Towards Equitable Cardiovascular Disease Prevention: A Policy Analysis Focusing on Deprivation and Ethnic Disparities in the UK

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Introduction

Cardiovascular disease (CVD) encompasses a range of conditions affecting the heart and blood vessels, including coronary heart disease, strokes and peripheral arterial disease (NHS England, 2025). These conditions are linked to 'risk factors' such as high blood pressure, smoking, high cholesterol and diabetes. Treatments for CVD include lifestyle changes, medications (statins, blood thinners, beta blockers) and procedures (valve repair, stents and angioplasty). After decades of decline, CVD mortality rates began to rise again after 2019, driven by the impact of COVID-19 and the increasing prevalence of risk factors such as obesity and hypertension. In response to this, the national government set out a target to cut the number of CVD diagnoses by 25% (Merrit, 2025). However, a publication by the House of Lords reported that cardiovascular care was "going in the wrong direction" with access to care deteriorating (Merrit, 2025).

In this context, deprivation refers to multiple disadvantages across employment, health, income, housing, education and access to services as stated by the English Index of Multiple Deprivation (IMD) (Noble, 2025). Blackpool, in the North of England, is ranked as the most deprived lower-tier local authority in England on the IMD rank of measure; a high proportion of residents live in the 10% most employment and income-deprived areas and experience poorer health outcomes (Lancashire County Council, 2019). People living in Blackpool face substantially higher risks of premature death from CVD than those in more affluent areas, reflecting the impact of social determinants on health. Poor cardiovascular health in such communities is shaped by social determinants, including limited healthcare access, socioeconomic status and geographical location, all of which contribute to the increasing trend in CVD diagnoses. Addressing social and economic factors is critical to reduce cardiovascular diseases across the UK. Furthermore, ethnic minorities, specifically the South Asian population, suffer disproportionately poor CVD outcomes compared to the white British population. This is largely due to intersecting structural, cultural, and socioeconomic factors.

This policy analysis critically evaluates guidelines issued by the National Institute for Health and Care Excellence (NICE), a statutory body established by the UK government to develop evidence-based recommendations for healthcare. These guidelines are intended for clinicians and commissioners in the NHS and local authorities. Using Blackpool, a northern English town with some of the highest levels of socioeconomic deprivation and premature CVD mortality, alongside South Asian communities as case studies. This paper argues that current UK CVD prevention policies remain insufficient as they fail to adequately address structural deprivation and cultural barriers faced by communities like Blackpool and the South Asian population. Furthermore, the paper draws on the North Karelia Project to propose equitable, community-based policy approaches.

Epidemiological Overview of Cardiovascular Disease Inequalities

Cardiovascular disease (CVD) remains a leading cause of morbidity and mortality in the UK, despite being largely preventable through leading a healthy lifestyle (NHS England, 2025). CVD continues to be a leading cause of death nationally, and it represents a substantial public health burden (NICE, 2024). CVD have had a steady decline; a study published in 2022 reported that CVD deaths declined from 1,045 deaths per 100,00 in 1969 compared to 255 deaths per 100,000 in 2019. This reduction is due to the use of medical interventions such as stains and interventional procedures (Cheema et al., 2022). CVD continues to place a significant burden on the NHS, accounting for 1.1 million hospital admissions annually and an estimated £19 bn in costs (Cheema et al.,2022).

Despite national improvements, significant inequalities persist. Individuals living in the most deprived areas, as defined by the IMD, are four times more likely to die prematurely from CVD compared to those who live in more affluent areas (Public Health England, 2019). The town of Blackpool, located in the Northwest of England, illustrates significant inequalities; the under-75 death rate is 133 per 100,000 compared to around 77 per 100,000 for the average population in England (Skillstg, 2025). Blackpool has some of the highest rates of stroke and heart disease across England (Lancashire County Council, 2018). A range of social determinants, such as poor diet, smoking, unemployment and poor access to preventative healthcare, all contribute to these high CVD rates in Blackpool. These factors all highlight how socioeconomic deprivation can shape health outcomes in communities and limit engagement for early detection and lifestyle interventions.

South Asians have a significantly higher risk of ischaemic heart disease, a condition which causes narrowed heart arteries and leads to myocardial damage (American Heart Association, 2022). Understanding the underlying reasons for these ethnic disparities is essential for informing and improving current and future public health strategies. Research indicates that South Asians are twice as likely to have coronary heart illnesses in comparison to White British populations (Razieh et al., 2022; Anand et al., 2025). Further research has suggested that these disparities are complex and arise from a range of factors, including genetics, health literacy and lifestyle factors (Cheema et al., 2022).

South Asian populations often live in the most deprived neighbourhoods in the UK. They are over-represented in areas with high poverty, poor housing, and limited access to healthy foods. This exposes them to socio-economic barriers, such as low income and overcrowded housing and cultural barriers such as language difficulties and culturally insensitive care, which increases their vulnerability to cardiovascular disease (Volgman et al., 2018).

Evaluation of NICE Guidelines for Cardiovascular Disease Prevention and Management

NICE provides national guidance to improve population health, including the prevention and management of cardiovascular disease. NG238, published in December 2023, lays out evidenced based recommendations for assessing and reducing CVD risk, with an emphasis on lifestyle interventions, such as dietary change, physical activity and smoking cessation and lipid management through therapies such as statins. NG238 uses a cardiovascular risk calculator tool called QRISK3, which estimates an individual's 10 - year risk of heart attack or stroke using multiple variables including age, ethnicity and gender (NICE,2023). This tool is extremely relevant for ethnic groups like South Asians, who experience higher baseline CVD risk. Section 1.6.3 of the NG238 document states that people may need support to make lifestyle changes, so to do this, it is advised that they are referred to programmes such as weight and obesity management services (NICE, 2023).

For South Asian communities, NG238 is essential because it incorporates ethnicity-specific risk into CVD care through QRISK3, which recognises high-risk individuals and justifies preventative interventions and treatments. However, whilst the guideline acknowledges social and cultural determinants, such as language barriers and specific dietary patterns, its focus remains on individual lifestyle modifications, which don't fully address all the barriers that contribute to the disproportionate burden of CVD and therefore limit uptake among South Asians (Chaturvedi, 2003).

The NG238 focuses on lipid management, a key strategy for reducing an individual's CVD risk and supporting both primary and secondary prevention. It is recommended that lipid profiles be regularly assessed to evaluate CVD risk and inform treatment planning. Targets have been set for clinicians to aim for LDL cholesterol levels below 2.0 mmol/L, which can effectively reduce cardiovascular risk (NICE, 2023). The guidelines recognise populations with elevated CVD risk, such as those with diabetes.

NG238 acknowledges that CVD is the leading cause of death and the burden it places on the NHS from a socioeconomic perspective. From an equity perspective, the concern is that burdens fall disproportionately on groups that are already disadvantaged, compounding socioeconomic disadvantage and poor health. The guideline recognises that groups need structured support with lifestyle changes and are actively supported through referrals to community services, with the potential to mitigate inequalities where services are available.

Nevertheless, despite comprehensive recommendations, NICE agree that LDL cholesterol levels, which, when high, cause a build-up of fatty plaque in artery walls, need to be reduced as much as possible for people with CVD. However, NICE have considered it is not cost-effective to offer the

full range of treatments to every individual with CVD. Therefore, expensive treatments will have to be targeted to the individuals who are very high risk which could leave those who are not considered 'very high risk' behind in treatment causing disparities to widen (Vaughan, 2023) Furthermore, as previously discussed NICE suggested an LDL target of below 2.0 mmol/l it has been recognised that this target is higher than other national targets. Achieving lower cholesterol requires more intensive treatment, which is considered too expensive for the NHS to handle (Vaughan, 2023).

The North Karelia Project

The North Karelia Project is an international example of a community cardiovascular disease prevention programme in Finland, initiated in 1972 in response to exceptionally high mortality among men. It aimed to utilise community-based interventions and implement policy changes by targeting lifestyle factors such as smoking to alleviate the burden of cardiovascular disease (Puska & Jaini, 2020; Vartiainen, 2018). Before implementation, baseline surveys in North Karelia and Kuopio assessed CVD risk factors and social determinants, providing an epidemiological foundation for specific targeted action (Puska & Jaini, 2020; Vartiainen, 2018). The overall project aim and strategy were focused on the prevention of CVD rather than treatment. The target was to reduce blood pressure, smoking levels and high cholesterol levels in individuals (Vartiainen, 2018). Research showed that in the 1960s, it was estimated that the cardiovascular mortality rate for men aged between 35 and 64 years old was 700 per 100,000 in North Karelia (Puska & Jaini, 2020). These statistics showed that Finland had the highest mortality rate at the time, which enabled policymakers to establish a clear outlook on what targeted interventions needed to be done.

The project adopted a multifaceted, population approach, coordinated across local government, healthcare and schools. In local healthcare settings, primary care centres carried out blood and cholesterol screening, offered smoking cessation counselling, and trained professionals to offer lifestyle advice (Puska & Jaini, 2020). Schools had integrated health education into the curriculum, promoting physical exercise and shifting social norms (Vartiainen, 2018). The national government supported efforts to implement food policies to encourage food substitutions in schools and hospitals that aimed to reduce the salt content (Pietinen et al., 1988).

Socio-behavioural changes were the centre of the project, which was done through coordinated work by community and non-governmental organisations, including local civic groups and national NGOs. The project provided educational, health-based material using the media to enforce these ideas. Furthermore, on a national scale, new policies were introduced, for example, to tackle smoking interventions included public media articles, posters, health services and schools (Puska & Jaini, 2020). This approach recognises the interplay between culture, environment and

lifestyle, acknowledging that social determinants need to be addressed to tackle this public health issue.

In 2011, the mortality rate among men aged between 35 and 64 years old was estimated to be around 100 per 100,000 compared to 700 per 100,000 in 1960. This 80% decline has had a significant impact on Finland, as it is predicted that 243,000 cardiovascular deaths were prevented due to the implementation of the project (Puska & Jaini, 2020). Furthermore, additional surveys carried out had found life expectancy had increased by around 10 years, which shows the success of the project.

Policy Recommendations

1. **Expand community-based interventions**
   Following the success of Finland's North Karelia Project, the UK needs to adopt community-based interventions and develop policies. Programmes can involve a collaborative approach incorporating local governments, schools and health services. The interventions from the North Karelia Project indicate that community engagement can generate healthier lifestyle changes in deprived and ethnic populations. In 2018, the UK introduced a sugar tax to combat obesity. This illustrates how population-level measures can shift dietary environments and reduce CVD by targeting the risk factors associated with the disease, complementing more targeted community-based interventions.

2. **Increase Local Funding for Targeted CVD Prevention**
   In deprived areas such as Blackpool, where CVD rates remain disproportionately high, increased local investment is essential. This should include local funding for early-detection programmes, like community centres and outreach programmes, expansion of NHS health checks, cardiac rehabilitation and lifestyle support services. Furthermore, adopting a community approach like the North Karelia Project could integrate tailored interventions and a collaborative approach using the media and community health interventions. This approach can promote healthier behaviours through policy changes such as Tobacco advertising restrictions, which can induce changing social norms.

3. **Increase Uptake of NHS Health Checks**
   The NHS health check programme is a critical tool for early detection of cardiovascular diseases and managing risk. The programme had a 52.6% uptake; however, there was a geographical variation across England, ranging from 25.1% to 84.7%. (Patel et al., 2020). Therefore, an investment in promoting this programme could be effective in tackling the issue in deprived areas such as Blackpool and reaching ethnic minorities like South Asians. This

could be done through a targeted approach like using posters, social media and a multilingual approach to reach everybody.

Conclusion

Cardiovascular disease in the UK illustrates how structural deprivation and ethnic inequality generate preventable and unequal patterns of morbidity and mortality. Addressing disparities requires a deep understanding of social determinants that influence risk; however, targeted medical interventions are also needed to prevent CVD. Without such equity-focused approaches, existing cardiovascular inequalities in communities like Blackpool and South Asian populations will continue to persist and worsen.

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