under 40s group (+13.3%). There was, however, a large decline in the proportion of White ethnic groups (excluding White British) entering the services (-16.4%). There were no large changes in the proportion of patients with sub-optimally managed cholesterol within the Core20 population.



Other results presented in Appendix B.1

IS : n = 26
EP : n = 209

Figure 7: The proportionate split of ethnic minority groups at the ABC Clinic, during the initial startup and established programme periods, with known sub-optimally managed cholesterol.

YMCA Clinic

The most significant proportional breakdowns of demographic data in the established programme phase of this study, according to patients with non-HDL cholesterol > 2.5mmol/L, are as follows:

78.2% Asian or Asian British

Black, Black British, Black Welsh, Caribbean or African 16.4%

18.2% Female (including trans woman)

[N/A population: 72.7%]

Male (including trans man) 9.1%

34.5% Over 40s

Under 40s 65.5%

***n* = 55**

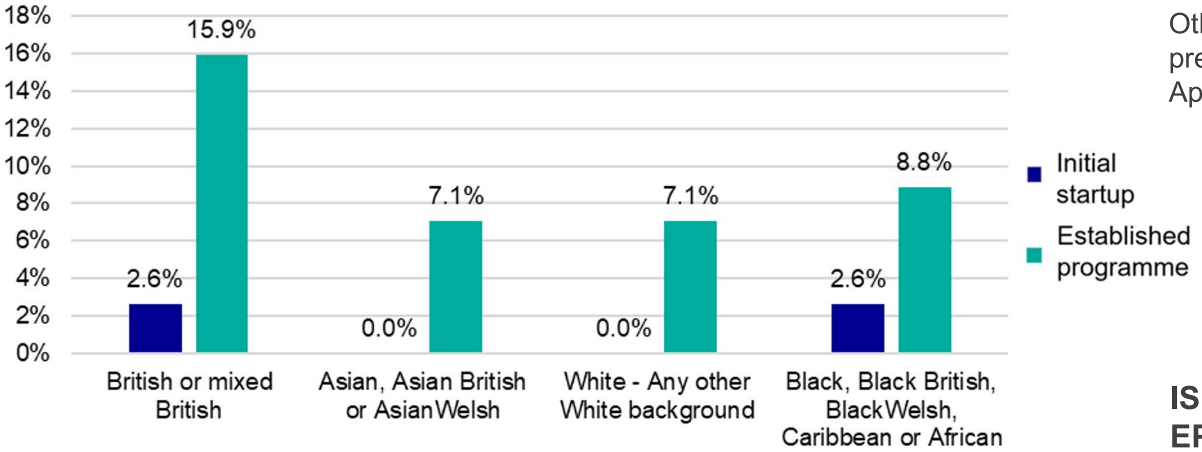
Quantitative insights: Casemix

Hypertension – Clinical condition

High blood pressure places additional strain on the heart and blood vessels as they need to work harder to move blood around the body. As with cholesterol, early detection and management are the best measures to lower the risk of serious cardiovascular events. These findings point to the identification of individuals with hypertension who might otherwise have remained undetected.

ABC Clinic

A notable rise was found in the proportion of patients with registered hypertension among the British or Mixed British (+13.3%), Asian (+7.1%), Black (+6.2%), and White ethnic groups excluding White British (+7.1%) (Figure 8). Positive change was also seen in the proportion of males (+9.2%) and over-40s (+7.7%) entering the established programme period over their gender and age group counterparts. There were no large changes in the proportion of patients with registered Hypertension within the Core20 population.



Other results presented in Appendix B.1

IS : n = 38
EP : n = 113

Figure 8: The proportionate split of ethnic minority groups at the ABC Clinic, during the initial startup and established programme periods, with registered Hypertension.

YMCA Clinic

There were only two cases of hypertension within the YMCA clinic dataset of 64 patients. Both patients were of a Black ethnic group and under 40. Their gender identity was not provided. As a result, wider comparable analysis on this topic is not possible.

Quantitative insights: Casemix

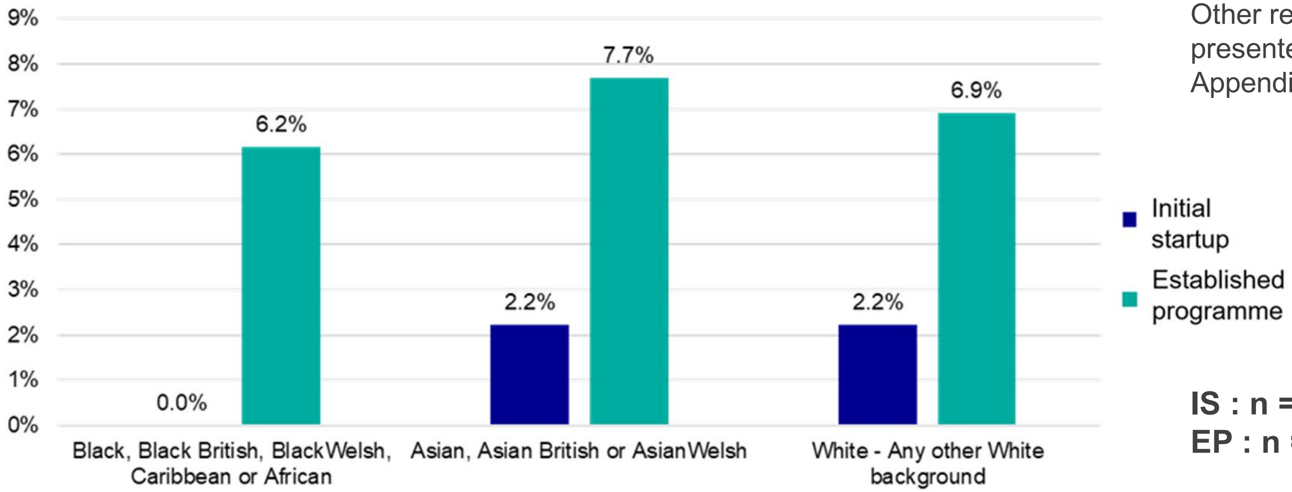
Diabetes – Clinical condition

People with diabetes have greater difficulty managing their blood sugar levels. It is common to avoid hypoglycaemic events (too little blood sugar) by spending a longer time hyperglycaemic. This places individuals at greater risk of peripheral neuropathy, diabetic retinopathy, and diabetic ketoacidosis. Identifying those at risk of type 2 diabetes early can support greater self-care and limit future deterioration. These findings demonstrate the identification of individuals with diabetes who might otherwise have remained undetected.

ABC Clinic

Based on a HbA1c count greater than or equal to 48, there were some moderate changes in the proportion of patients with diabetes across Black (+6.2%), Asian (+5.5%) and White ethnic groups excluding White British (+4.7%) (Figure 9). There were no large changes in the proportion of patients with diabetes across gender (retaining a mostly 60/40 split between female/male), age groups or the Core20 population.

Other results presented in Appendix B.2



IS : n = 45
EP : n = 130

Figure 9: The proportionate split of ethnic minority groups at the ABC Clinic, during the initial startup and established programme periods, with a HbA1c count greater than or equal to 48.

YMCA Clinic

There were no cases of a HbA1c count being greater than or equal to 48 within the YMCA clinic dataset, but patients were nonetheless filtered for diabetes. Significant proportional breakdowns of demographic data in the established programme phase of this study, according to the number of patients with diabetes, are as follows:

63.6% Asian or Asian British

Black, Black British, Black Welsh, Caribbean or African 30.3%

18.2% Female (including trans woman)

[N/A population: 66.7%]

Male (including trans man) 15.2%

45.5% Over 40s

Under 40s 54.5%

n = 33

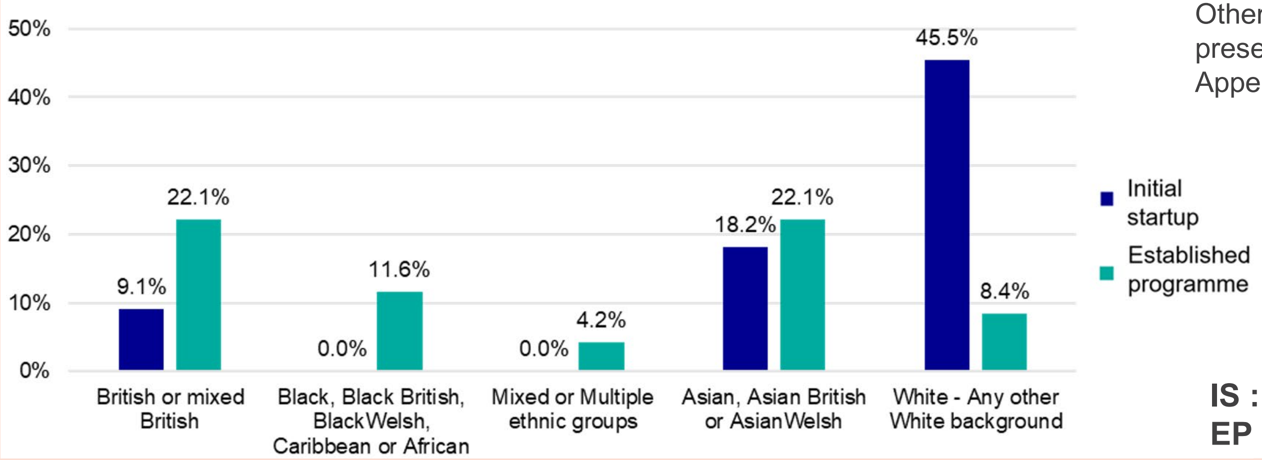
Quantitative insights: Casemix

Family History – Risk prediction

Diabetes can be hereditary and so those with a family history of diabetes are at greater risk of developing it themselves. Identifying those at risk of type 2 diabetes early can support greater self-care and limit future deterioration. These findings demonstrate the identification of individuals with diabetes who might otherwise have remained undetected.

ABC Clinic

There was a notable rise in the proportion of patients with a family history of diabetes across British or Mixed British (+13.0%) and Black (+11.6%) ethnic groups (Figure 10). Positive change was also seen in the proportion of females (+23.0%) and under-40s (+15.9%) entering the established programme period over their gender and age group counterparts. There was, however, a large drop off in the proportion of White ethnic groups excluding White British (-37.0%), although the initial startup sample size was particularly small. There were no large changes in the relative number of patients with a family history of diabetes within the Core20 population.



Other results presented in Appendix B.2

IS : n = 11
EP : n = 95

Figure 10: The proportionate split of ethnic minority groups at the ABC Clinic, during the initial startup and established programme periods, with a family history of diabetes.

YMCA Clinic

The most significant proportional breakdowns of demographic data in the established programme phase of this study, according to the number of patients with a family history of diabetes, are as follows:

84.6% Asian or Asian British

Black, Black British, Black Welsh, Caribbean or African 11.5%

26.9% Female (including trans woman)

[N/A population: 65.4%]

Male (including trans man) 7.7%

42.3% Over 40s

Under 40s 57.7%

***n* = 26**

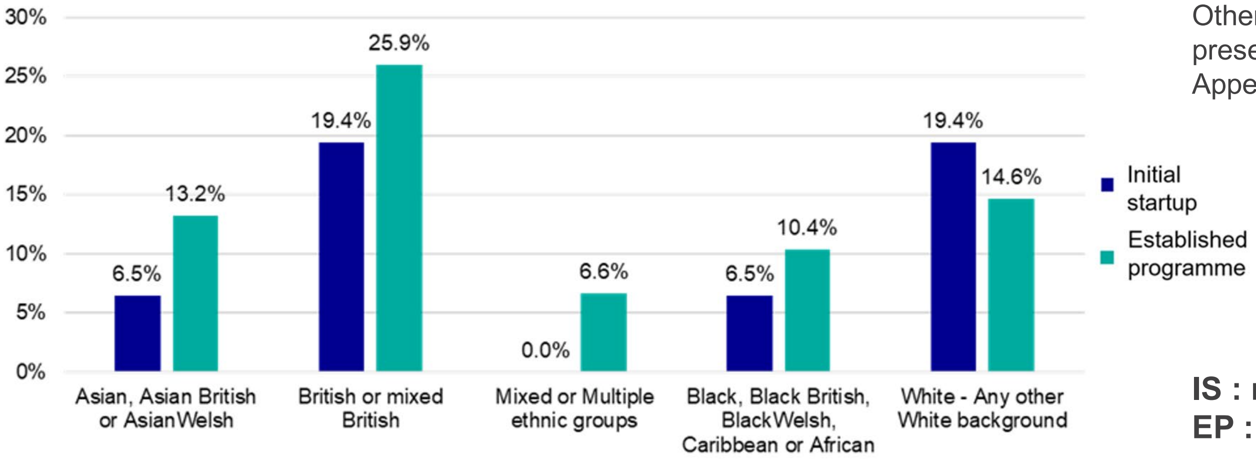
Quantitative insights: Casemix

BMI – Risk prediction

Early recognition of those who are overweight and obese grants them the chance to make healthy changes and engage in established programmes that can help them obtain a healthy weight. Common risks associated with obesity are type 2 diabetes, coronary heart disease, and some cancers. These findings demonstrate the identification of individuals who were overweight or obese who might otherwise have been unaware and not received established programme.

ABC Clinic

There was a small rise in the proportion of patients considered overweight or obese across Asian (+6.8%), British or Mixed British (+6.6%), Mixed or Multiple (+6.6%) and Black (+3.9%) ethnic groups (Figure 11). A moderate fall in the White ethnic groups excluding White British (-4.7%). Positive change was also seen in the proportion of females (+10.7%) and under-40s (+9.1%) entering the established programme period over their gender and age group counterparts. No large changes were seen in the proportion of patients considered overweight or obese in the Core20 population.



Other results presented in Appendix B.1

IS : n = 31
EP : n = 212

Figure 11: The proportionate split of ethnic minority groups at the ABC Clinic, during the initial startup and established programme periods, that are considered overweight or obese.

YMCA Clinic

The most significant proportional breakdowns of demographic data in the established programme phase of this study, according to patients considered overweight or obese, are as follows:

65.1% Asian or Asian British

Black, Black British, Black Welsh, Caribbean or African 30.2%

18.6% Female (including trans woman)

[N/A population: 72.1%]

Male (including trans man) 9.3%

37.2% Over 40s

Under 40s 62.8%

***n* = 43**

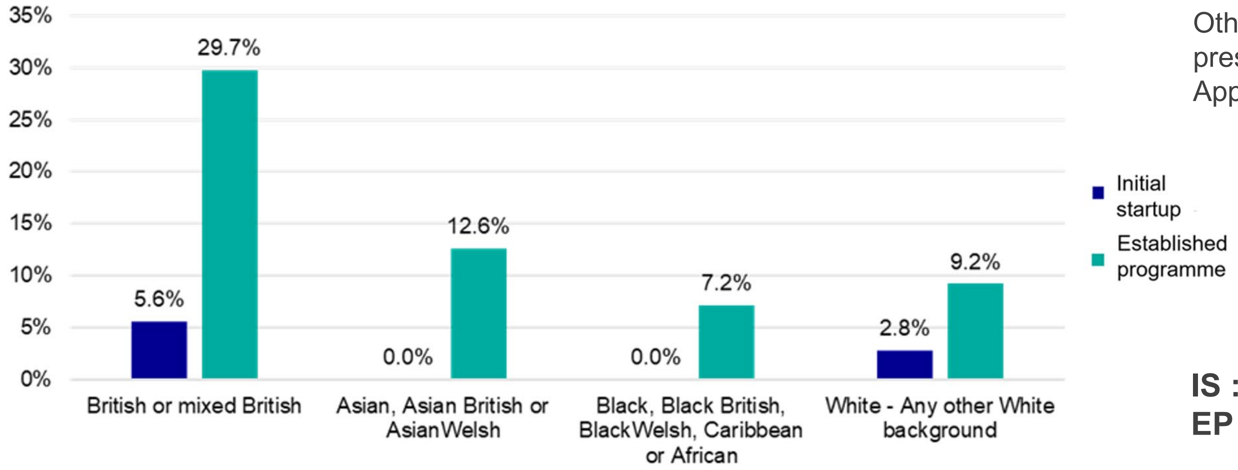
Quantitative insights: Casemix

QRISK – Risk prediction

The QRISK3 predictor calculates an individual’s risk of experiencing a heart attack or stroke in the proceeding next years. Early identification of individuals with QRISK scores over 20 allows for timely established programmes and lifestyle modifications that can effectively manage and reduce cardiovascular disease risks. These findings demonstrate the identification of individuals who had high QRISK scores who might otherwise have been undetected.

ABC Clinic

There was a notable rise in the proportion of patients with significant QRISK2 or QRISK3 scores across British or Mixed British (+24.1%), Asian (+12.6%), Black (+7.2%), and White ethnic groups excluding White British (+6.4%) (Figure 12). Positive change was also seen in the proportion of males (+4.9%) entering the established programme period. There were no significant changes in the proportion of patients with significant QRISK2 or QRISK3 scores across age groups (retaining a 60/40 split between Over/Under 40s) or IMD deciles for the Core20 population.



Other results presented in Appendix B.1

IS : n = 36
EP : n = 293

Figure 12: The proportionate split of ethnic minority groups at the ABC Clinic, during the initial startup and established programme periods, significant QRISK2 or QRISK3 scores.

YMCA Clinic

There were no cases of QRISK2 scores being greater than or equal to 20 within the YMCA clinic dataset. QRISK3 scores were also not contained within this dataset. As a result, there is no opportunity for comparable analysis on this topic.

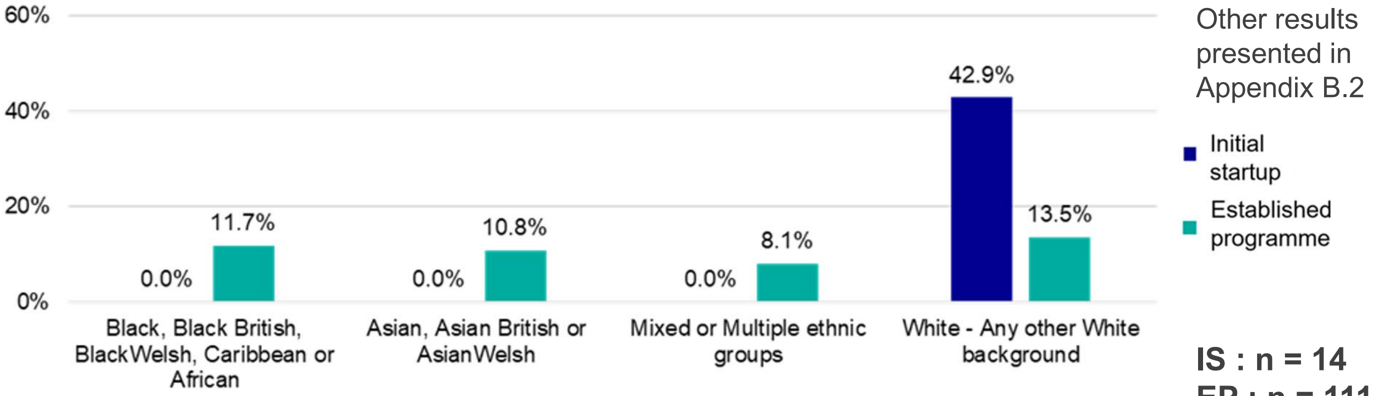
Quantitative insights: Casemix

Heart age – Risk prediction

The heart age calculator uses data from QRISK to estimate a person's heart age and their risk of cardiovascular disease.

ABC Clinic

A clear change was seen in the proportion of patients with a recorded heart age greater than their actual age across Black (+11.7%), Asian (+10.8%), and mixed ethnic groups (+8.1%) (Figure 13). These changes are especially noticeable given these population cohorts did not feature in the initial startup period for recorded heart age greater than actual age. Positive change was also seen in the proportion of under-40s (+21.7%) entering the established programme period. There was, however, a large drop off in the proportion of White ethnic groups excluding White British (-29.3%). There were no large changes in the proportion of patients with a heart age greater than their actual age across genders or the Core20 population.



Other results presented in Appendix B.2

IS : n = 14
EP : n = 111

Figure 13: The proportionate split of ethnic minority groups at the ABC Clinic, during the initial startup and established programme periods, with a recorded heart age greater than their actual age.

YMCA Clinic

The most significant proportional breakdowns of demographic data in the established programme phase of this study, according to the number of patients with a recorded heart age greater than their age band, are as follows (*n* = 9):

88.9% Asian or Asian British

Black, Black British, Black Welsh, Caribbean or African 11.1%

33.3% Female (including trans woman)

[N/A population: 55.6%]

Male (including trans man) 11.1%

11.1% Over 40s

Under 40s 88.9%

***n* = 9**

Quantitative insights: Action required

Health education – established programme provided

Providing health advice to patients regarding their conditions can empower them to effectively manage their health, potentially averting the development of more serious complications in the future.

ABC Clinic

Given that 58 out of a possible 74 patients within the initial startup population did not receive health advice, this analysis focuses on the proportional demographic breakdown according to the number of patients who received health education during the established programme phase only. The results are presented in Appendix B.3.

There were no significant changes in the relative number of patients offered health education within the Core20 population.

YMCA Clinic

The proportional demographic breakdown according to the number of patients who received any form of health education during the established programme phase of this study is presented in Appendix B.4. Note, there was insufficient data to analyse the proportionate breakdown of health education types across all ethnicity groups.

There was insufficient data on patients from the Core20 population to comment on this criteria across IMD scores.

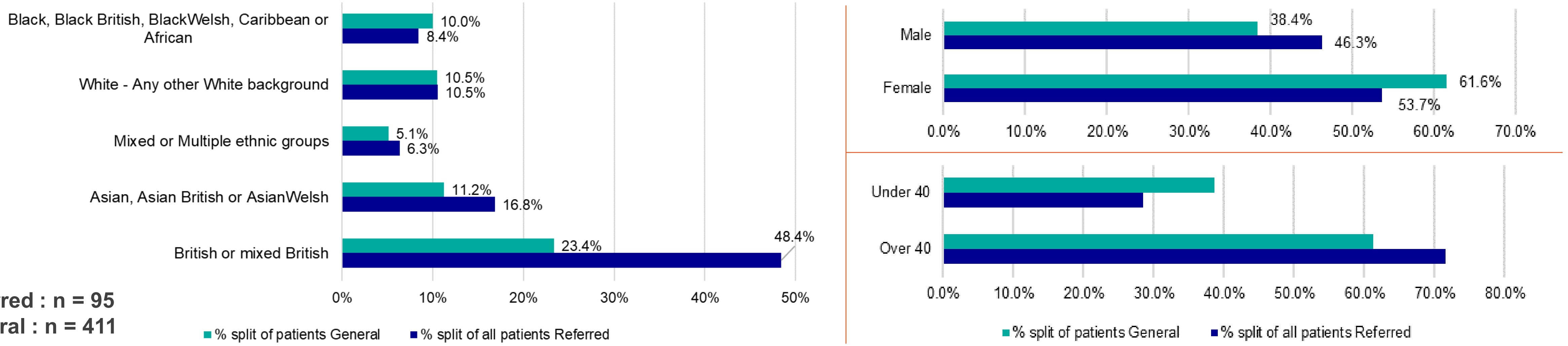
Quantitative insights: Casemix

Onward referrals – established programme provided

Referrals ensure that patients are directed to appropriate healthcare services or specialists, facilitating timely and targeted management of their conditions, which may help prevent further complications. These findings highlight individuals who have received an established programme, who may not have if not for the programme.

ABC Clinic

The proportion of patients getting referred from the ABC clinic population was not evenly distributed. The outliers in this category include British or mixed British (48.4%) and Asian (16.8%) ethnic groups (Figure 14), which differ from their general proportion among the entire cohort by 25.1% points and 5.6% points, respectively. There is also a notable difference in the larger proportion of males and over 40s being referred, amounting to 7.9% points and 10.3% points more referrals than their general proportion, respectively. There were no clear observations from the proportion of patients getting referred across IMD deciles for the Core20 population, largely because the sample size is very small (5 Core20 patients referred from a total patient population of 411 in the established programme period.)



Referred : n = 95
General : n = 411

Figure 14: Proportion of service users that were referred for further health care by ethnicity (left), gender (top right) and age (bottom right)
Note: Firstly, YMCA data did not contain referral information. Secondly, selected ethnicities were not included above due to little to no change between the initial startup and established programme periods.

Quantitative insights: Impact

Impact summary – Conditions

The impact of this programme can be assessed by combining the total number of patients seen across both the ABC and YMCA clinics during the established programme period, split across different CVD related conditions. The full results can be summarised as follows. Note, some patients have more than one condition, so double counting occurs across these values.

Table 3: Impact summary breakdown by clinical condition and risk predictors

	Condition	Engagement	Provided health education	Escalated to GP or for further care	Additional escalations*
Clinical conditions	High cholesterol	**264**	**166**	**112**	**6**
	Hypertension	**115**	**45**	**24**	**2**
	Diabetes	**163**	**65**	**47**	**4**
Risk predictors	Familial History of Diabetes	**121**	**80**	**54**	**3**
	High BMI	**255**	**153**	**99**	**9**
	High QRISK	**293**	**138**	**82**	**13**
	Disproportionate Heart Age	**120** [21 people with 10+ years difference]	**83** [16]	**56** [10]	**2** [0]

* Additional escalations includes referrals to diabetes nurses and/or social prescribing services.

Quantitative insights: Impact

Impact summary – Demographics

The impacts of this programme can also be assessed across demographics. In total, 240 individuals from the cohort with health indicators of a CVD condition were provided health education, and 145 were escalated to a GP for further care. These results can be summarised as follows. Note, patient demographic data is double counted across each demographic field since patients could be belonging to the Asian ethnic group, Over 40, and Female.

Table 4: Impact summary breakdown by demographics

	Demographic	Engagement	Provided health education	Escalated to GP or for further care	Additional escalations*
Ethnicities	Asian ethnic groups	**93**	**66**	**59**	**3**
	Black ethnic groups	**55**	**28**	**20**	**2**
	British / mixed British (not white)	**96**	**61**	**42**	**4**
	White (not British)	**43**	**26**	**7**	**3**
Ages	Over 40s	**275**	**136**	**83**	**8**
	Under 40s	**200**	**104**	**62**	**5**
Gender	Females	**264**	**116**	**54**	**8**
	Males	**164**	**84**	**45**	**5**
IMD	Core20	**15**	**7**	**4**	**1**

Qualitative insights

Interviews

5
interviews
conducted

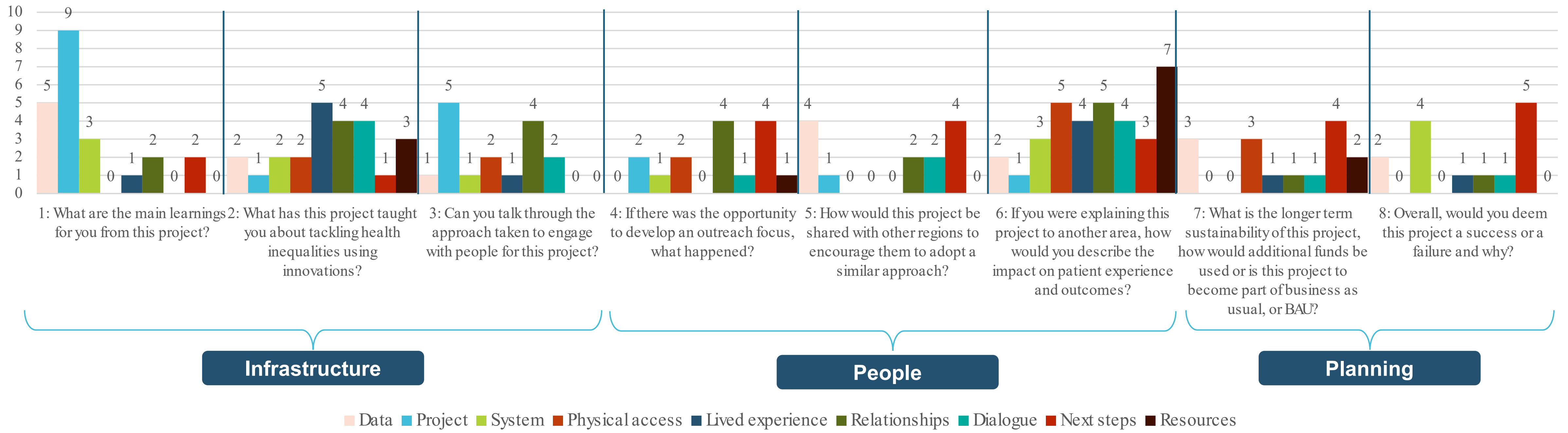


Figure 15: Frequency count of themes mentioned when answering interview questions.

The thematic analysis of the interview responses (n=5) provided a comprehensive overview and deep dive into the delivery of the InHIP project. The frequency count for each theme can be seen in figure 15. There were three themes, and nine sub-themes, as detailed below.

Qualitative insights

Infrastructure: Data

Several key considerations were raised under the sub-theme of data. Challenges relating to ensuring appropriate data sources were fully integrated and tested at the start of the project were acknowledged to have been a contributing factor to being able to demonstrate the full impact of the project on the targeted groups:

> Ensuring that any data in primary care is sorted to start with...(we were) up against a tight time scale

A source of frustration was also the fact that traditional methods of demonstrating impact, at a local and national level, were not suitable for this project due to small numbers of the cohorts:

> Outcomes come down to something that's easily definable…a monetary gain automatically disadvantages those sort of populations. Although we stressed (this) it wasn't translated into project monitoring

Whilst data was used to help understand the areas to prioritise focus, this was challenging to conduct robustly, as there was no easy way of pulling data from multiple sources to create a clear picture:

> Identifying and measuring health inequalities is really, really hard…this project taught us that we just don't know the makeup of people in our local communities. (We) can get round that by sharing more data with like local authorities etc.

Qualitative insights

Infrastructure: Data

It was also noted that different organisations would find entering and sharing data more challenging, due to the current set up of data keeping systems:

> The GP Federation partner could obviously enter data straight into the patient record whereas (there is a) separate data recording system for YMCA which then just required more work to enter that data

Challenges relating to aligning timelines for a business case and the evaluation of the project were raised as barriers to securing ongoing funds for the service delivery. However, all participants spoke of the importance to share learning from the project with other areas to help facilitate engaging with other communities in different geographical areas:

> There is no additional funding to be sourced…(it will be) interesting what the evaluation says because (it is) really hard to put a business case together to show the impact… (the) sustainability of it is the learning of the approach that we've taken in terms of engagement, that learning can be shared to support other partners to be able to engage with those populations

Information regarding people's subsequent journey along the lipids optimisation pathway was a point of concern for interview participants, and led to considerations on how to streamline prevention projects for future delivery:

> For anything like this to be sustainable or to demonstrate the impact you need the data…(I) worry where the failure for this project was just around that continuous loop back to the patient record and not (being) able to pull the pull that data and look (at) patient interactions

Qualitative insights

Infrastructure: Project

The sub-theme of project provided detail on the importance of stakeholder relationships and learning as the project developed to be able to improve delivery. There was reference to the speed of delivery, largely thanks to existing relationships and bringing the right stakeholders together rapidly:

> (The) importance of community engagement, getting the right people on the ground involved, expertise in a project group make(s) a difference and get(s) something off the ground quickly…(it is) important to have all of those good networks and relationships already existing

It was noted, however, that it was challenging to engage meaningfully with people from the target communities, despite strong partnership working between health provider organisations:

> Describing it as (a) hard to reach community…I learned that was the case, not an easy task

There were also additional steps that needed to be taken as the project developed that had not been foreseen, but resulted in stronger relationships and enabled effective reach into the communities:

> (The) structure of team and all the extra steps we had to take to actually take this service to people under 40…how this has benefited the NHS and us and the patients, working with (the) ICB

Qualitative insights

Infrastructure: Project

The communication lines between the Outreach Team and the GP practice in the ABC GP Federation arm of the delivery team were reported to be instrumental in helping to ensure people continued to receive care after receiving their initial community health screen:

> Using the digital system, we're sending messages back to practices, (it's) another way to be able to loop back in on our (patient) advocate or call a surgery…we'll challenge some issues a patient is having and doesn't feel they have the strength to be able to tackle

Ensuring the project was designed to think about local community make up from the outset, who the role models or leaders are that may not be traditional healthcare staff, and enabling people to easily receive screening appointments was paramount to securing engagement. It was quickly realised that taking varied approaches for different groups was the most effective way of promoting engagement, although not without some barriers:

> Looking at where the provisions for them are in the area and then thinking about going to those communities to make it easier to access…(we) had pop up clinics (and) physically gone out in teams to the GRT community.

> Trying to engage with lots of different groups and it did work with certain groups and didn't work with others…let's test this out and analyse why we've not been able to engage with that group

Qualitative insights

Infrastructure: System

Comments regarding the wider healthcare system featured with several participants. Current system pressures were linked to poorer health outcomes for people who have previously experienced challenges engaging with healthcare services:

> If you're on the phone line for 40 minutes and then all the appointments are gone, that's your opportunity gone, and after a little while you say ‘oh well, it’s too hard, I’ll do it later’

The appointments were identified as an opportunity to signpost to wider services, however, consideration for what happened to people as they progressed through the pathway was a point of concern as there was no assigned responsibility to follow up with individuals:

> Some users would go in for that appointment again and the GP would ask them to go for a full blood test. Looking at the people we have dealt with, did they go? What happens if they did not go for a full blood test? Has this been followed up and the results that we gave, have (the people) been looked after?

Qualitative insights

Infrastructure: Physical Access

Physical access was carefully considered during the delivery design phase of the project, to ensure physical barriers to people accessing healthcare services were mitigated as far as possible. However, a risk that had not been considered during the early stages of the project was managers in other services who work with the target communities playing a gate keeping role, determining what would be of interest to the communities, without apparently asking the group members if this was correct:

> Some of the services put up a barrier for actually going and see(ing) these cohorts…some managers say ‘Ok, I don’t think they need this service. They know where the GP’s are. You don’t need to come.’ But, actually, getting through that management barrier or whoever (it) is that (is) not allowing the contact…explaining to them what are actually the health inequalities that we need to go and see those people was very important to them (to) actually get the access

The physical space people could receive screening appointments was designed to be as easy as possible, and at venues people would already be likely to use:

> Improving visibility of the services, so you know…shopping centre was an ideal location. Just the ability to put the service in front of people, going to them instead of saying come into the GP surgery because they wouldn't do that. It's out of their way

Convenience for people was received favourably, not only in terms of venues and physical accessibility, but also for additional health tests:

> (The project was) looked on favourably and people were quite pleased that people coming out to them rather than them having to seek out medical intervention themselves

Qualitative insights

People: Dialogue

The sense of having a meaningful, two-way conversation was commonly raised by participants. This was enabled by longer appointments, which were heralded as contributing to the success of the project, resulting in discussions about health that were tailored to the individual:

> A nice sort of half hour slot and chat about the benefits of being able to improve their health, and signposting them to areas where they could do that.

Becoming an advocate for people and ensuring they were aware of their entitlement to healthcare services was pivotal in helping open the conversation to facilitate people engaging with other services:

> Just making patients aware, actually, you know what? You can go here. This is what you're eligible for. You can access XYZ. Would you like us to help you with that as well?

Interestingly, the relationships team members have built with members of the local community, has in turn helped other service providers feel more comfortable engaging with people and able to share information appropriately to provide ongoing support to vulnerable people:

> (I) spoke to one of the partners in Surrey and, actually, they're then going out to do a home visit for this homeless person out in the community, but felt much more empowered once we said, oh, actually there's no issues

Qualitative insights

People: Relationships

Building networks and relationships, both between other healthcare organisations and communities was of great importance to participants. A focus on trust, both with the healthcare provider and the wider service, was noted to be of importance when meeting the needs of underserved communities in their own space:

> Building that sense of relationship…conversation, listening, making people feel that they can trust the process and we're not there for any other agenda

The importance of considering wider sensitivities and relationships was raised as a consideration in support of accessing people from different communities to those offering the community screening checks:

> One of the big struggles…accessing mosques etc, you know it wasn't necessarily appropriate for a white female to go in necessarily. It's like (considering) cultural awareness

Collaborative working to streamline the appointments and venues people needed to attend was considered to facilitate engagement, and support follow up onto appropriate pathways for ongoing medical treatment:

> We have partners who do health visiting with babies and children, and then often it's an easier way to link into families. We have done health clinics alongside other projects that are running TB screening at the same time while they get a free meal as well at the shelter.

Qualitative insights

People: Lived experience

Stories relating to the direct impact the project has had on individuals who have attended community screening were shared and were extremely powerful. Several participants gave examples of instances where appointments identified additional information, or people who would have become unwell if they had not been seen:

> We went to the domestic violence shelter and a lady who gave birth four/three weeks ago had very high blood pressure…she was just not well. We said just bring her down, let us have a chat and see what's going on. So, when we spoke to the managers, they said ‘Oh we just thought that she is rundown because she just had a baby’ but actually, this lady would end up very badly...so having had that nurse there, she can actually see what's going on (getting) the full picture

> Most people had a GP in London, so they ended up in an emergency accommodation. They're homeless or they're GRT, coming here staying here for 6 months…they do not want to go and set up a new GP because they are scared that they are going to get moved again or very soon they don't know where they're going to live. So, sending that GP task will not be actually helpful, and that person will not go and travel (to the appointment)

The significance of a clinician having time to talk through a patient’s needs and answer questions about treatment, pitched to the person’s own barriers to engaging with healthcare services, was a key factor in helping people gain understanding of their health:

> We had a person come with a box of medications saying ‘I have that diabetes, the GP has told me but they gave me so much medication, I do not know which one to take, I don't know if I can have them together, I don't know what time’, and after the nurse looking (she) said ‘OK, these are all out of date, we have to call the GP’ and she explained what is this for and a lot of people were not literate

Qualitative insights

People: Lived experience

It was acknowledged there can be a mismatch between healthcare providers and other people's priorities:

> Although we've identified existing groups that we were working with it still took time to meaningfully engage with those groups and it was mainly because it wasn't their priority. So, for example, the cab group, the cab drivers, they were meeting on a regular basis, but they weren't necessarily interested in having somebody come in and do health checks because their priority was to (do) their first aid so they could get their license

The reality of people accessing services was acknowledged to be very individual and, therefore, people should be offered the chance to talk about themselves meaningfully:

> Barriers are individual, but actually being able to talk and being able to provide some advocacy in (the current) climate right now makes it unfortunately very difficult for all patients to access care

Qualitative insights

People: Lived experience

There was also discussion around how people in underserved communities can feel left out of service provision when demand on services is high:

> It almost feels like we can't get through to the GP. So therefore, you know, that's the end of the line for us. You know, nobody will know, nobody cares

Conversely, when it would be easy to assume further healthcare interventions were the last thing people undergoing significant care would be interested in, results may be more impactful than not:

> We have seen that many people under 40 did have bad results…what also stands out is some of the stories when the results were good. For example, somebody in alcohol rehab, when we said to them all the results are good, they said 'this is all I needed to hear, I'm staying here for 8 weeks now away from my family and knowing that my cholesterol is all right gives me more confidence in continuing to look after myself

Qualitative insights

Planning: Next steps

There was also a desire to share the realities of working in a different way:

If we were to, kind of, share this sort of learning with others…demonstrate the impact, but also the approach of going out to communities and working with them, also just sharing the things that didn't go so well and where we can have some improvements

Wrap around healthcare education and service awareness was identified as a requirement for wider organisations who support vulnerable people:

What is actually missing is healthcare education for the managers that are looking after these people

Participants felt strongly that the work should continue, largely to mitigate the people who have been seen during the project feeling left behind by healthcare services. Existing relationships were suggested as the most effective way forwards:

We've gone in, we've built relationships, we've built trust and we've offered some form of health intervention… (but) then to go away and then not come back again it almost sort of closes the door

…build on the grassroot work that has already been done. It makes sense that if certain partners and certain groups have formed relationships and have built trust to enable them to continue, it will always be much harder to get another bunch of people in and another project.

Qualitative insights

Planning: Resources

Wider implications for resources for workforce or the system to consider were also brought up. An importance was placed on appropriate staff being part of the team from the outset:

...appropriate staff to deliver services as well, particularly if you're trying to reach certain populations

We have a patient advocate in our team, and it's been really heartwarming for her when she's had feedback later to say 'you saved my life because I couldn't get that GP appointment'

Nuances between population groups to support engagement were identified and built into the delivery model of the project:

It worked well with Women's groups, maybe it was a woman going in (that) was making the difference

The importance of clinicians being part of the on the ground delivery team during screening appointments, and the added value a prescriber brought when required was highlighted:

This needs to a nurse, because when you have somebody vulnerable that does not go to speak about their health it's a good chance to actually look at overall health and what has been missed.

Clinical supervisor on call…so if any readings were too high or somebody had other symptoms because the nurse was there, we were able to call the ambulance straight away because knowing, OK, this person is going to have epilepsy or something…he was able to prescribe…(which is a) big help for the people that would not go for the appointment or needed their prescription right now right there

Qualitative insights

Planning: Resources

A point of contention was the impact this would have on funding similar projects, particularly when small numbers of people were likely to form the targeted population groups:

> The sustainability side of it is probably more (the) financial implications, because (of getting) resources out to people for smaller amounts of people

The impact on the health and social care system was also linked to workforce resources, and alternative models to support delivery where no funds were available in NHS services:

> If you look at (the) current situation, funding is going to be prioritised for those services that have either got massive waiting lists and have got a massive clinical risk attached to them, rather than extending a service. It would be easy to do because we have got the existing infrastructure. All we're doing is just opening up to more people once we're there already. But we can't do that without additional resources, because anything over and above that's not been directly funded centrally, there's just no budgets for it anywhere, and the prioritisation will be clinical need because obviously that's the higher risk for patients screening and prevention unfortunately.

Benefit forecasting insights

Benefit forecast modelling

Actual scenario

Lipids management

Total 5-year saving

Number of patients escalated for treatment = 112 × Event risk reduction × Event unit cost (£ total) = £6,408

Hypertension

Number of patients escalated for treatment = 24 × Event risk reduction × Event unit cost (£ total) = £129

The Benefit forecast analysis shows that if the Surrey InHIP project escalated 136 additional patients, over a 5-year period the project would save **£6,537.**

Benefit forecasting model insights

Benefit forecast modelling

Actual scenario

Table 5: Monetary savings after 5 years per benefit stream if 136 additional patients had their care escalated.

Benefit stream	Number of care escalations		*	Event risk reduction		*	Event unit costs (£ total)	=	Total 5-year Savings (£)
	Lipids	Hypertension		Lipids	Hypertension				
Stroke	112	24		0.09%	0.03%		£23,778		£2,575
Transient ischaemic attack				0.05%	0.01%		£2,961		£173
Myocardial infarction				0.13%	0.02%		£9,571		£1,456
Unstable angina				0.05%	0.01%		£3,523		£204
Stable angina				0.00%	0.04%		£1,241		£6
Coronary revascularisation				0.13%	0.00%		£8,555		£1,288
Non coronary revascularisation				0.08%	0.00%		£9,263		£832
Heart failure				0.00%	0.01%		£3,598		£3
							Total		**£6,537**

Benefit forecasting model insights

Benefit forecast modelling

Expansion scenario

Total 5-year saving

Lipids management

Number of eligible patients in the population × Modelled engagement rate = 25% × Proportion escalated to GP / Further care for lipids × Event risk reduction × Event unit cost (£ total) = £100,165

Hypertension

Number of eligible patients in the population × Modelled engagement rate = 25% × Proportion escalated to GP / Further care for Hypertension × Event risk reduction × Event unit cost (£ total) = £961

The Benefit forecast analysis shows a total 5-year estimated saving from reducing adverse events, such as stroke, as a result of a more targeted care escalation, to be **£101,127.**

Benefit forecasting model insights

Benefit forecast modelling

Expansion scenario

Table 6: Forecasted monetary savings after 5 years per benefit stream if the project is extended to a wider ICB geography implementation

Benefit stream	Number of care escalations		*	Event risk reduction		*	Event unit costs (£ total)	=	Total 5-year Savings (£)
	Lipids	Hypertension		Lipids	Hypertension				
Stroke	1,048	189		0.09%	0.03%		£23,778		£39,544
Transient ischaemic attack				0.05%	0.01%		£2,961		£2,673
Myocardial infarction				0.13%	0.02%		£9,571		£22,548
Unstable angina				0.05%	0.01%		£3,523		£3,153
Stable angina				0.00%	0.04%		£1,241		£43
Coronary revascularisation				0.13%	0.00%		£8,555		£20,133
Non coronary revascularisation				0.08%	0.00%		£9,263		£13,006
Heart failure				0.00%	0.01%		£3,598		£26
							Total		**£101,127**

Benefit forecasting model insights

Benefit forecast modelling

Actual scenario

Figure 16 shows the monetary savings after 5 years per benefit stream. The estimated benefit from lipids management is £6,408 and the estimated benefit from hypertension management is £129. Therefore, the total estimated benefit is £6,537.

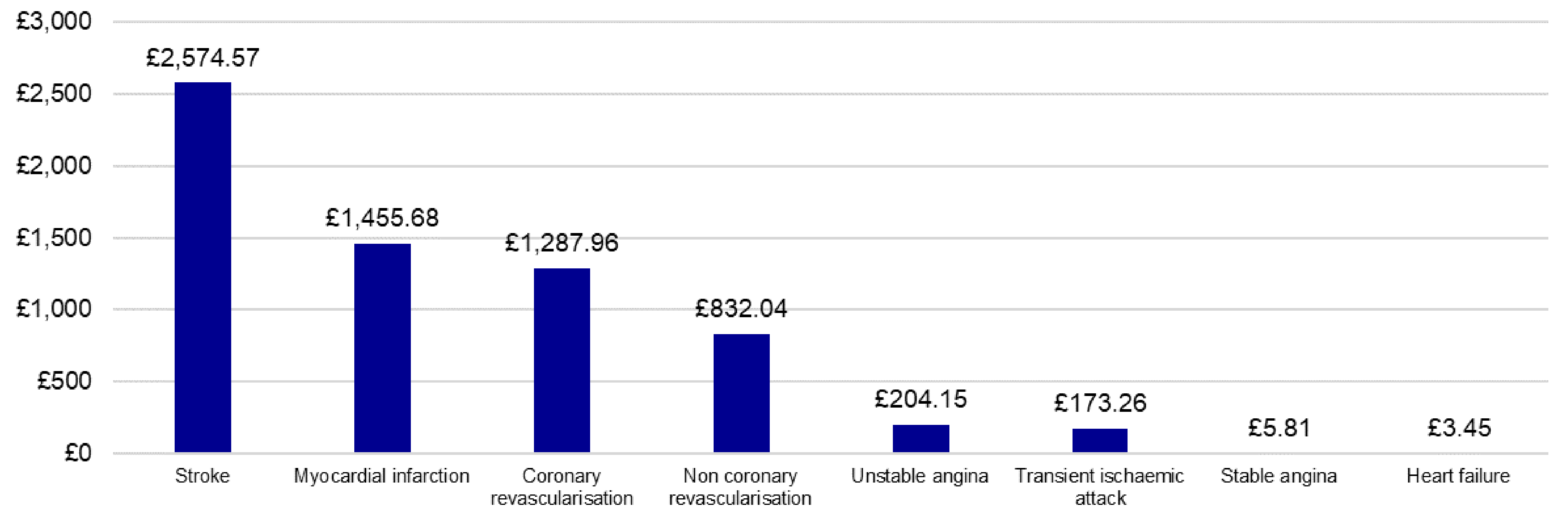


Figure 16: Monetary savings after 5 years per benefit stream if 136 additional patients are treated to target

Benefit forecasting model insights

Benefit forecast modelling

Expansion scenario

Figure 17 shows the forecasted monetary savings after 5 years per benefit stream if the project is extended to a wider ICB geography implementation. The estimated benefit from lipids management is £100,165 and the estimated benefit from hypertension management is £961. Therefore, the total estimated benefit is £101,127.

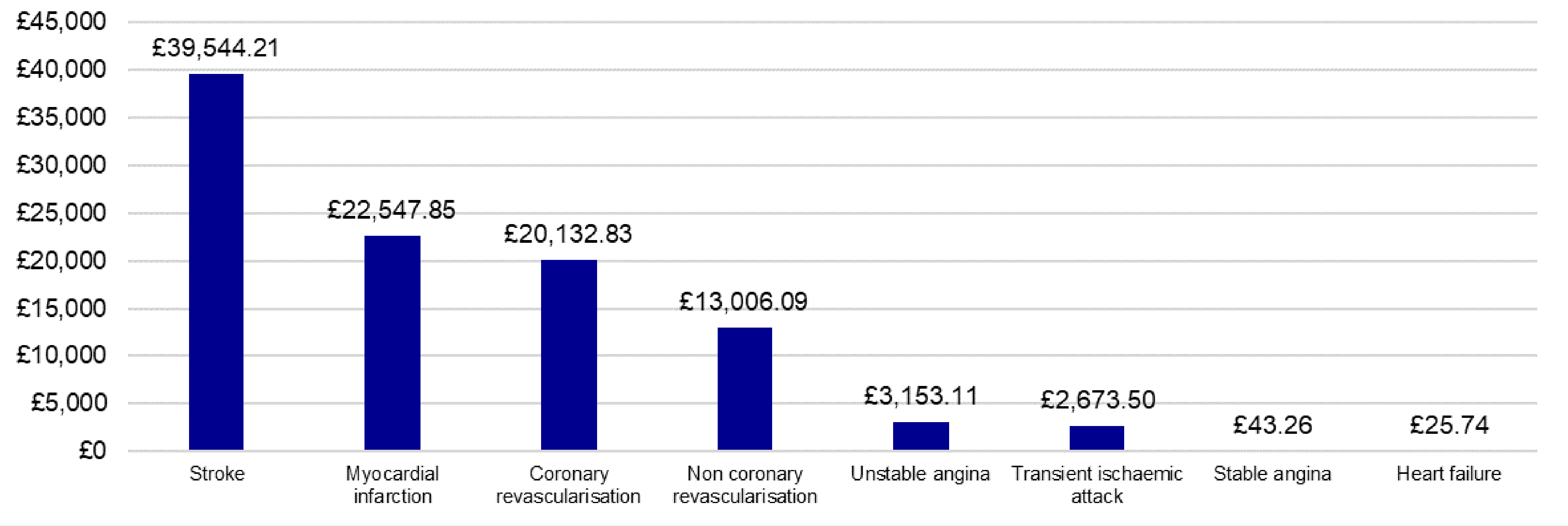


Figure 17: Forecasted monetary savings after 5 years per benefit stream if the project is extended to a wider ICB geography implementation.

Summary of findings

Summary of findings

How effective has the project been at reaching hard-to-reach groups (Core20PLUS5)?

The project was effective in increasing engagement with ethnic minorities, under 40s and Core20 groups:

The programme increased engagement with ethnic minorities, exceeding initial startup levels. There was a noticeable dip in reach among White British individuals. Compared to the Surrey-wide demographic, the programme notably engaged a greater percentage of ethnic minority groups, demonstrating its ambition in connecting with these communities.

Patients under 40 had increased engagement during the established programme phase, as corroborated by staff interviews indicating effective reach to high-risk individuals not previously identified by GPs.

Analysis of the YMCA dataset shows the programme effectively reached individuals from IMD Core20 postcode areas, which is particularly significant given Surrey's generally low deprivation levels.

The deprivation profile targeted by the programme was generally more disadvantaged than that of the broader Surrey area. Although only 1% of Surrey falls into the Core20 category of deprivation (IMD 1-2), the programme indicates a successful outreach to Core20 groups, representing a higher proportion relative to Surrey’s population.

Summary of findings

What effect has the project had on outputs or outcomes across target groups?

The project improved identification of individuals at risk for CVD within some of the target groups (ethnic minority groups) as the project matured, this could enable early management of their conditions and potentially prevent adverse outcomes

Asian ethnic groups (46 patients) saw a rise in their proportional uptake across CVD conditions compared to Black ethnic groups (41 patients), considering the Asian population makes up a significantly larger proportion of the total population across Surrey Heartlands.

Splits across gender and age bands were less evident across CVD conditions, showing rises and falls in Under 40 and Over 40 groups as well as between Males and Females.

Males and the Over 40 cohort were referred at a higher rate than their gender and age group counterparts, and therefore could be a focus of programme's outreach goals.

When analysing impact, results show that in total, 240 individuals from the cohort with health indicators of a CVD condition were provided health education, and 145 were escalated to a GP for further care. These individuals may not have known of their condition and so early detection and treatment could improve their outcomes (also shown in the forecast model).

Summary of findings

What has been the monetary impact of the InHIP programme?

The Benefit forecast results show that there is a potential benefit to health and social care within the Surrey ICB geography of £101k over 5 years.

This represents the measurable and monetisable benefits of the project, but the total impact of the project likely far exceeds this. These unmonetized benefits include factors such as quality of life, continually accrued benefits beyond a 5-year time horizon, and benefits from social prescribing and other lower-intensity preventative care such as health education. The full impact of the project is likely to be realised over decades, rather than years.

The size of the monetisable benefit, plus the likely scale of the unmonetisable benefits, presents a business case for continued investment and scale-up of the project, applying key learnings from the implementation to-date.

Costs of the project have not been incorporated into the analysis, however, a review of costs and efforts to minimise costs are recommended before a wider scale implementation to ensure a positive return on investment.

Summary of findings

Is the approach a feasible option for future initiatives?

Interviews revealed positive feedback and hopes that the work is continues

A consideration when working on new models of care to deliver healthcare services to people and communities who have had poor experiences with healthcare services, is the wider impact on the system and how sustainable the adopted approach would be in the longer term.

Despite considering different resources implications, participants were in agreement that engagement is important and makes sense to be continued by delivery partners who already have trusted relationships with communities. Participants were concerned if the work wasn't continued, this may feed into the narrative that people are forgotten about and left behind by healthcare services.

Whilst it was acknowledged current service parameters would be prohibitive to continuing to screen people ineligible for NHS health checks, it was described as a quick win for the system as a whole, with far reaching impact on upstream system pressures for acute care.

Participants also commented on the impact the project had had on a personal level, with staff being moved by patients stories of poor healthcare and celebrating with them the journey of building trust with healthcare providers again.

Summary of findings

Is the approach a feasible option for future initiatives?

Future project options

Community champions

Education programmes

Community screening delivery support

Additionally, multiple participants volunteered other ideas to expand upon the existing project and better serve the PLUS population groups, such as developing a network of Community Champions, explore other healthcare needs, developing an educational programme for service managers working with vulnerable people and linking into commercial operations to support delivery of community screening. Bespoke projects were suggested for Homeless Outreach and Refugee and Asylum seekers waiting for their application to be accepted.

Summary of findings

Is the approach a feasible option for future initiatives?

Limitations of current design

During the interviews, participants reflected on the experiences of working at pace to deliver a targeted piece of work with minimal guidance. There were suggestions as to how this could be improved for the experience of staff, such as meetings between all involved partners. Forming a network was also hypothesised to ensure people didn’t fall through gaps in service provision, as multiple organisations would then have sight of the person eligible for services.

In a similar vein, if referral loops are not closed and the person identified as being at risk seen for further clinical input, this could result in the person remaining untreated, or repeating tests, requiring additional, unnecessary resources. Part of the wider learning for the project was communications between delivery team members and the GP practices, to ensure patients receive appropriate onwards care.

A significant barrier to proving the outcomes of patients screened in the community was down to challenges tagging patients with a specific SnoMed code that could be used in searches to identify people who had been seen as part of the project and gone further along the lipid optimisation pathway. Participants reported frustrations around how outcomes are currently measured, and change needed as a matter of urgency to develop measurements that are better suited for the target populations..

Conclusion

Conclusion

1. **How effective has the project been at reaching hard-to-reach groups (Core20PLUS5)?**
    - Analysis of both YMCA and ABC data sets found that the project engaged with a higher proportion of people identifying in ethnic minority groups compared to the initial startup. Those ineligible for a health check due to age criteria (under 40) were also engaged with more during the project's implementation, and interviews support that these groups would not have been identified if not for the project. Finally, the deprivation profile targeted by the project (Core20) was generally more disadvantaged than that of the broader Surrey area suggesting the project was effective in increasing engagement with ethnic minorities, under 40s and Core20 groups (to a small degree).

2. **What effect has the project had on outputs or outcomes across the target groups?**
    - The project improved identification of individuals at risk for CVD within some of the target groups (ethnic minority groups) as the project matured, this could enable early management of their conditions and potentially prevent adverse outcomes

3. **What has been the monetary impact of the InHIP programme?**
    - The Benefit forecast results show that there is a potential benefit to health and social care within the Surrey ICB geography of £101k over 5 years. This represents the measurable and monetisable benefits of the project, but the total impact of the project likely far exceeds this. The size of the monetisable benefit, plus the likely scale of the unmonetisable benefits, presents a business case for continued investment and scale-up of the project. Nonetheless, costs were not included in the analysis and should be reviewed before any scale-up occurs.

4. **Is the approach a feasible option for future initiatives?**
    - Interviews revealed staff recognise the significance and importance of the programme, and felt it had a positive impact on upstream pressures. They did acknowledge some limitations of the current design, such as inadequate onward care post detection, but interviewees suggested some ideas to address these challenges. Participants felt strongly that their work should continue. Building on existing relationships were suggested as the most effective way forwards.

References

References

- Denzin, N.K. and Lincoln, Y.S. (eds.). *Handbook of Qualitative Research*, Sage, Thousand Oaks, 1994.
- Miles, M.B. and Huberman, A.M. *Qualitative Data Analysis: A Sourcebook of New Methods*, Sage Publications, Newbury Park, CA, 1984.
- Ross, P.T., Bibler Zaidi, N.L. Limited by our limitations*. Perspective Medicine Education. 2019 Aug;8(4):261-264. doi: 10.1007/s40037-019-00530-x.* PMID: 31347033; PMCID: PMC6684501.
- Smith, J., and Noble, H. *Bias in research.* Evidence Based Nursing 2014;**17**:2–3. doi:10.1136/eb-2014-101946
- NICE NG238 Resource Impact Template (Lipids) NICE (2024)
- NICE NG136 Resource Impact Template (Hypertension) NICE (2022)
- CVDPREVENT, 2023. CVDPREVENT Data Extract [Website]. URL: https://www.cvdprevent.nhs.uk/data-extract

Appendix A

Definitions

Core20PLUS5

is a national NHS England and NHS Improvement approach to support the reduction of health inequalities at both national and system level. Core20PLUS5 populations in England suffer from poorer health outcomes, accentuated by the same patients suffering from inequitable access, experience and outcomes from health and care services and treatment pathways. The approach defines 2 target population cohorts – the 'Core20 (nationally defined) PLUS (ICS defined) – and identifies '5' focus clinical areas requiring accelerated improvement.

Ethnic Minorities

The Office of National Statistics (ONS) has highlighted that there is no true consensus on what defines an ethnic group, as identification to these is self-defined and subjectively meaningful to the individual29. Ethnicity can include a variety of elements such as ancestry, culture, identity, religion, language, and physical appearance. However, it is generally accepted that ethnicity includes all of these aspects, and others, in combination. Under the Equality Act 2010, ethnicity includes colour, nationality and ethnic or national origins.

Appendix A.1

Postcode district	Total number of Postcode areas	Postcode areas within the Core20 % (n)	% split of Core20 Postcode areas	Total number of people within the pathway	% split of people within the pathway
CR3	678	0% (0)	0%	1	1.56%
KT4	466	0% (0)	0%	1	1.56%
RH1	1007	2.68% (27)	64.29%	51	79.69%
RH19	873	0% (0)	0%	1	1.56%
RH2	664	0% (0)	0%	5	7.81%
RH6	670	0% (0)	0%	2	3.13%
RH9	139	0% (0)	0%	1	1.56%
SM5	655	2.29% (15)	35.71%	1	1.56%
SM7	424	0% (0)	0%	1	1.56%
Total	**5576**	**4.97% (42)**	**100%**	**64**	**100%**

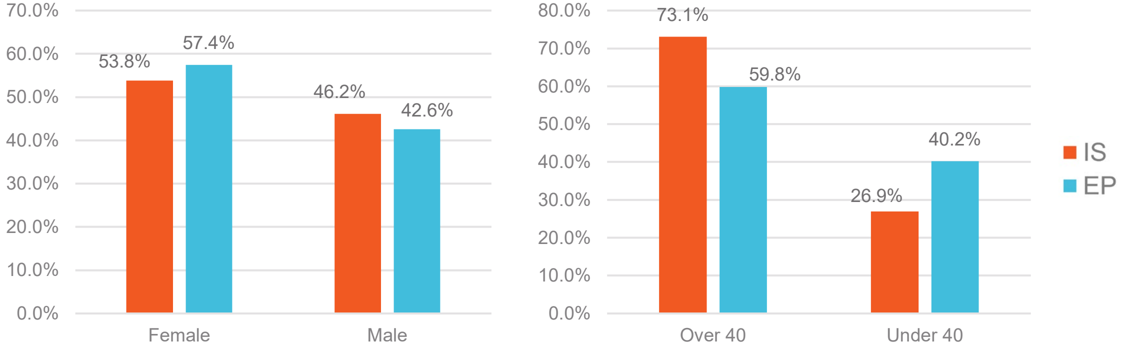
Figure 18: Comparison of IMD score splits across postcode districts represented in the YMCA clinic dataset, with a focus on Core20 groups (IMD Scores of 1 and 2), and the proportional split of patient postcode districts within the YMCA dataset.

Appendix B.1

ABC data

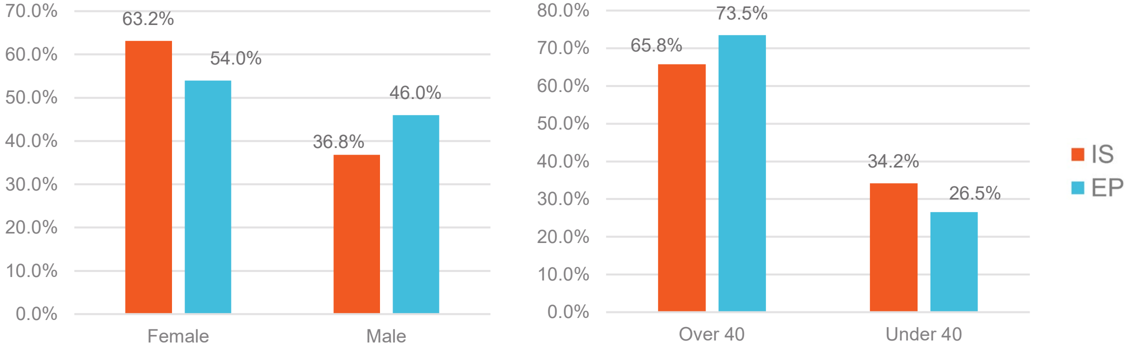
Additional Results: Cholesterol

IS : n = 26
EP : n = 209



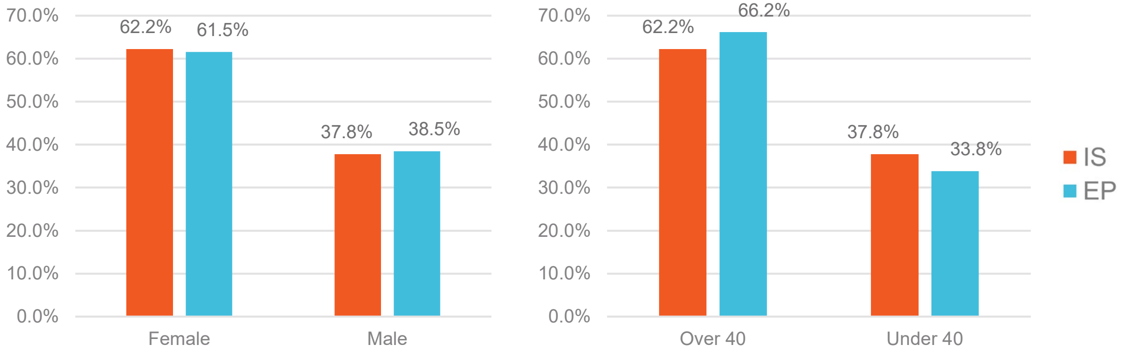
Additional Results: Hypertension

IS : n = 38
EP : n = 113



Additional Results: Diabetes

IS : n = 45
EP : n = 130



Additional Results: Familial History

IS : n = 11
EP : n = 95

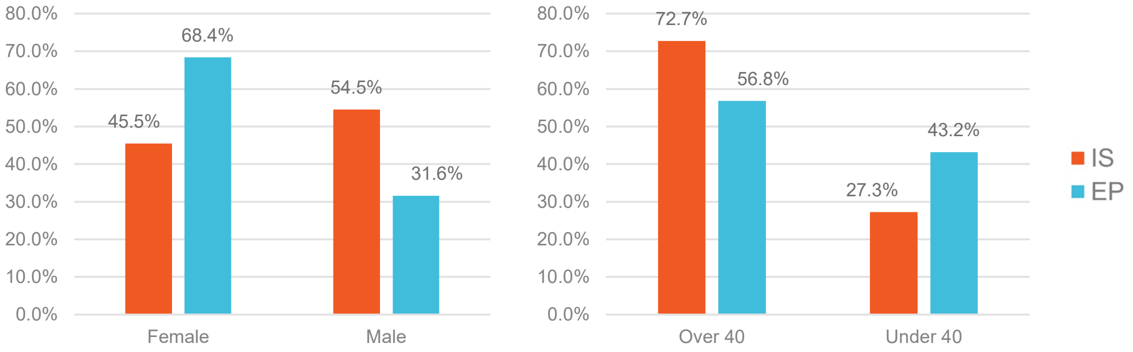


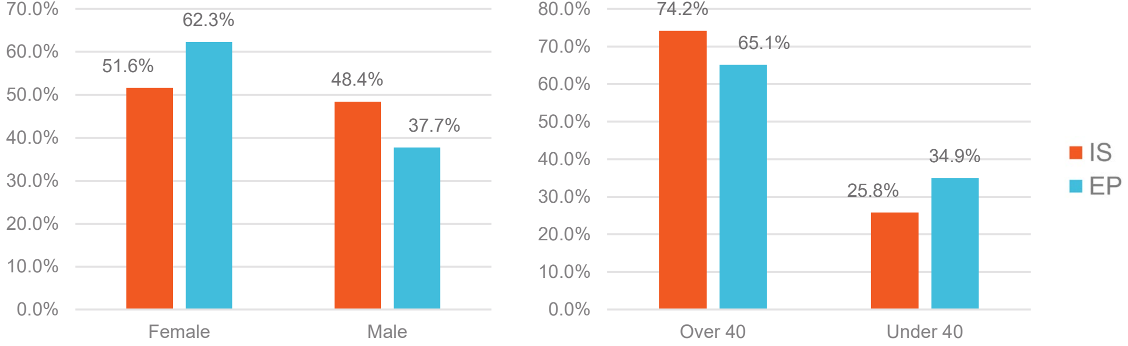
Figure 19: The proportionate split of genders and age groups at the ABC Clinic, during the initial startup and established programme periods, with known sub-optimally managed cholesterol (top-left), registered hypertension (top-right), a HbA1c count greater than or equal to 48 (bottom-left), and a family history of diabetes (bottom-right).

Appendix B.2

ABC data

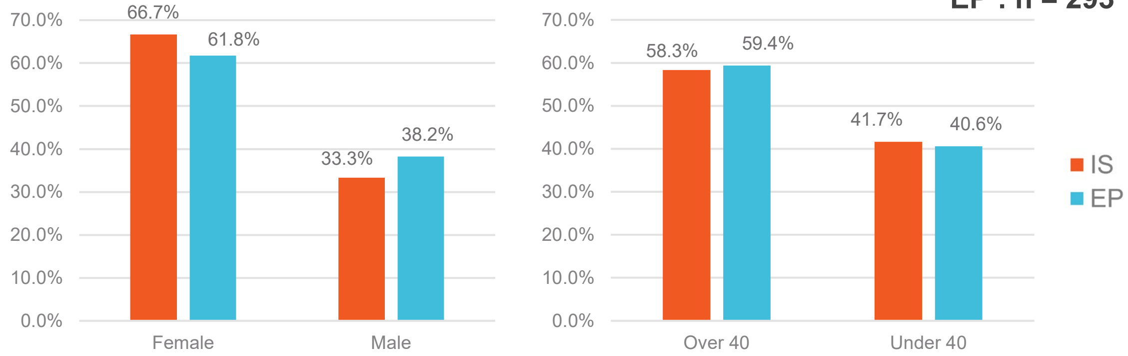
Additional Results: BMI

IS : n = 31
EP : n = 212



Additional Results: QRISK

IS : n = 36
EP : n = 293



Additional Results: Heart Age

IS : n = 14
EP : n = 111

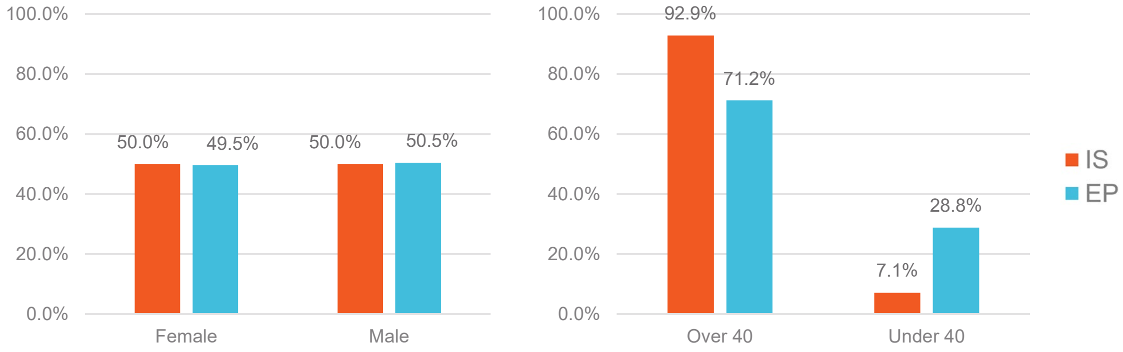


Figure 19: The proportionate split of genders and age groups at the ABC Clinic, during the initial startup and established programme periods, with patients that are considered overweight or obese (top-left), significant QRISK2 or QRISK3 scores (top-right), and a recorded heart age greater than their actual age (bottom).

Appendix B.3

Additional Results: Health Education (ABC data)

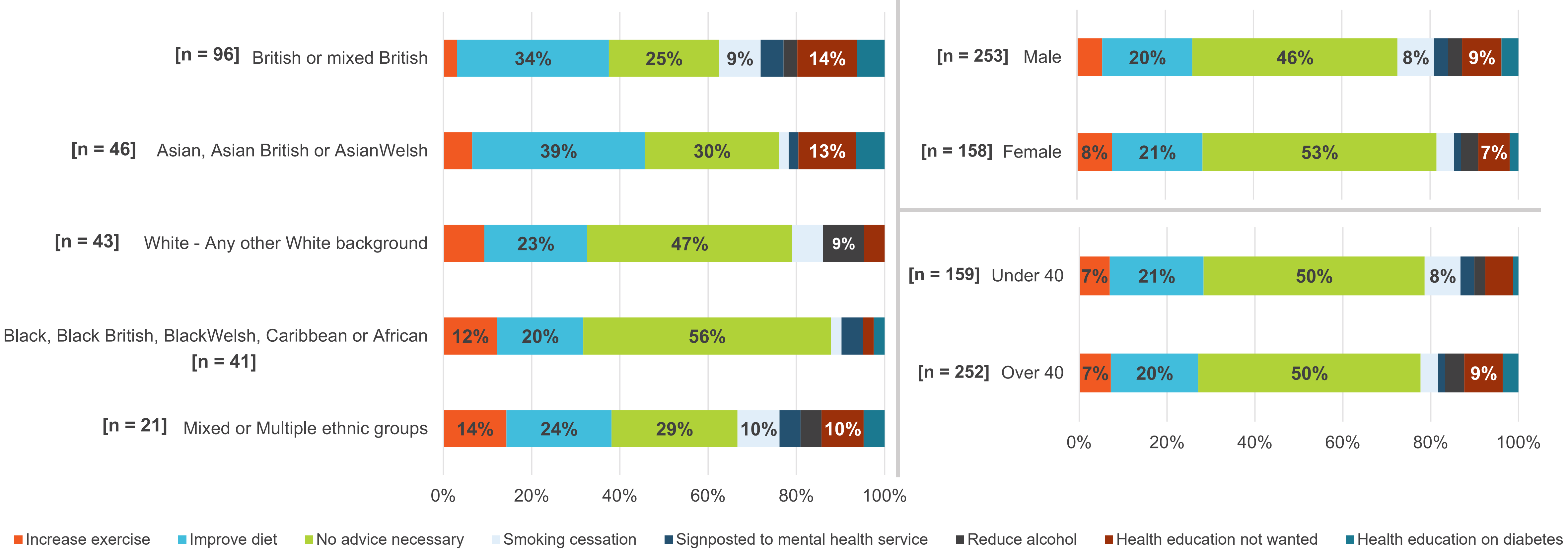


Figure 20: The proportionate split of ethnicity groups (left), genders (top-right) and age groups (bottom-right) at the ABC Clinic, combined across the initial startup and established programme periods, that received health education.

Appendix B.4

Additional Results: Health Education (YMCA data)

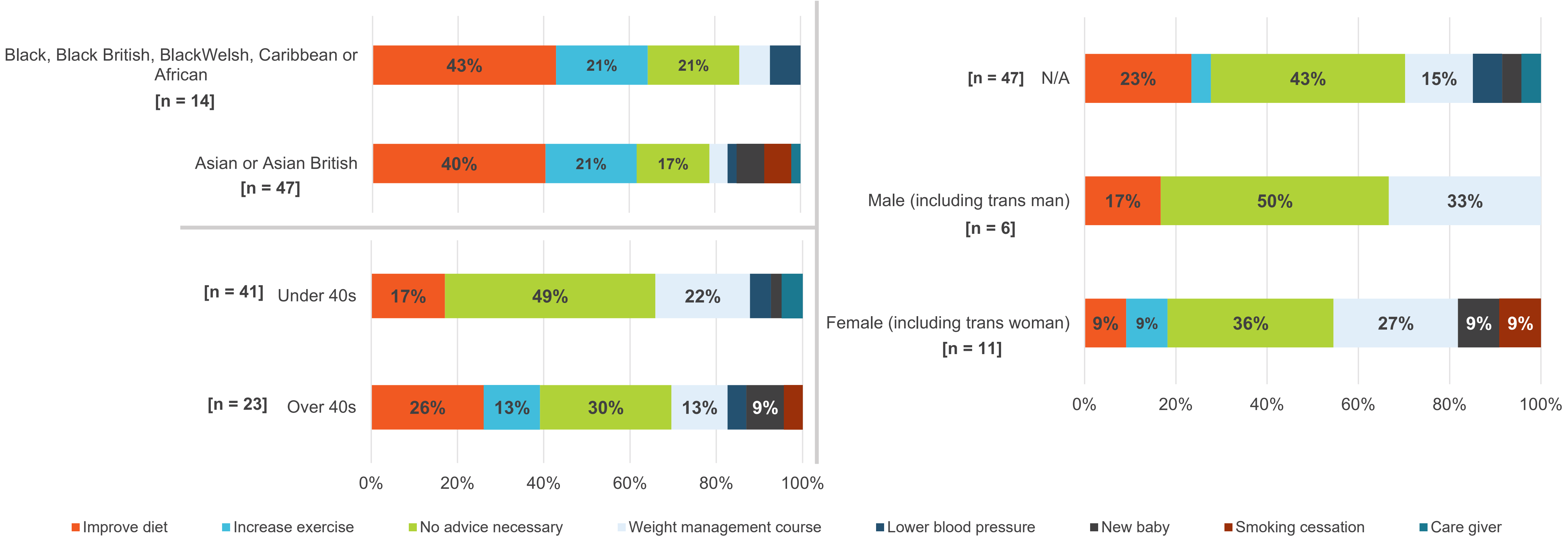


Figure 21: The proportionate split of ethnicity groups (top-left), genders (right) and age groups (bottom-left) at the YMCA Clinic, combined across the initial startup and established programme periods, that received health education.