Public Health England

Protecting and improving the nation's health

Health inequalities briefing for London

NHS Health Checks and target diseases: Inequalities by protected characteristics and socioeconomic factors

Public Health England (London): key facts on social inequalities in the target diseases and uptake of NHS Health Checks.

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. It does this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health.

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Background

Public Health England's (PHE) mission is to improve and protect the nation's health and wellbeing and improve the health of the poorest fastest. This includes PHE's core aim of reducing health inequalities. Health inequalities are systematic, avoidable differences in health between different groups of people. Health inequalities arise from social inequalities in factors that influence health like housing, the environment, income, employment and education.

Complementary to work on health inequalities is a focus on advancing equality, which is underpinned by provisions in the Equality Act 2010. Work on equality and diversity focuses on having due regard to eliminating discrimination, advancing equality of opportunity and fostering good relations between people or persons in relation to certain "protected characteristics" set out in the Equality Act 2010[1]. Legislation exists to protect the rights of individuals and promote equality of opportunity for all. The Act includes a public sector Equality Duty which requires "public authorities", such as Public Health England, to have due regard to the following in their work:

- eliminate unlawful discrimination, harassment and victimisation and other conduct prohibited by the Act
- advance equality of opportunity between people who share a protected characteristic and people who do not
- foster good relations between people who share a protected characteristic and those who do not

Purpose of the briefings

This initial suite of briefings provides a summary description of inequalities in relation to protected characteristics (under the Equality Act) and socioeconomic factors. They will be updated for new data and evidence, periodically. The aim is to:

- increase awareness of health equality and socioeconomic differences across PHE London's five priority areas, as well as tobacco and NHS Health Checks
- inform decision making in the implementation of plans to reduce health inequalities and support compliance with the Equality Act 2010

This briefing provides a summary description of inequalities of cardiovascular disease (CVD), heart disease, stroke, diabetes, kidney disease and dementia among the protected characteristics and socioeconomic factors. It does not cover evidence of the modifiable risk factors among the protected characteristics unless there is insufficient evidence associated with the group of diseases. They are not systematic reviews but they have been developed with local, regional and national experts in the field.

This equalities briefing contains descriptive information. We hope that providing background information on what we know about how NHS Health Checks might impact on key equalities

groups will be helpful to public health teams in shaping how they design and implement their local programmes. PHE London are using the information to inform our support work.

Other areas covered in the suite of briefings include mental health, sexual health, obesity, childhood immunisation, tuberculosis and tobacco (use).

The protected characteristics include:

- age
- disability
- gender reassignment
- marriage and civil partnership
- pregnancy and maternity
- race
- religion and belief
- sex
- sexual orientation

The socioeconomic factors include, for example, deprivation, employment status, educational attainment level, housing status

Context

In England the most common diseases that kill include: heart disease, stroke, respiratory disease and liver disease. Approximately 103,000 deaths of people under the age of 75 every year could have been avoided through their prevention[2]. In London almost 30,000 people died from causes considered preventable in the 3 years between 2010 and 2012[3]. Cardiovascular disease (CVD) is the greatest contributor to death and one of the greatest contributors to the life expectancy gap between London boroughs[4]. The burden of disease and death from CVD is disproportionately shouldered by those in the lowest socio-economic groups and certain ethnic groups.

The death rate from causes considered preventable is statistically significantly lower in London than England (178.2 vs. 187.8 per 100,000 respectively) however there are large variations across London boroughs (ranging from 136.6 in Harrow to 260.7 in Tower Hamlets per 100,000)[5].

The NHS Health Check is a national programme to prevent heart disease, stroke, diabetes, kidney disease and certain types of dementia. Adults aged 40-74, who have not been diagnosed with one of these conditions or have certain risk factors, are invited (once every five years) to assess the likely risk of developing the conditions. One of the main aims of the NHS Health Check programme is to help narrow health inequalities from the conditions covered by it.

In order for NHS Health Checks to be effective at reducing health inequality, it is important to have high and equitable uptake in high risk populations as risk factors of tobacco use, high blood pressure, excess alcohol consumption, high cholesterol and being overweight are key reasons for inequalities in health and life expectancy[5].

The NHS Health Check programme can reduce health inequalities by:

- increasing healthy life expectancy by through lifestyle and clinical management of risk factors that cause preventable disease and disability
- reducing differences in healthy life expectancy and overall life expectancy within and between communities at ward level within local authorities
- reducing premature preventable death by assessing the risk of developing a condition and providing necessary treatment if the condition presents itself

NHS Health Checks and target diseases: Inequalities by protected characteristics and socioeconomic factors

Age

Age is a non-modifiable risk factor. The prevalence of cardiovascular disease, diabetes and dementia increases significantly with age.

The prevalence of heart disease in London increases with age. In the 16-44 age group the percentage is 0.47%, which increases in the older age groups to 5.77% (45-64), 16.56% (65-74) and 22.85% for 75+[6].

Of those who have had a stroke in London, 0.35% are in the age group 16-44, compared to 1.89% in the 45-64 group. This increases to 6.79% (65-74) and 11.79% (75+)[6]

Type 2 diabetes occurs in middle-aged adults, most frequently after age 40. The prevalence of diabetes rises considerably after age 40[7].

In England, in the age groups 18 to 24, 25 to 34 and 35 to 44, the prevalence of kidney disease in men in 2009 was less than 1%. This increased to 3.08% for the 45 to 54 age group, 6.89% for the 55 to 64 age group and 17.65% for the 65 to 74 age group[8].

For women the prevalence of kidney disease in the same year was less than 1% for the 18 to 24 and 25 to 34 age groups, rising to just under 3% for the 35 to 44 and 45 to 54 age groups, and then increasing further to 13.09% for the 55 to 64 age group and 27.89% for the 65 to 74 age group[8].

The risk of developing most dementias increases with age. Approximately one in twenty people over the age of 60 have dementia, but this rises to about one in five people over the age of 80[9]. Late-onset dementia affected 7.3% of London's population aged 65 years and over[10].

Local authorities have a legal duty to offer the NHS Health Check to all of their residents between aged between 40 and 75 years old.

Research shows there is huge variation on uptake by age; however, a health equity audit carried out by Lewisham Public Health Department found that age groups 40-44 and 45-49 comprised the highest uptake of the NHS Health Check:

- take up among the 40-44 age group ranged from 19% to 28%
- take up among 45-49 age group ranged from 21% to 25%
- for the age groups over 50, fewer NHS Health Checks were correspondingly performed; the lowest uptake was for the 70-74 age group[11]

A cross-sectional study of uptake using data from electronic medical records of general practices in Hammersmith and Fulham found that, over two years, uptake was lower in 40-54 year old patients[12], which has been found elsewhere[13], particularly in younger men[14] (35-54 years). However, it should be noted that differences in uptake in these areas may depend on the delivery model (women more routinely access primary care so this may be a factor for example), and there may be variation in the collection of local data.

Disability

Stroke and cardiovascular disease are leading causes of adult disability in England[15 16]. The prevalence of disability rises with age. Around 7% of children are disabled, compared to 16% of working age adults and 43% of adults over State Pension age[17].

People aged 18 and over who have been assessed as having moderate, severe or profound learning disabilities, or people with a mild learning disability who have other complex health needs, are entitled to a free annual health check (not the same as the NHS Health Check).

People with learning disabilities have poorer physical and mental health than the general population[18], with almost half (48.5%) of deaths of people with learning disabilities in England considered avoidable[15]. People with learning disabilities also have an increased risk for dementia, three to four times higher than for the general population[19].

In London, there are an estimated 8,140 people (aged 35-44), 5,750 (aged 45-54) and 3,692 (aged 55-64) with a moderate or severe learning disability[20] .

Having a mental health problem increases the risk of physical ill health and doubles the risk of coronary heart disease in adults[21, 22]. Those with severe mental illness have a 2-3 fold increase in deaths from cardiovascular disease[23].

People with schizophrenia and bipolar disorder die on average 16 to 25 years sooner than the general population[24]. They have two to three times higher rates of diabetes[25] than the general population[23]

There is a reported low uptake of screening programmes in those with an intellectual impairment[26], although it should be taken in to consideration that the NHS Health Check is not regarded as a screening programme but an assessment of the risk of developing a condition.

Gender reassignment

At the time of writing we found little published evidence regarding the presence of inequalities in the uptake of NHS Health Checks among this protected characteristic.

A European study assessing death, ill health and criminal activity after sex reassignment in transsexual persons concluded that persons with transsexualism, after sex reassignment, have considerably higher risks for death than the general population[27]. The study found that deaths due to cardiovascular disease were significantly increased among sex reassigned individuals, albeit these results should be interpreted with caution due to the low number of events[27].

In a separate study, the prevalence of smoking was reported at 50% by males who had undergone gender reassignment to females (males-to-females) and almost 20% by females who had undergone gender reassignment to males (females-to-males)[28], which may explain an increase in deaths due to cardiovascular disease, however the numbers in the study were small and caution should be taken in the generalisation of results.

Equally Well, the Scottish Government's report on health inequalities, notes that transgender people experience lower self-esteem and higher rates of mental health problems. These have an impact on health behaviours including, higher reported rates of smoking, alcohol and drug use[29], which have associated health risks such as cardiovascular disease.

Marriage and civil partnership

The terms (same sex) marriage and civil partnership are used jointly under this protected characteristic. At the time of writing we found little published evidence regarding the presence of inequalities in the uptake of NHS Health Checks among this protected characteristic group.

Pregnancy and maternity

Pregnancy is the condition of being pregnant or expecting a baby. Maternity refers to the period after the birth, and is linked to maternity leave in the employment context. In the non-work context, protection against maternity discrimination is for 26 weeks after giving birth, and this includes treating a woman unfavourably because she is breastfeeding[30].

At the time of writing we found little published evidence regarding the presence of inequalities in the uptake of NHS Health Checks among women who are pregnant or who have given birth in the proceeding 26 weeks.

However, women who develop diabetes during pregnancy have a seven-fold increased risk of subsequently developing type 2 diabetes compared with women who have normal levels of glucose in pregnancy[31]. There is an increased risk of developing gestational diabetes in older mothers[32]. With this in mind, the number of women over the age of 40 having a baby has been increasing. In 1983, there were 6,872 live births in England and Wales to women aged 40 or more, about 1% of all babies born that year. In 2013, the figure had risen to 29,158, or 4.2% of all live births[33].

Race

There are large differences in the risk of coronary heart disease and strokes between different ethnic groups in the UK. Differences in risk factors such as diabetes and blood pressure. 2010 statistics show:

- the prevalence of coronary heart disease was highest in Indian (6%) and Pakistani (8%) men
- the prevalence of diabetes was 3 times higher in black Caribbean and 6 times higher in South Asian populations than in the white population
- stroke rates were highest in people of African Caribbean descent 34. In a separate study (2013) increased stroke risk was found in black groups35. The 2013 study did not break down the category black groups so it is not possible to state what percentage of this study was from African Caribbean descent

At the time of writing there is limited London based evidence available on uptake of NHS Health Checks and race. However, a cross-sectional study of uptake using data from electronic medical records of general practices over two years in Hammersmith and Fulham found in the second year, uptake was higher by South Asian and black patients than by the general population [12]**,** also shown in analysis elsewhere[36]. This is in contrast to screening programmes, ie breast or bowl cancer, where uptake was lower[14]

The authors did not draw any definitive conclusion as to why the uptake of NHS Health Checks by patients of South Asian descent was higher than the uptake of screening programmes. However, they suggested that where the NHS Health Check programme is rooted in general practice, patients of South Asian origin may have a higher attendance at practices overall and that South Asian patients in practices with smaller list sizes may also have a higher rates of attendance, which would support the authors findings.

Religion and belief

At the time of writing we found little published evidence regarding the presence of inequalities in the uptake of NHS Health Checks according to religion and belief.

However, in Scotland, the Scottish health survey[29] found that:

- Muslims (9%), Hindus (3%) and those who said they belonged to no religion (14%) had significantly lower prevalence of cardiovascular disease than the national average (15%)
- Roman Catholics (17%) were significantly more likely to have a cardiovascular disease related condition.
- Muslim respondents had a much higher prevalence of diabetes (18%) than the national average.
- Diabetes prevalence among those who reported 'Other' religion was also significantly higher than average (8%).
- prevalence of diabetes among those who reported belonging to no religious group was very slightly, but significantly, lower than average.

Sex

There are differences between males and females in deaths and prevalence of preventable disease; although rates of mortality from diseases considered preventable are significantly lower in London than for England, at 232.2 per 100,000 the rate for men is almost twice that for women (129.3).

In London there is a large gap between the male and female death rates from all cardiovascular disease considered preventable (79.3 males vs. 27.0 females per 100 000)[3].

Prevalence of cardiovascular disease increases with age; from 3% of men and 5% of women aged 16 to 24, to 54% of men and 31% of women aged 85 and over[37].

There is limited evidence on uptake of NHS Health Checks and a person's sex. However, the Lewisham health equity audit of NHS Health Checks found that females

were more likely to attend. The year 2 findings from the cross-sectional study of uptake in Hammersmith and Fulham also found females were more likely to attend[12], as well as analysis from other areas[38]. However, it should be noted that differences in uptake of NHS Health Checks in these findings may depend on the delivery model (women more routinely access primary care so this may be a factor for example), and there may be variation in the collection of local data.

Sexual orientation

At the time of writing we found little published evidence regarding the presence of inequalities in the uptake of NHS Health Checks related to sexual orientation.

However, international research suggests lesbian and bisexual women[39] are more likely to be overweight and obese than heterosexual women[40]. However, UK research has found similar body mass index (BMI) levels for lesbian, bisexual and heterosexual women[41].

Local and national research of lesbian, gay, bisexual, and transgender (LGBT) communities has repeatedly demonstrated higher levels of risk behaviour, such as smoking and drug and alcohol use. This higher level of risky behaviour can have an impact on preventable diseases.

LGBT people are also less likely to engage with health interventions and screening programmes[42].

Socioeconomic factors

Around two-thirds of the life expectancy gap between local authority areas with high levels of deprivation and poor health outcomes and the country as a whole related to the contribution of cancers, circulatory and respiratory diseases[43].

Using household income quintiles as a measure of deprivation, there is an increase in stroke prevalence from 2% in both men and women in households with the highest income, to 6% in men and 5% of women in households with the lowest income[44].

People living in the 20% most deprived neighbourhoods in England are 56% more likely to have diabetes than those living in least deprived areas[45].

In a UK study people living in the same 20% of most socially deprived areas had a 45% increased risk of new diagnosis of chronic kidney disease as those living in affluent areas[46].

Small studies have shown that people in more deprived areas are as likely to attend an NHS Health Check as those living in less deprived areas[13] A study on the delivery of NHS Health Checks showed that the higher the deprivation score of the Primary Care Trust, the higher the coverage of NHS Health Checks[47]. However this may be a factor of delivery, rather than uptake. The study concludes by recommending that variations in uptake of NHS Health Checks be addressed.

Other

An Inclusion Health report noted that vulnerable migrants have difficulties in accessing GP services, Gypsy and Traveller groups have low GP registration rates, and homeless people experience numerous barriers in accessing mainstream primary care. Additionally sex workers are less likely to take up routine screening and health checks[48].

Prisons have a duty to provide health checks to their population. However, a recent audit showed that from 85 prisons that responded (out of 106 eligible prisons) less than one in ten provide a full programme as they would be commissioned and delivered in the community[49].

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