Bolton Council

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NHS Health Checks: Health Equity Audit

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Contents

Executive Summary

The purpose of a health equity audit is to take a systematic approach to identifying inequities in a programme or service. This report aims to examine whether access, delivery, and uptake of NHS Health Checks are distributed fairly across population groups in Bolton – and to highlight opportunities to improve health inequalities.

The NHS Health Check programme targets several key preventable diseases by identifying risk factors early in people aged 40-74. The main focus of the service is targeting cardiovascular disease as well as diabetes, and Bolton's local population experiences some of the highest rates of these diseases in the country. This makes the NHS Health Check service critical to combatting poor health and health inequalities for local residents.

Key Findings

Invitations & Attendance

The NHS Health Check service in Bolton is a top performer nationally, with the latest figures showing that 75.1% of the eligible population received a Check over the past 5 years – the highest figure of any English local authority. However, there is still room for improvement. Whilst rates of invitations are relatively consistent across different population groups, some inequities in attendance rates are apparent:

- **Deprivation:** Attendance follows a social gradient, with eligible residents from the most deprived (69%) areas less likely to attend than the most affluent (74%)
- **Age:** Younger patients (64%) have lower attendance than older (78%)
- **Sex:** Males (65%) tend to be much less likely to attend NHS Health Checks than females (76%)
- **Ethnicity:** Residents from Asian backgrounds (80%) and Black ethnic groups (78%) attend at high rates, which is positive given higher risks of cardiovascular disease and diabetes in this population
  Some smaller ethnic groups attend at much lower rates, such as non-British or Irish White (63%) and Mixed White and Black African (62%)

Data

Local data is poor for several groups that may be at higher risk of exclusion according to research. Priority groups identified for improvements in data collection, monitoring, and reporting are:

- People with disabilities
- People who have undergone gender transition

- Inclusion health groups, such as people experiencing homelessness, vulnerable migrants and refugees, unpaid carers and people in contact with the criminal justice system

All of these groups are at higher risk of disease, but no local data was available to examine whether they are being underserved by the current programme in Bolton.

Completeness

The NHS Health Check consists of 9 elements, assessing a patient's lifestyle risk factors along with several physical examinations such as blood pressure and blood tests. It is essential that all of these components are completed to provide a comprehensive risk assessment and tailor support correctly.

In Bolton, only 52.8% of performed Health Checks are complete with all 9 elements, with the most common missing components being assessments of family history and physical activity. Several groups also experience disproportionately low rates of completeness.

On average, the most deprived (48%) have more missing elements than the most affluent (53%) and whilst attendance is good in patients from an Asian background, they have the lowest rates of completeness (44.7%) of any ethnicity. In fact, every minority ethnic group exhibited lower rates of completeness than White British patients. It will be important to ensure that systemic inequalities do not manifest at this stage of delivery.

Outcomes & Referrals

The effective management of risks identified during Health Checks is crucial to ensuring the programme improves long-term health outcomes. Without this, the service is nothing more than an elaborate data collection exercise.

Over the past 5 years, 82% of current smokers and 8% of current drinkers received some form of intervention to support them to reduce or stop their consumption, but a deeper interrogation of these statistics will be required to understand which services are being used, who is accessing them, and how effective they are. Such a breakdown by population groups was not available for the purposes of this report, so inequalities at the outcomes and referrals stage were not identified. This will be important to consider for future improvement to ensure the best outcomes for attendees.

Key Recommendations

1) **Recommendation: Invitations & Attendance**

Invitation rates are high across almost all population groups, so the key gap to bridge is facilitating the take up of invitations. Research indicates 3 key elements in this: a) The method of invitation, b) Logistical barriers such as arranging travel and childcare, c) Awareness and attitudes, for example not understanding the importance or relevance of the NHS Health Check programme.

a) **Invitations**
    a. Local invitation methods should be reviewed to highlight potential for improvement
    b. Consider implementation of a system where non-attenders are flagged for more proactive invitation methods
        i. The most effective invitation approaches are telephone calls and opportunistic face-to-face invitations – however these are also more labour intensive than text messages and letters

b) **Logistical barriers**
    a. Discuss the possibility of increasing the local offer of non-traditional pathways for health checks, for example:
        i. Out-of-hours appointment slots for non-responding patients
        ii. Increasing NHS Health Check offers in the community e.g. mobile services in deprived areas, at places of worship, and at sporting anchor institutions
        iii. Workplace NHS Health Checks
        iv. Home-visits

c) **Awareness & attitudes**
    a. Review primary care invitations to ensure clear, accessible explanations of the importance and relevance of NHS Health Checks across all invitation modalities
    b. Consider a region-wide campaign to raise awareness
    c. Consider routes of collaboration with VCSE sector to target improving uptake in specific population groups

2) **Data**
    a. Establish data collection, monitoring, and reporting of high priority populations
        i. People with disabilities
        ii. People who have undergone gender transition
        iii. Inclusion health groups (Core20**PLUS**5)

3) **Completeness**
    a. Promote awareness and explore this issue through discussions with primary care and service delivery partners

4) **Outcomes & Referrals**
    a. Implement consistent data collection, monitoring and reporting of referrals for patients identified with a risk factor e.g. smokers who receive smoking interventions (with breakdowns by population groups)

Background – NHS Health Checks

Aims & Objectives

The NHS Health Check programme aims to identify, prevent, and manage several key, preventable non-communicable diseases in people aged 40-74, namely: heart disease, stroke, diabetes, kidney disease, and dementia. It achieves this by systematically assessing common risk factors and by providing individuals with behavioural support and pharmacological treatment where appropriate.

In accordance with these ambitions, the programme's objectives are to:

- Promote and improve the early identification and management of the individual behavioural and physiological risk factors for vascular disease and other conditions associated with these factors
- Support individuals to effectively manage and reduce behavioural risks and associated conditions through information, behavioural, and evidence-based clinical interventions
- Help reduce inequalities in the distribution and burden of behavioural risks, related conditions, and multiple morbidities
- Promote and support appropriate operational research and evaluation to optimise programme delivery and impact, both nationally and locally

NHS Health Check Components

The NHS Health Check consists of a total of 9 elements, reviewing a range of social and genetic factors as well as physical and biochemical metrics:

- Physical activity
- Smoking status
- Alcohol intake
- Family history
- Body Mass Index (BMI)
- Blood pressure
- Cholesterol levels
- HbA1c
- QRISK

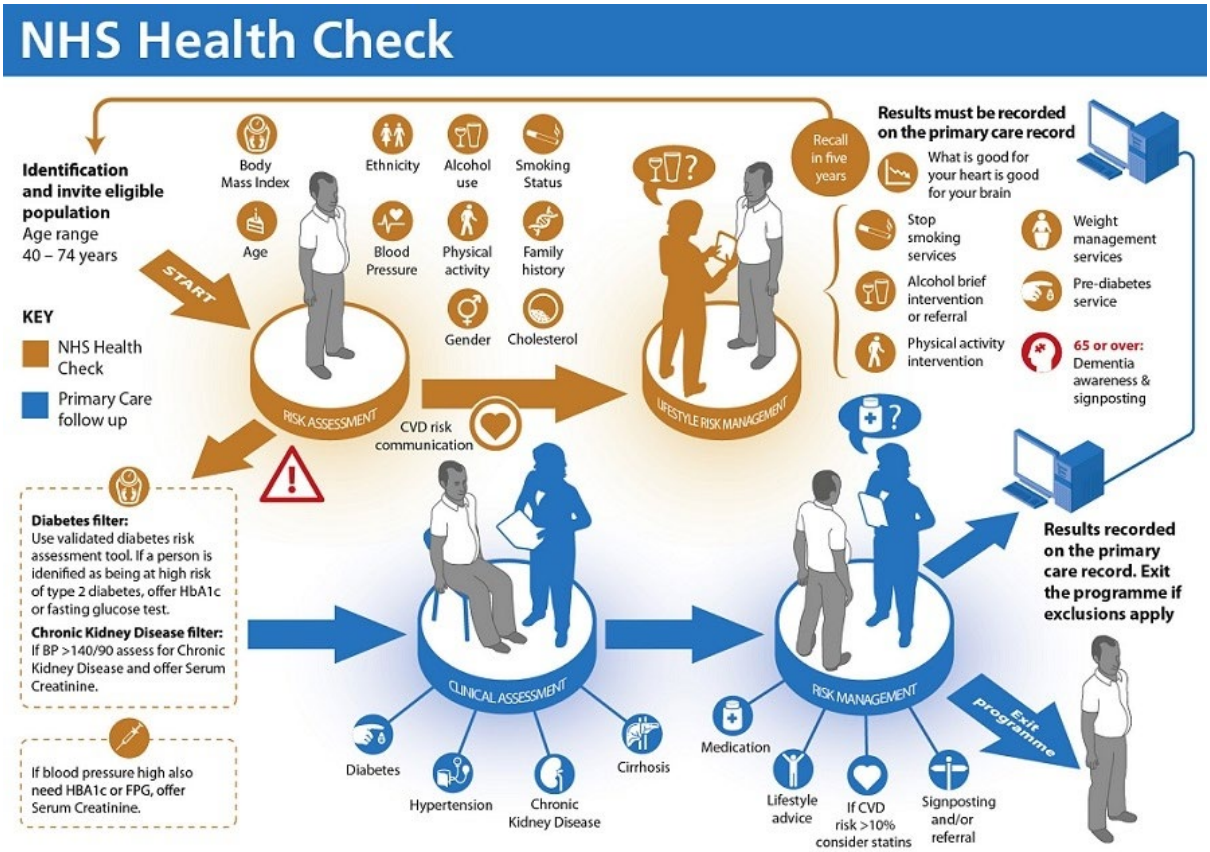

Figure 1. The NHS Health Check Process

Eligibility Criteria

For the NHS Health Checks programme, anyone aged 40-74 is eligible for screening if they have not already been diagnosed with or managed for any of the following:

- Coronary heart disease
- Chronic kidney disease (CKD) stage 3, 4, or 5 as per National Institute for Health and Care Excellence (NICE) clinical guideline 182 on CKD
- Diabetes
- Hypertension
- Atrial fibrillation
- Transient ischaemic attack (TIA)
- Hypercholesterolaemia
- Heart failure
- Peripheral arterial disease
- Stroke
- Currently being prescribed statins for the purpose of lowering cholesterol
- Previously had an NHS Health Check and found to have a 20% or higher risk of developing cardiovascular disease over the next ten years

Targets

Local authorities have a legal responsibility to ensure that an NHS Health Check is offered to 100% of the eligible population once every five years.

Ensuring a high percentage of the eligible population attend a Health Check is essential to optimising the clinical and cost effectiveness of the programme. This is particularly important for populations with the greatest health needs and is pivotal to the programme's ability to narrow health inequalities.

National & Local Overview

NHSHC Invites & Delivery

Over the last five years, from Q1 2021 – Q4 2025, 12.7 million people have been invited for an NHS Health Check in England – 79.3% of the eligible population.[1] However, only 30.5% have received a Health Check across the same period. It is worth noting that this period also overlaps with the Covid-19 pandemic which impacted the delivery of Health Checks greatly due to restrictions and reprioritisation of resources.

According to national data, Greater Manchester performs particularly well with more invites sent than the total eligible population. This is reported as 100% of the eligible population receiving an invite, but may also be due to duplication of invitations, changes in population, or technical issues in reporting. A total of 40.5% of the eligible population across the region received an NHS Health Check over the same five-year period.

Bolton also invited 268,398 people for a Check over this period, significantly more than the eligible population. In fact, this is close to the total population of the Metropolitan Borough of Bolton, which is estimated to be around 300,000. It is not exactly clear how these numbers are being recorded or where the duplication is – it may be repeat invitations for non-attenders. Regardless, Bolton performs excellently in Health Checks delivered, with 75.1% of the eligible population receiving a Check over a five-year period, the highest figure of any English Local Authority.

[1] Office for Health Improvement and Disparities (2025). Public health profiles – NHS Health Check. Available at: NHS Health Check - Data | Fingertips | Department of Health and Social Care [Accessed: 05/09/2025]

The Health Burden

The prevention and early management of cardiovascular disease is the cornerstone of the NHS Health Check programme. Despite Bolton seemingly performing well in the delivery of the programme, the downstream health outcomes do not correspond at this time. Bolton's under-75 mortality rate from cardiovascular disease (CVD) over the past 3 years was 110.3 per 100,000, compared to the national average of 77.1 per 100,000.[2] This places the locality within the worst 8% of local authorities for this measure and outcomes have not been improving in recent years (Figure 2). This is reflected upstream too, with Bolton experiencing higher than average rates of risk factors such as obesity, smoking, and physical inactivity.

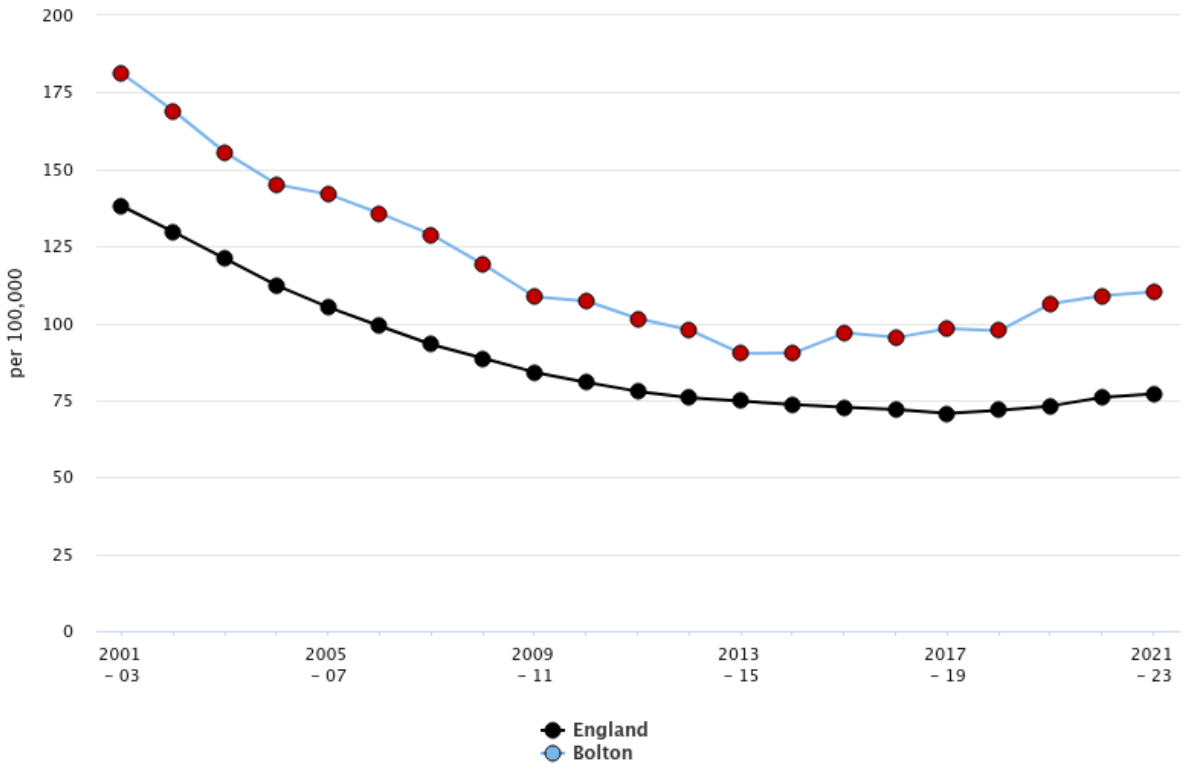

Figure 2. Under-75 mortality rate from cardiovascular disease for Bolton and England (3-year range)[2]

It is important to acknowledge, however, that Bolton is not an 'average' locality in many respects, with higher levels of deprivation, poorer infrastructure, and a more diverse ethnic community than many areas; such factors present significant challenges in maintaining good levels of health. Comparing with statistical and regional neighbours

[2] Office for Health Improvement and Disparities (2025). Public health profiles – Cardiovascular Disease. Available at: Fingertips | Department of Health and Social Care [Accessed: 25/09/2025]

can provide context here. Oldham and Rochdale are two examples of local authorities within Greater Manchester with similar demographics and local landscapes. Whilst Bolton shows substantially better performance in the delivery of NHS Health Checks, there is little difference in cardiovascular outcomes. Oldham records a rate of 106.0 CVD deaths per 100,000 and Rochdale 113.9, placing them as the 20th and 8th highest rates in the country, respectively, compared to Bolton which sits 13th.

The figures for diabetes prevalence present a similar picture, with 9.4% of the local population suffering from the condition. This represents the 13th highest prevalence in the country. Although, Bolton's estimated diabetes diagnosis rate from 2018 is 87.9%, showing that the area may be performing strongly in identifying cases. Oldham and Rochdale perform very similarly across both metrics, with Oldham experiencing a 9.5% prevalence of diabetes and Rochdale 9.3%. Estimated diagnosis rates are also 88.1% and 87.0% for Oldham and Rochdale, respectively.

The prevalence of chronic kidney disease (CKD) in Bolton is also higher than the rest of the country at 5.3% compared to the national average of 4.4%. Statistical neighbours Oldham and Rochdale are again comparable, both with 5.2% prevalence of CKD locally.

Given that the Alzheimer's component of NHS Health Checks is primarily about education and raising awareness, there are no appropriate figures to assess outcomes at this time.

Aims

- To take a systematic approach in identifying inequities throughout the delivery of the NHS Health Checks programme in Bolton
- To propose recommendations to address any inequities identified
- Highlight areas for future research and development

Methods

Health Equity Audit Tools

This Health Equity Audit draws from the following guidance documents:

- Health Equity Assessment Tool (HEAT)
- NHS Health Check Health Equity Audit Guidance (2017)

Data Sources

The data in this report is drawn from a variety of local, national, and international sources. Wherever possible, Bolton's local data is prioritised with national data and the peer-reviewed literature providing context.

1. Local Primary Care Data
2. GM Tableau
3. Fingertips
4. Peer-reviewed academic literature

Approach

Utilising the HEAT tool and the NHSHC HEA Guidance, this health equity audit considers inequalities across the following domains:

1. **Deprivation** (Index of Multiple Deprivation – IMD)

2. **Protected characteristics**
    a. Ethnicity
    b. Age
    c. Sex
    d. Disability
    e. Religion
    f. Sexual Orientation
    g. Marriage & Civil Partnership
    h. Gender reassignment
    i. Pregnancy & Maternity

3. **Inclusion health groups:** *Populations who experience deep social exclusion, multiple overlapping disadvantages, and significant health inequalities, for example:*
    a. People experiencing homelessness
    b. Carers
    c. People with mental health conditions
    d. People in contact with the criminal justice system
    e. Sex workers
    f. Asylum seekers & vulnerable migrants
    g. Unemployment
    h. Gypsy, Roma, and Traveller (GRT) community

Deprivation

Need: Disease Prevalence & Inequalities

As is the case with many health outcomes in the UK, the burden of CVD follows a social gradient, with the most deprived experiencing much higher rates of disease and mortality than more affluent members of society. There are various reasons for this including income, education, and access to healthcare – but importantly, several related individual risk factors such as the higher frequency of smoking, poor diet, and lack of physical activity are reversible with the right support.

The figure below shows the distribution of under-75 mortality from cardiovascular disease across the spectrum of index of multiple deprivation (IMD) over the past 3 years (Fig.3).[3] These trends are also broadly mirrored across statistics of diabetes and CKD prevalence, morbidity, and mortality, demonstrating the higher unmet burden of disease with increasing levels of deprivation.

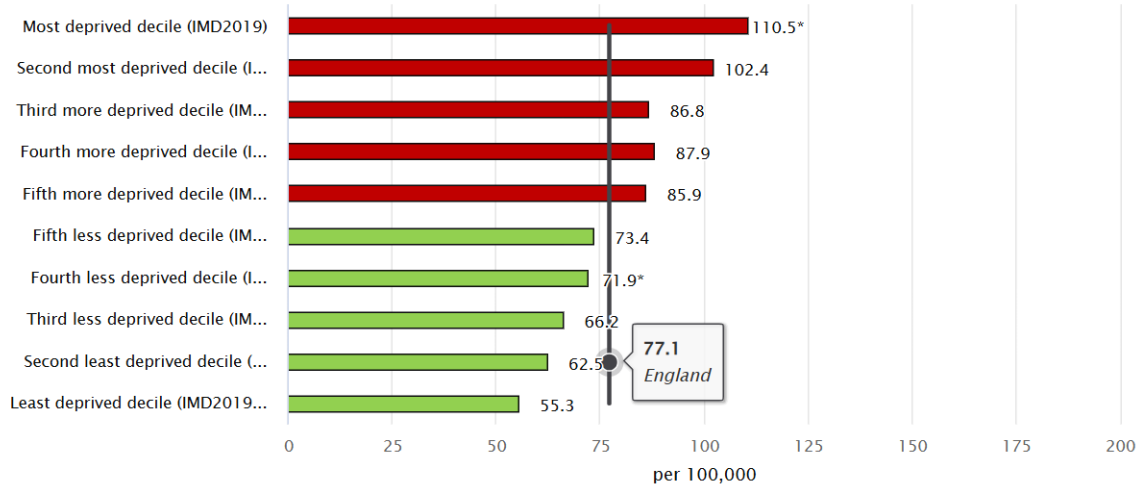

Figure 3. Under-75 CVD Mortality by IMD decile across England (3-year)[3]

Bolton's population experiences some of the highest levels of deprivation in the country, ranking as the 34th most deprived of 317 local authorities, with 45% of the local population living in an area amongst the 20% most deprived nationally.[4] Geographically, we can see that this deprivation is most heavily concentrated around the town centre of Bolton (Fig.4).[3] This highlights areas which are likely to have the highest unmet need within Bolton, and therefore the potential for most benefit from accessing NHS Health Checks.

[3] Office for Health Improvement and Disparities (2025). Public health profiles. Available at: Fingertips | Department of Health and Social Care [Accessed: 15/07/2025]
[4] Bolton JSNA (2025). Deprivation. Available at: Deprivation – Bolton JSNA. [Accessed: 15/08/2025].

IMD 2019 across LSOA's in Bolton compared to the highest levels of deprivation in England
1 being most deprived
10 being least deprived

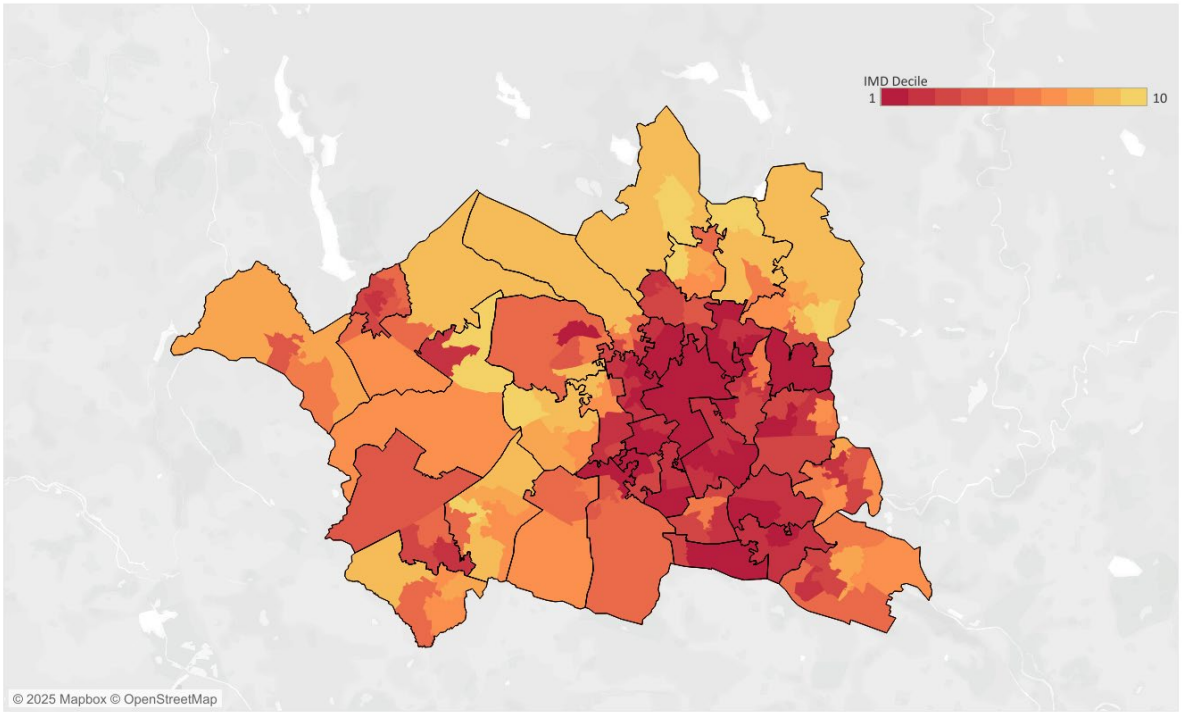

Figure 4. Index of Multiple Deprivation (IMD) deciles in Bolton

Access: Invitation, Uptake & Delivery

Whilst NHS Health Checks have the highest impact in the areas of highest need, it is often these same populations who have the most difficulties accessing the service. Research shows that nationally, the most deprived populations are often less likely to be invited and typically less likely to attend NHS Health Checks.[5,6]

Reviewing Bolton's local data, we can see that rates of invitation over the past 5 years are relatively consistent across the spectrum of deprivation, with an overall rate of invitation of 90.2% (Table 1). Attendance rates, on the other hand still follow a social gradient, with the most deprived populations less likely to receive an NHS Health Check. Given the aims of the programme and the principles of proportionate universalism, we would ideally see the opposite trend with the most deprived attending at the highest rates in order to secure the most benefit for the population.

IMD decile	Eligible	Invited in last 5 years	% Invited in last 5 years	Received HC in last 5 years	% Received HC in last 5 years
1 (most deprived)	17,504	15,614	89.2%	12,052	68.9%
2	13,442	12,136	90.3%	9,238	68.7%
3	8,151	7,256	89.0%	5,607	68.8%
4	3,821	3,460	90.6%	2,668	69.8%
5	5,840	5,372	92.0%	4,171	71.4%
6	4,111	3,712	90.3%	2,944	71.6%
7	6,676	6,064	90.8%	4,776	71.5%
8	5,255	4,805	91.4%	3,796	72.2%
9	7,244	6,573	90.7%	5,395	74.5%
10 (Least deprived)	4,247	3,819	89.9%	3,125	73.6%
(blank)	99	88	88.9%	52	52.5%
Total	76,390	68,899	90.2%	53,824	70.5%

Table 1. NHS Health Checks invitations and attendance, breakdown by IMD

[5] Karia, Aleesha, et al. "Evaluating the Effectiveness of Primary Care Health Checks at Assessing Cardiovascular Risks among Ethnic Minorities in the UK: A Systematic Review." *Reviews in Cardiovascular Medicine* 26.1 (2025): 25614.

[6] Tanner, L., et al. "NHS Health Check programme: a rapid review update." *BMJ open* 12.2 (2022): e052832.

Quality: Component Completeness

Overall, 52.8% of NHS Health Checks in Bolton are completed in full with all 9 components of the screening. Considering completeness by IMD decile, the clearest inequity is present in the most disadvantaged two deciles – particularly in the lowest decile where only 47.6% of Health Checks were complete. Beyond the second decile, there are no clear disparities across the spectrum. The aim of any intervention here should be to increase completeness of Checks for all, but with a particular focus on the most deprived.

IMD Decile	% Complete NHS Health Check (all elements performed)
1 (most deprived)	47.6%
2	51.3%
3	53.7%
4	53.8%
5	60.3%
6	52.5%
7	55.0%
8	55.5%
9	55.2%
10 (least deprived)	54.9%
Total	52.8%

Table 2. Completeness of NHS Health Checks breakdown by IMD

Recommendations

The data highlights lower attendance amongst the most deprived groups despite roughly equivalent invitation rates. The literature identifies two broad categories of barriers to attendance beyond the invitations: 1) Logistical barriers such as appointment times and the arrangement of travel and childcare, and 2) Lack of awareness, which may include a lack of appreciation of the importance and purpose of NHS Health Checks or the perceived lack of personal relevance.[7,8]

Solutions should therefore address the mode of invitation as well as logistical barriers to attendance and awareness of NHS Health Checks.

Invitations

- Review of quality of invitations through discussion with primary care and service delivery partners
    - At least two different modalities of invite should be delivered to every patient e.g. telephone and letter
    - More targeted invitations could be delivered for higher deprivation groups. Whilst face to face appointments and telephone calls have been shown to be more effective invitation approaches, they are more labour intensive
        - This intervention could be delivered by deploying HIPs, who are a significant local asset, and clinicians in more deprived areas to increase attendance rates
- Addressing common concerns and reasons for non-attendance within invitation letters has been shown to improve uptake.[9] The value and importance of NHS Health Checks should be explained and emphasised within all invitation modalities – this can be discussed with local delivery partners
    - Health literacy rates are also often lower in more deprived groups, so it is essential that materials are accessible to invitees.

Logistical barriers

- Review options for facilitating attendance for patients, particularly those in areas at high risk of transport-related social exclusion (fig.5).[10] For example:

[7] Harte, Emma, et al. "Reasons why people do not attend NHS Health Checks: a systematic review and qualitative synthesis." *British Journal of General Practice* (2017).
[8] Eberhardt, Judith, et al. "Barriers and Facilitators of NHS Health Checks in Socioeconomically Deprived Communities in the North East of England: A Qualitative Study With Peer Researchers." *Health Expectations* 28.2 (2025): e70199.
[9] Sallis, A. et al. Increasing uptake of National Health Service Health Checks in primary care: a pragmatic randomized controlled trial of enhanced invitation letters in Northamptonshire, England. *Journal of Public Health*, *43*(1) (2021), e92-e99.
[10] Transport for the North (2025). Local Authority TRSE tool. Available at: TRSE in England Visualiser. [Accessed: 06/10/25].

- Developing specific out-of-hours appointment slots for non-responding patients
- Increasing NHS Health Check offers in non-traditional community settings, with a particular focus on the most deprived areas. For example:
  - Workplace NHS Health Checks
  - Mobile NHS Health Checks
  - NHS Health Checks delivered at local anchor institutions such as places of worship or sports clubs

Awareness & Attitudes

- The option of a region-wide campaign to raise awareness and explain the benefits of NHS Health Checks should be discussed between local authority public health team and the ICB

Completeness

Finally, the completeness of NHS Health Checks must be increased across the socioeconomic spectrum. This can be highlighted in discussions with delivery partners.

- Raise awareness of and explore barriers causing low completeness rate of NHS Health Checks with primary care and service delivery partners

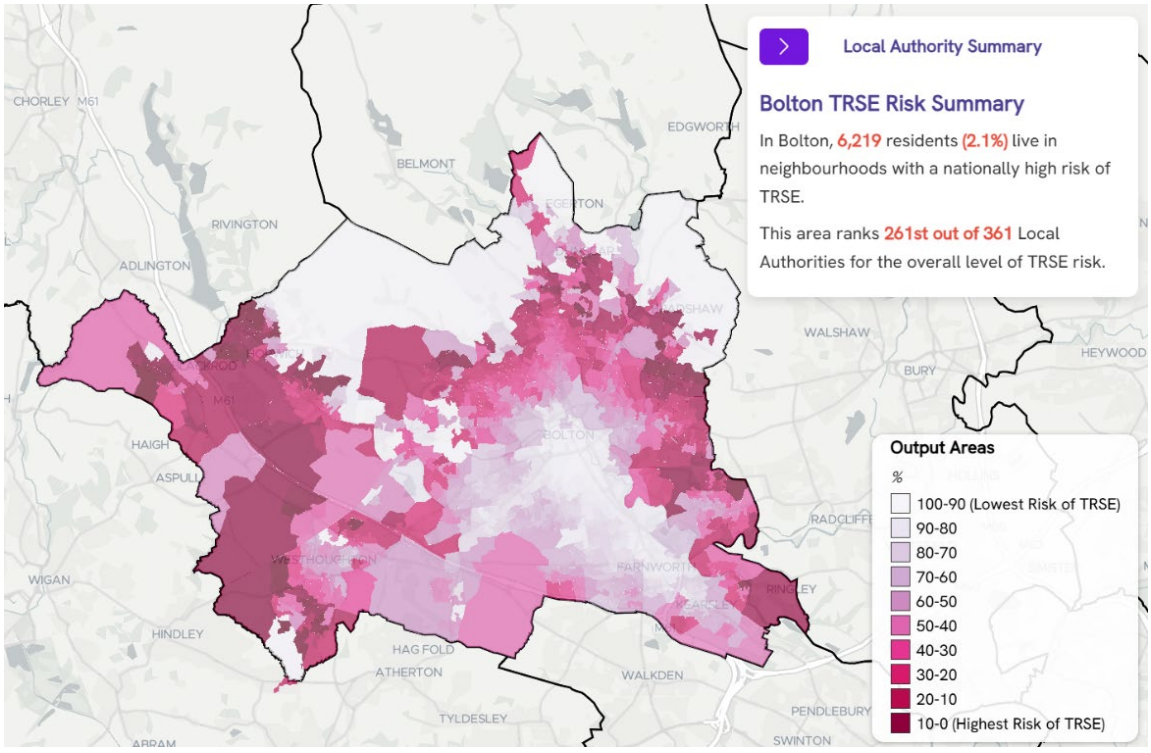

Figure 5. Mapping Bolton's risk of transport-related social exclusion[10]

Protected Characteristics

Age

Need: Disease Prevalence & Inequalities

It is well established that the risks of CVD, diabetes, and CKD increase with age – particularly after the age of 50. Whilst this means that it is vital to ensure older member of the population attend NHS Health Checks, it is also important for screening to take place before serious illness develops.

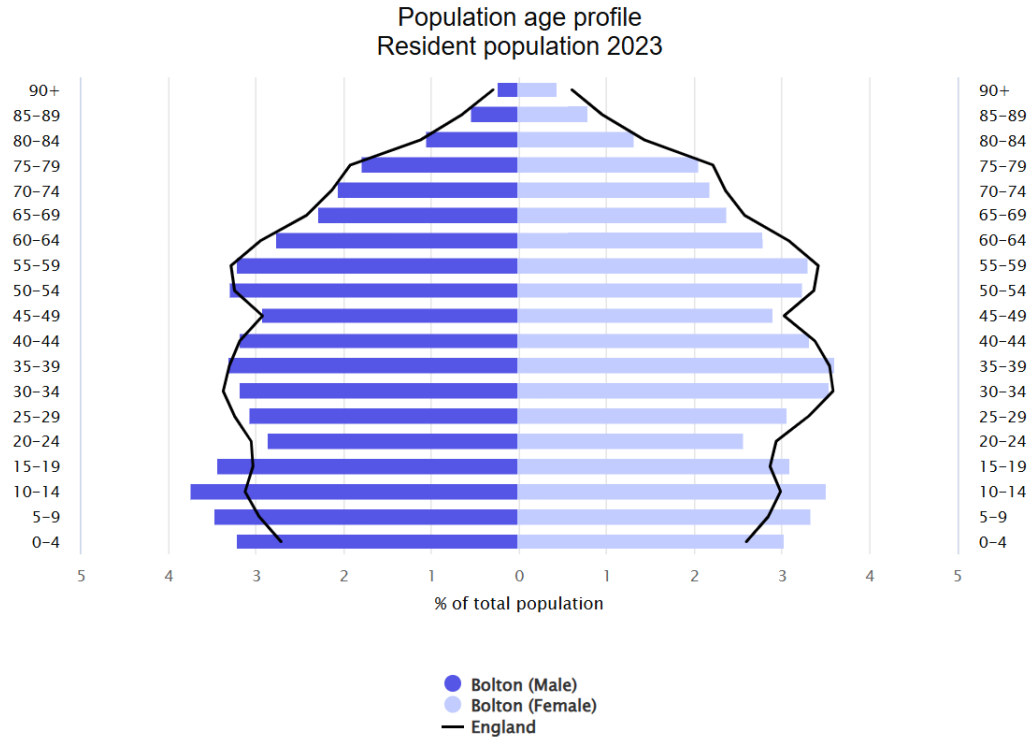

Figure 6. Bolton & England age profiles[11]

The age profile of Bolton is very similar to the national one, though with higher proportions of children and slightly lower proportion of working-age adults (fig.6).[11]

[11] Office for Health Improvement and Disparities (2025). Public health profiles – Population. Available at: Wider Determinants of Health - Data | Fingertips | Department of Health and Social Care [Accessed: 15/07/2025]

Access: Invitation, Uptake, & Delivery

The academic literature generally reports that NHS Health Check uptake increases with age.[12,13,14] Bolton's local data is broadly consistent with this literature (Table 3). Whilst a similar proportion of each age group is invited to attend a Health Check, attendance increases with age. It is notable that the oldest (75-79) and youngest (40-44) age groups show markedly lower attendance rates. This may be due to the transition periods of patients becoming eligible and lapsing out of the eligibility age range, particularly in the oldest age group as the NHS Health Check offer extends only to the age of 74.

Age Category	Eligible	Invited in last 5 years	% Invited in last 5 years	Had HC in last 5 years	% Had HC in last 5 years
40-44	18,433	16,570	89.9%	11,840	64.2%
45-49	14,659	13,469	91.9%	10,290	70.2%
50-54	13,437	12,368	92.0%	9,747	72.5%
55-59	11,679	10,721	91.8%	8,586	73.5%
60-64	8,666	7,948	91.7%	6,706	77.4%
65-69	4,950	4,507	91.1%	3,880	78.4%
70-74	2,635	2,360	89.6%	2,041	77.5%
75-79	1,929	955	49.5%	734	38.1%
Total	76,388	68,898	90.2%	53,824	70.5%

Table 3. Invitations and attendance, breakdown by age

Quality: Component Completeness

There is no clear pattern in NHS Health Check completeness across the age spectrum. The most notable disparity occurs in the oldest age category (75-79), where only 45.4% of all Checks are completed with all 9 components.

Age Category	Complete NHS Health Check % (all elements performed)
40-44	54.0%
45-49	51.1%
50-54	51.8%
55-59	53.8%
60-64	53.3%
65-69	54.7%
70-74	52.7%
75-79	45.4%
Total	52.8%

Table 4. NHS Health Check completeness, breakdown by age

[12] Tanner, L., et al. "NHS Health Check programme: a rapid review update." *BMJ open* 12.2 (2022): e052832.
[13] Bunten, Amanda, et al. "A systematic review of factors influencing NHS health check uptake: invitation methods, patient characteristics, and the impact of interventions." *BMC public health* 20.1 (2020): 93.
[14] Molokhia, Mariam, et al. "What factors influence differential uptake of NHS Health Checks, diabetes and hypertension reviews among women in ethnically diverse South London? Cross-sectional analysis of 63,000 primary care records." *EClinicalMedicine* 49 (2022).

Recommendations

Whilst the risk of disease, morbidity, and mortality increases with age, it is also important to recognise that the youngest age categories are the largest. The youngest age group (40-44) constitutes almost a quarter of the eligible population; lower attendance rates in these groups means many eligible patients are currently being missed – and valuable opportunities to intervene at an earlier age to reduce the population health burden.

Many of the recommendations outlined above in the 'Deprivation' section are also relevant to the younger groups highlighted as a priority here.

Invitations

- Ensure robust systems for inviting patients closer to age cut-offs
- Clear explanation of the benefits and relevance of NHS Health Checks in any invitation modality

It is of particular importance in younger age groups to explain and emphasise the aims and benefits of NHS Health Checks at the invitation stage, as they are more likely to perceive a lack of need or relevance to their own health.

Logistical Barriers

- Increase the offer of NHS Health Checks outside of working hours
- Offer NHS Health Checks in non-traditional settings, workplace Health Checks may be of particular benefit for younger age groups

Younger age groups may often have additional time constraints and competing priorities with responsibilities such as work and younger families. Increasing the accessibility of our NHS Health Check offer could significantly increase coverage.

Awareness & Attitudes

- A region wide campaign raising awareness and highlighting the importance of NHS Health Checks may again be of benefit – this could be performed via social media to increase reach to younger groups

Ethnicity

Need: Disease Prevalence & Inequalities

Research shows that people of South Asian ethnic groups tend to be at much higher risk of developing CVD and diabetes.[15,16] Some studies show that people from Black ethnic backgrounds also have higher risk, but these differences are thought to be primarily due to structural factors such as higher rates of deprivation.[17] Given this research, we know that the attendance of eligible South Asians is particularly important, but that intersecting disadvantages may make Black ethnic groups a priority population too.

Bolton has a substantial Asian population of 20.1%, with 18.6% from South Asian origins of India, Pakistan, and Bangladesh – over double the national average proportion (Table 5).[18] There are also a smaller but not insignificant Black ethnic and Mixed ethnic populations of 3.8% and 2.2%, respectively.

[15] Ho, Frederick K., et al. "Ethnic differences in cardiovascular risk: examining differential exposure and susceptibility to risk factors." *BMC medicine* 20.1 (2022): 149.
[16] Razieh, Cameron, et al. "Differences in the risk of cardiovascular disease across ethnic groups: UK Biobank observational study." *Nutrition, Metabolism and Cardiovascular Diseases* 32.11 (2022): 2594-2602.
[17] Chiu, Maria, et al. "Comparison of cardiovascular risk profiles among ethnic groups using population health surveys between 1996 and 2007." *Cmaj* 182.8 (2010): E301-E310.
[18] Office for National Statistics (ONS), 2021, ONS website, statistical bulletin, Nomis - Official Census and Labour Market Statistics

Ethnic Group	Residents	% of Population
Asian, Asian British or Asian Welsh	59,596	20.1
Asian, Asian British or Asian Welsh: Bangladeshi	985	0.3
Asian, Asian British or Asian Welsh: Chinese	1,123	0.4
Asian, Asian British or Asian Welsh: Indian	26,238	8.9
Asian, Asian British or Asian Welsh: Pakistani	27,897	9.4
Asian, Asian British or Asian Welsh: Other Asian	3,353	1.1
Black, Black British, Black Welsh, Caribbean or African	11,238	3.8
Black, Black British, Black Welsh, Caribbean or African: African	9,299	3.1
Black, Black British, Black Welsh, Caribbean or African: Caribbean	603	0.2
Black, Black British, Black Welsh, Caribbean or African: Other Black	1,336	0.5
Mixed or Multiple ethnic groups	6,643	2.2
Mixed or Multiple ethnic groups: White and Asian	2,338	0.8
Mixed or Multiple ethnic groups: White and Black African	1,242	0.4
Mixed or Multiple ethnic groups: White and Black Caribbean	1,737	0.6
Mixed or Multiple ethnic groups: Other Mixed or Multiple ethnic groups	1,326	0.4
White	212,941	71.9
White: English, Welsh, Scottish, Northern Irish or British	203,486	68.8
White: Irish	1,430	0.5
White: Gypsy or Irish Traveller	519	0.2
White: Roma	373	0.1
White: Other White	7,133	2.4
Other ethnic group	5,542	1.9
Other ethnic group: Arab	1,812	0.6
Other ethnic group: Any other ethnic group	3,730	1.3
Total: All usual residents	295,960	100.0

Table 5. Bolton's ethnic demographics according to ONS Census 2021[17]

Access: Invitation, Uptake, & Delivery

The academic literature regarding invitation and uptake of NHS Health Checks shows that generally, people of South Asian or White British heritage are more likely to engage with the service.[19] The research regarding other ethnic groups is more mixed, with most highlighting lower uptake in Black and Mixed ethnic groups, but some studies not detecting any significant disparities.[20,21]

In Bolton, invitation rates appear to be high across all major ethnic categories, with none falling below 90% (Table 6). Attendance rates for South Asian patients are above 80% whilst Black ethnic groups also attend at a high rate of 78%. This is reassuring given the CVD and diabetes inequalities highlighted previously. The most evident disparities in attendance are in the smaller ethnic groups, such as 'Any other Asian background', 'Mixed or multiple ethnic groups', and 'Any other White background' along with 'White Gypsy or Irish Traveller' – all of whom fall below 70% attendance. Additionally, attendance amongst patients who did not have an ethnic group recorded are particularly low.

[19] Karia, Aleesha, et al. "Evaluating the Effectiveness of Primary Care Health Checks at Assessing Cardiovascular Risks among Ethnic Minorities in the UK: A Systematic Review." *Reviews in Cardiovascular Medicine* 26.1 (2025): 25614.
[20] Robson, John, et al. "NHS Health Checks: an observational study of equity and outcomes 2009–2017." *British Journal of General Practice* 71.710 (2021): e701-e710.
[21] Cook, Erica J., et al. "Who uses NHS health checks? Investigating the impact of ethnicity and gender and method of invitation on uptake of NHS health checks." *International Journal for Equity in Health* 15.1 (2016): 13.

Ethnic Category	Ethnicity	Eligible	Invited in last 5 years	% Invited in last 5 years	Received HC in last 5 years	% Received HC in last 5 years
Asian or Asian British	**Total**	**12,788**	**11,748**	**91.9%**	**10,126**	**79.2%**
	Any other Asian background	991	866	87.4%	677	68.3%
	Bangladeshi	178	161	90.4%	144	80.9%
	Chinese	774	716	92.5%	611	78.9%
	Indian	5,188	4,790	92.3%	4,152	80.0%
	Pakistani	5,657	5,215	92.2%	4,542	80.3%
Black, African, Caribbean or Black British	**Total**	**3,243**	**3,017**	**93.0%**	**2,529**	**78.0%**
	African	2,849	2,656	93.2%	2,233	78.4%
	Any other Black or African or Caribbean background	195	170	87.2%	139	71.3%
	Caribbean	199	191	96.0%	157	78.9%
Mixed or multiple ethnic groups	**Total**	**737**	**673**	**91.3%**	**494**	**67.0%**
	Any other Mixed or multiple ethnic background	225	197	87.6%	149	66.2%
	White and Asian	199	188	94.5%	136	68.3%
	White and Black African	178	163	91.6%	110	61.8%
	White and Black Caribbean	135	125	92.6%	99	73.3%
White British	**Total**	**53,058**	**48,744**	**91.9%**	**38,836**	**73.2%**
	Any other White background	2,424	2,211	91.2%	1,526	63.0%
	White English or Welsh or Scottish or Northern Irish or British	50,344	46,267	91.9%	37,109	73.7%
	White Gypsy or Irish Traveller	30	28	93.3%	16	53.3%
	White Irish	260	238	91.5%	185	71.2%
Any other ethnic group	**Total**	**1,854**	**1,720**	**92.8%**	**1,356**	**73.1%**
	Any other ethnic group	1,394	1,286	92.3%	979	70.2%
	Arab	460	434	94.3%	377	82.0%
Unknown	Declined to provide	453	385	85.0%	74	16.3%
	No record	4,257	2,612	61.4%	409	9.6%
Total	**Total**	76,390	68,899	90.2%	53,824	70.5%

Table 6. NHS Health Check invitations and attendance, breakdown by ethnic group

Quality: Component Completeness

In terms of the completeness of NHS Health Checks, it is notable that all minority ethnic groups had a lower probability of receiving a full NHS Health Check with all 9 components when compared to White British patients (Table 7). This will need to be addressed in order to prevent systemic inequities from manifesting in the delivery of screening.

Ethnic Category	Complete NHS Health Check % (all elements performed)
Asian or Asian British	44.7%
Black, African, Caribbean or Black British	51.3%
Mixed or multiple ethnic groups	46.8%
White British	55.7%
Any other ethnic group	49.8%
Unknown	15.3%
Total	52.8%

Table 7. NHS Health Check completeness, breakdown by ethnic group

Recommendations

Further efforts are needed to engage Mixed and non-British White ethnic groups. As invitation rates are high across the spectrum, the disparity again appears to form between this invitation stage and the accepting and attending of an NHS Health Check.

Invitations

- As with other groups, these patient populations may benefit from more direct and bespoke invitations such as direct phone calls from clinicians or HIPs, or more opportunistic invites – particularly those who do not attend following automated invitations
- It may be that invitations in other languages need to be developed for specific low-attending groups

Logistical barriers

- Offering more accessible appointment times may be an effective approach given the layers of multiple disadvantage that are often present in minority ethnic groups
- It is also important to raise awareness across target demographics of the importance of NHS Health Checks to ensure all are aware of the value of attending
- Engagement with local communities may be an option but given the mixed heritage backgrounds with lower attendance it may be challenging to identify key anchor site and figures to facilitate this. This may require some collaborative, creative solutions

- Importantly, further information is needed to understand why these groups are less likely to attend. Qualitative data can be helpful here, collected through more active engagement and involvement from prospective attendees, for example in the form of focus groups
    - By understanding the groups less likely to attend better, we can then consider offering NHS Health Checks at local anchor institutions for specific communities
    - Population data indicates that the largest non-British White group in Bolton is Polish, followed by Romanian and Hungarian. A potential avenue for engagement could be local Churches, for example

Completeness

It is essential to ensure that inequities do not manifest during the delivery of the Health Check itself. This may be due to a number of factors such as language barriers, unconscious biases, or discrimination

- This data should be shared with ICB and primary care partners to facilitate discussions with a view to increasing completeness of Checks for all patients and reducing inequities in minority ethnic groups

Sex

Need: Disease Prevalence & Inequalities

The picture is somewhat mixed when it comes to sex-related disparities in cardiovascular disease. Men typically have a higher overall incidence and mortality of CVD, particularly at younger ages – however, women have been shown to have a higher rate of mortality and worse prognoses following an acute cardiovascular event.[22,23] From a population health perspective this demonstrates that whilst NHS Health Checks may be more likely to detect risks in men, good coverage is crucial for both sexes. As with most of the country, Bolton has a close to even sex split, with 49.3% male and 50.7% female residents.

Access: Invitation, Uptake, & Delivery

The research consistently shows that women are more likely to attend NHS Health Checks than men.[24,25] Some of this data highlights small differences in invitation rates, but generally the clearest disparities are in rates of uptake.

Reviewing Bolton's data with this in mind, it is clear that the same patterns emerge locally (Table 8). Whilst there is a small disparity of 1.7% in invitation rates, with 89.3% of eligible men invited compared to 91.0% women, there is a much more significant difference in attendance rates. A total of 75.6% of women in Bolton attended their NHS Health Checks, whereas uptake was only 64.9% in men. Looking across the age spectrum, the disparities across sex are evident throughout, but most prominent at the extremities of age. The lowest attendance rate across all the eligible groups is young men, with only 57.1% of males aged 40-44 attended a check over the last 5 years.

[22] Gao, Zujie, et al. "Gender differences in cardiovascular disease." *Medicine in Novel Technology and Devices* 4 (2019): 100025.
[23] Bots, Sophie H., Sanne AE Peters, and Mark Woodward. "Sex differences in coronary heart disease and stroke mortality: a global assessment of the effect of ageing between 1980 and 2010." *BMJ global health* 2.2 (2017): e000298.
[24] Tanner, L., et al. "NHS Health Check programme: a rapid review update." *BMJ open* 12.2 (2022): e052832.
[25] [25] Bunten, Amanda, et al. "A systematic review of factors influencing NHS health check uptake: invitation methods, patient characteristics, and the impact of interventions." *BMC public health* 20.1 (2020): 93.

Sex	Age Band	Eligible	Invited in last 5 years	% Invited in last 5 years	Had HC in last 5 years	% Had HC in last 5 years
Female	40-44	9,019	8,275	91.8%	6,461	71.6%
	45-49	7,228	6,712	92.9%	5,501	76.1%
	50-54	6,650	6,182	93.0%	5,156	77.5%
	55-59	5,999	5,566	92.8%	4,681	78.0%
	60-64	4,731	4,385	92.7%	3,832	81.0%
	65-69	2,937	2,721	92.6%	2,386	81.2%
	70-74	1,772	1,609	90.8%	1,440	81.3%
	75-79	1,405	712	50.7%	574	40.9%
	All ages	**39,741**	**36,162**	**91.0%**	**30,031**	**75.6%**
Male	40-44	9,414	8,295	88.1%	5,379	57.1%
	45-49	7,431	6,757	90.9%	4,789	64.4%
	50-54	6,787	6,186	91.1%	4,591	67.6%
	55-59	5,680	5,155	90.8%	3,905	68.8%
	60-64	3,935	3,563	90.5%	2,874	73.0%
	65-69	2,013	1,786	88.7%	1,494	74.2%
	70-74	863	751	87.0%	601	69.6%
	75-79	524	243	46.4%	160	30.5%
	All ages	**36,647**	**32,736**	**89.3%**	**23,793**	**64.9%**

Table 8. Bolton NHS Health Check invitations and attendance, breakdown by sex and age

Quality: Component Completeness

There is a small disparity in the completion of Checks by sex, with male patients (54.2%) slightly more likely to receive all 9 components than female patients (51.7%). It will be important to monitor this disparity whilst making efforts to increase completeness of Checks for all patients.

Sex	Complete NHS Health Check % (all elements performed)
Female	51.7%
Male	54.2%
Total	52.8%

Table 9. Bolton NHS Health Check completeness, breakdown by sex

Recommendations

Poor attendance in eligible males in Bolton is concerning give the increased relative risk of CVD, particularly at younger ages.

Invitations

- Again, ensuring that all invitation modalities include explanation and emphasis of the benefits and importance of NHS Health Checks is key, particularly for young men who are often the likeliest to perceive a lack of personal relevance
- More intensive invitation modalities such as telephone calls and face-to-face or opportunistic invitations must be deployed in non-attenders

Logistical Barriers

- Along with previous recommendations regarding out-of-hours appointments, some non-traditional settings for NHS Health Check offers could be particularly effective for recruiting younger males to attend:
    - Workplace NHS Health Checks
    - Collaboration with local sports teams to offer NHS Health Checks at grounds

Awareness & Attitudes

- Workplaces and sporting institutions can also be avenues for raising awareness and improving attitudes towards NHS Health Checks

Disability

Disability can encompass a broad range of physical and mental impairments, ranging from sensory impairments such as blindness or deafness to learning disability or mental illness. Each individual's conditions and circumstances have different implications on the risks of CVD, diabetes, and kidney disease.

Overall, the research surrounding the health consequences of disability is not well developed – but there are indications that many groups are at increased risk. For example, people with learning disabilities in the UK have a shorter life expectancy by approximately 20 years with studies suggesting higher risk of obesity, CVD, and diabetes.[26]

In Bolton, almost a fifth of the population are considered disabled under the Equality Act, meaning they have a long-term health condition or disability which limits their day to day activities.[27]

People with disabilities are therefore a significant sector of the local population who are likely to have increased risk of diseases relevant to NHS Health Checks and the potential for systemic inequities in access to healthcare.

Research regarding NHS Health Check attendance for people with disabilities is sparse with no clear insight into whether coverage is poorer. This is further complicated by the fact that some people with disabilities, namely learning disabilities, are eligible for Annual Health Checks which are a separate pathway from NHS Health Checks.

Unfortunately, this data is not routinely recorded for NHS Health Check attendees in Bolton and was not available for this Health Equity Audit. This should be an area of priority moving forwards given the potential for both increased risk of disease and systemic inequalities in accessing healthcare.

Recommendations

- Prioritise consistent recording, monitoring, and reporting of NHS Health Check invitation and attendance of eligible people with disabilities locally
- Review data at regular intervals with a view to intervening to mitigate any potential health inequities

[26] Autism and learning disability partnership, LeDeR, King's College London. The causes and impact of CVD and circulatory disease in people with a learning disability in the 2022 LeDeR cohort. (2024). Available at: https://www.kcl.ac.uk/ioppn/assets/fans-dept/the-causes-and-impact-of-cardiovascular-disease-in-adults-with-a-learning-disability.pdf [Accessed 03/09/2025]

[27] Bolton JSNA. Equality Characteristics. (2023). Available at: Equality characteristics – Bolton JSNA [Accessed 30/08/25].

Religion

Research is not typically conducted on the physical health implications of religion or belief as these are not immutable characteristics. However, faith can sometimes impact social behaviour or be related to any number of other factors important to health. For example, we know that around two thirds of British Muslims have an Asian heritage, which is associated with increased risk of CVD and diabetes as previously discussed.

The most recent Census in 2021 showed the most prevalent religious beliefs in Bolton were Christianity (47.0%), followed by No Religion (25.8%), Islam (19.9%), and Hinduism (2.0%).[28]

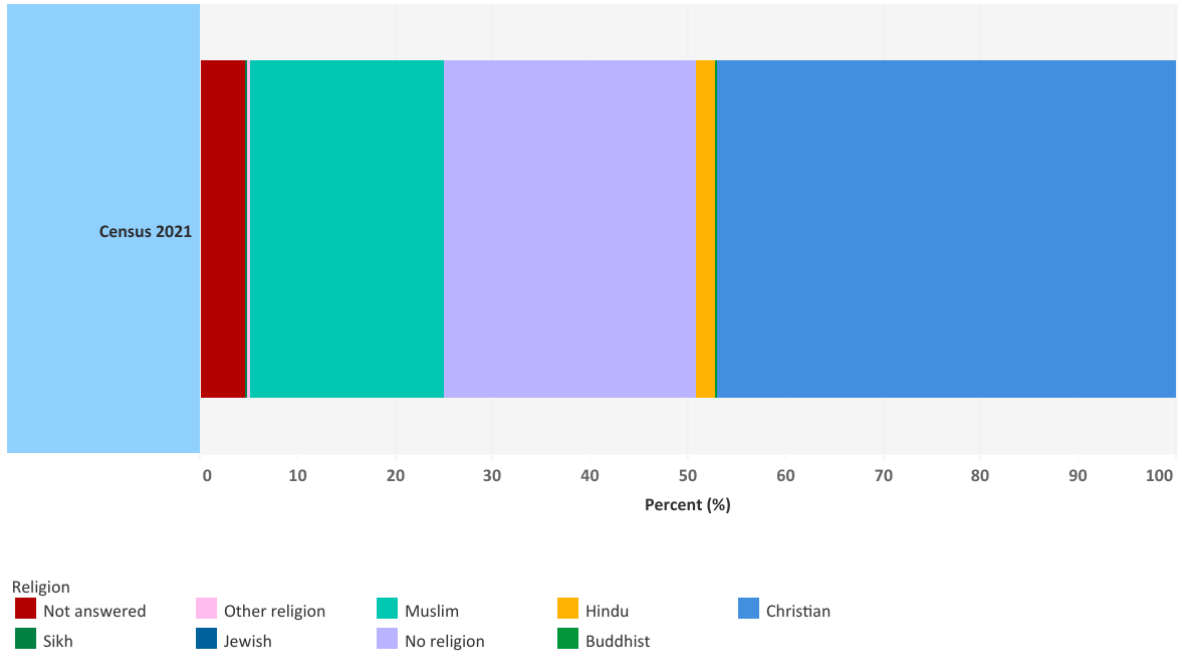

Figure 7. Religion and belief in Bolton, 2021[28]

Local religious data for NHS Health Check invitation and attendance was not available for the purposes of this report. Given the paucity of data in the peer-reviewed literature regarding NHS Health Check attendance by religion, it is difficult to make an accurate judgement on the importance of incorporating such data into routine collection. Research into other screening programmes has at times revealed lower attendance in religious communities, but these have often been screening programmes with more

[28] Bolton JSNA. Religion and Belief. (n.d.). Available at: Religion and belief – Bolton JSNA. [Accessed: 01/09/25]

sensitive physical examinations such as the NHS Bowel Cancer Screening Programme or breast screening.

A practical perspective could be that the religious makeup of Bolton would correlate with the ethnic breakdown i.e. Muslims with Asian backgrounds, where no major inequities were detected – but this may mask inequities in smaller religious groups who the service may not be reaching. More data is needed to be certain, but this must also be balanced against the practicality of adding more data collection to the delivery of the NHS Health Check and the intrusion of further questions.

Recommendations

- Consider recording religious and faith information for attendees to ensure no systemic inequities are present
- Places of worship and faith communities can be valuable partners in reaching out to the public and offering NHS Health Checks in non-traditional sites. This should be a consideration for our local service regardless of further data collection

Sexual Orientation

Research shows that homosexual and bisexual groups are at higher risk of multiple physical conditions, including CVD.[29,30] It is theorised that this is due to a number of factors, including psychosocial stressors such as discrimination as well as higher prevalence of some lifestyle risk factors such as the use of tobacco products and lower rates of physical activity.[31]

The data on what proportion of the population identify as LGB is not entirely clear. Official statistics from the UK Census report that 3.8% of adults identify as homosexual or bisexual, though these figures are significantly higher in younger age groups with over 10% of 16-24 year olds identifying this way compared to less than 1% of those over 65.[32] In Bolton, the overall reported figure is 2.2% (5,124 people), with 7% of respondents choosing not to answer (15,931 people).

[29] Bonomo, Jason A., Kate Luo, and Jorge A. Ramallo. "LGBTQ+ cardiovascular health equity: a brief review." *Frontiers in Cardiovascular Medicine* 11 (2024): 1350603.
[30] Caceres, Billy A., et al. "Assessing and addressing cardiovascular health in LGBTQ adults: a scientific statement from the American Heart Association." *Circulation* 142.19 (2020): e321-e332.
[31] Sherman, Jessica, et al. "Sexual minorities are at elevated risk of cardiovascular disease from a younger age than heterosexuals." *Journal of behavioral medicine* 45.4 (2022): 571-579.
[32] ONS. Sexual Orientation, UK: 2023. Available at: Sexual orientation, UK - Office for National Statistics. [Accessed 02/09/25].

There is no real body of literature regarding the engagement of LGB groups with the NHS Health Check programme. Drawing from other sources we know that access to healthcare is often poorer, in part due to negative experiences with health systems.

NHS England recently highlighted this issue, identifying LGBT+ groups as a priority for tackling health inequalities. One of the key focuses of this work is to improve the collection of data on sexual orientation – which is often lacking throughout the health system – and locally, data regarding attendance at NHS Health Checks in LGB groups was not available for the purposes of this report.

Recommendations

- Consider the introduction of routine collection of sexual orientation data into NHS Health Checks
- Consider collaboration with local VCSE sector organisations to promote awareness of NHS Health Checks

Marriage & Civil Partnership

Older studies conducted into the relationship between marriage and the risk of cardiovascular disease found that marriage impacted men and women differently, acting as a protective factor only for men. However, more recent, larger studies consistently report that married individuals benefit from reduced risk of CVD as well as improved prognosis after CVD diagnosis or intervention.[33] The leading theories for this are due to the additional social support, which increases the likelihood of earlier recognition of and response to disease as well as the financial and logistical support offered post-diagnosis.

In Bolton, 46% of people aged 16+ are married or in a civil partnership, constituting a large proportion of the local population.

Again, there is little research regarding potential inequalities in NHS Health Checks due to marriage or civil partnership and data from Bolton regarding the subject was not available for the purposes of this report. However, there is no real evidence from the wider literature to indicate that this should be a priority area for the local programme to pursue with respect to health inequalities.

[33] Wong, Chun Wai, et al. "Marital status and risk of cardiovascular diseases: a systematic review and meta-analysis." *Heart* 104.23 (2018): 1937-1948.

Recommendations

- Marriage & Civil Partnership not a priority area for development within Bolton's NHS Health Check programme at this current time

Gender Reassignment

As a population group, transgender people experience significantly worse mental and physical health outcomes compared to cisgender people. A recent systematic review found an alarming 40% higher risk of CVD in transgender individuals when compared to cisgender people of the same birth sex.[34]

Some of the theorised underlying causes are similar to other LGBT groups, such as discrimination and the associated minority stress as well as increased prevalence of lifestyle factors such as smoking. An additional factor in transgender populations, however, is of gender-affirming hormone therapy (GAHT). The administration of some forms of oestrogen, particularly, is associated with an elevated risk of blood clots. Testosterone is less clearly linked to heart disease, but some research has shown that its usage can increase blood pressure and affect blood lipids.

Just 0.6% of Bolton's respondents reported a gender identity different from their sex registered at birth in the 2021 Census. This echoes with national data which estimates the proportion of transgender individuals at less than 1%.

Again, no research on the attendance of transgender individuals to NHS Health Checks was found and local data was not available for this report. Research from other screening programmes shows some indications of systemic inequalities and issues with access, however, these are often more gendered screenings such as breast or cervical screening.

In general, the research that does exist indicates that transgender individuals have poorer access to healthcare, are more likely to avoid healthcare services, and lower satisfaction rates when they do attend appointments. This suggests that improving local data collection for this small minority is likely to be an important step in better understanding and ultimately addressing potential health inequities.

Recommendations

- Improve data collection, monitoring, and reporting of transgender patients in NHS Health Checks with a view to identifying areas for future improvement

[34] van Zijverden, Lieve Mees, et al. "Cardiovascular disease in transgender people: a systematic review and meta-analysis." *European Journal of Endocrinology* 190.2 (2024): S13-S24.

- Consider collaboration with local VCSE sector organisations to promote awareness of NHS Health Checks amongst transgender groups

Pregnancy & Maternity

There is little to no data or research regarding attendance of NHS Health Checks in eligible patients during pregnancy. This data is also not routinely collected or recorded locally in Bolton and so was not available for this report.

However, given the eligibility age range of 40-74, this is unlikely to be priority area for the service. Just 4.1% of all births in 2023 were to mothers over 40. Additionally, pregnant people are eligible for a range of other antenatal checks and screening tests throughout pregnancy.

Recommendations

- Not currently a priority area for intervention.

Inclusion Health Groups

The field of inclusion health seeks to identify, prevent, and address health and social inequalities experienced by groups suffering from deep social exclusion and marginalisation. Some examples of these groups are people experiencing homelessness, sex workers, people in contact with the criminal justice system, asylum seekers and vulnerable migrants, Gypsy, Roma, and Traveller (GRT) communities, and carers.

The overlapping and intersecting layers of disadvantage experienced by these inclusion health groups culminate in some of the worst health outcomes of any sector of society. For example, people experiencing homelessness have an average life expectancy in the 40s, with three-times higher odds of CVD.[35] Similar inequalities are evident across all of these groups and it is therefore vital to consider their needs when evaluating the health equity of a service.

Many of these inequalities in health outcomes are due to structural factors such as poverty, education, and social exclusion. However, health services can also do more to alleviate the disparities. There are common barriers to access such as lacking a fixed address or not being registered to a GP.

[35] Korukonda, Samhita, et al. "Cardiovascular disease burden in the homeless population." *Open Heart* 12.1 (2025).

It may be possible to generate data for some of these groups locally, however, the data is not routinely reported and was not made available for this report within the required timeframe.

Recommendations

- The establishment of data collection, monitoring, and reporting of inclusion health groups should be a high priority for Bolton's NHS Health Check service
- Consider collaboration with local VCSE sector organisations to promote awareness of NHS Health Checks and discuss potential avenues for service improvement

Limitations

The approach taken in this Health Equity Audit draws from national guidance to take a structured and systematic view of local inequalities. However, this report relies heavily on quantitative data with little formal qualitative data informing the assessment. The next steps of action aim to address this by engaging actively with colleagues across the primary care workforce to begin to integrate the findings and recommendations with the realities of the service.

Whilst the approach of considering population groups in turn provides a structure to systematically evaluate inequalities, it does not leave much room for intersectionality – that is, how multiple disadvantages can overlap and exacerbate. This can be seen in the assessment of Sex in NHS Health Checks above, where the data shows that younger men have particularly poor uptake. The consideration of intersecting inequalities can be an opportunity for future work.

Finally, data regarding outcomes and referrals was limited for this report. Whilst interventions for smoking and weight management appear common, interventions for alcohol are limited (Fig.8).[36] This data was not available with a breakdown by population groups, however, so inequalities could not be evaluated effectively.

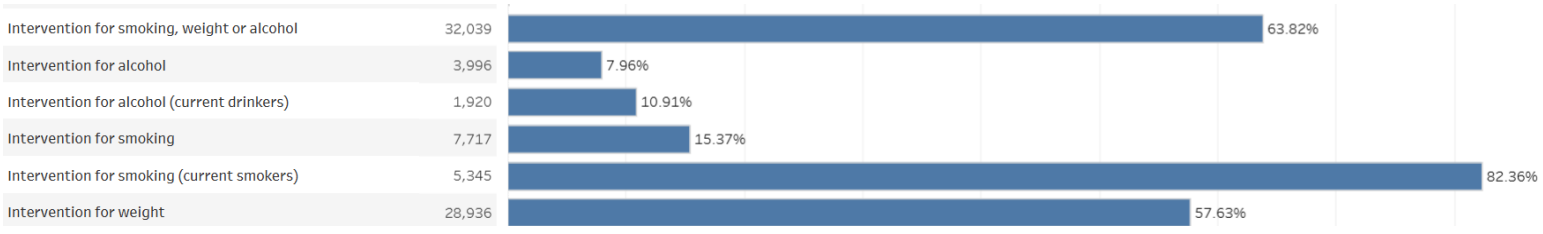

Figure 8. Interventions following an NHS Health Check[36]

[36] GM Tableau (2025). NHS Health Check Dashboard – Outcomes. Available at: NHS Health Check Dashboard: Outcomes - Tableau Cloud. [Accessed: 06/10/25].

Recommendations Summary

Data

This report has highlighted several key areas for improvement in data collection, monitoring, and reporting. A number of these concern specific population groups whilst some are regarding stages of the NHS Health Check process itself.

Population Groups

- High priority for improving data gathering
    - Disability
    - Gender reassignment
    - Inclusion health groups (Consider Core20PLUS5)
        - People experiencing homelessness
        - Unpaid carers
        - People with mental health conditions
        - Refugees, asylum seekers, and vulnerable migrants
        - People who are unemployed
        - Gypsy, Roma, and Traveller (GRT) communities
        - People who have been in contact with the criminal justice system
- For consideration of data improvement
    - Religious beliefs
    - Sexual orientation
- Consider implementing more direct engagement and collection of qualitative data for high-priority groups to better understand barriers to non-uptake, for example via focus groups

NHS Health Check Process & Outcomes

Ideally, this report would have included a greater depth of focus on the downstream outcomes of the NHS Health Check, however, it was not possible to collect sufficient data in this regard to generate meaningful insights.

- Review current data collection processes regarding interventions and referrals when a risk factor is identified during an NHS Health Check
    - Breakdowns of such data by inequalities as laid out in this report may reveal systemic inequalities in outcomes and potential targets for intervention
    - Such data would also allow further exploration of the types of interventions being offered, their uptake, and their effectiveness

Invitations & Attendance

Whilst invitation rates are generally high across Bolton, a number of population groups do not take up these invitations resulting in inequitable coverage. Many of the potential solutions found in the academic literature may help to target inequities in multiple underserved groups simultaneously.

Invitations

Headline invitation rates are high, but data is not available regarding the methods of invitation across Bolton

- A review of local invitation modalities may help to clarify the local picture and highlight potential room for improvement
- Consider implementation of a system where non-attenders are flagged for telephone calls and face-to-face invitations
    - Research shows that the most effective invitation approaches are telephone calls and opportunistic face-to-face invitations – however these are also more labour intensive than text messages and letters
    - This intervention could be delivered by deploying HIPs, who are a significant local asset, and clinicians in high-priority settings

Logistical barriers

- Discussion with local delivery partners regarding the development of non-traditional pathways for NHS Health Checks. For example:
    - Out-of-hours appointment slots for non-responding patients
    - Increasing NHS Health Check offers in non-traditional community settings, such as:
        - Mobile clinics in deprived areas
        - Workplace NHS Health Checks
        - Anchor institutions e.g. places of worship or sports clubs
        - Home-visits

Awareness & Attitudinal barriers

- The value and importance of NHS Health Checks should be explained and emphasised in an accessible way within all invitation modalities – this can be reviewed with local primary care colleagues as many may already be implementing this in their approaches
- The option of a region-wide campaign to raise awareness should be discussed between local authority public health team and the ICB
- Consider collaborations with VCSE sector to target improving uptake in specific groups

Completeness

Completeness of NHS Health Checks was low across the attending patient population (52.8%) with some notable inequalities in completeness in some groups such as ethnic minorities and the most deprived patients.

- In the first instance, promote awareness and explore this issue through discussions with primary care colleagues and service providers
- Continue to monitor and report completeness – further intervention may be needed if no improvement

Outcomes

Despite seemingly excellent performance in NHS Health Check attendance, there still appears to be a lack of tangible benefits in downstream outcomes such as cardiovascular disease and diabetes when compared to statistical neighbours.

Whilst this was not the focus of this report, it may be valuable to conduct more detailed reviews into referral and intervention processes to ensure risks detected during the screening programme are being managed effectively.

- Implement consistent data collection, monitoring and reporting of patients with a risk factor who are referred to relevant services e.g. smokers who receive smoking intervention, with breakdowns by population groups
- Review of intervention pathways to ensure patients with risk factors are receiving appropriate and effective support