



MSc Public Health and Social Care in Practice
LCHS7000 Social Epidemiology and Public Health Development

Component 2: Analytical Report

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Task 1: Disability Inequalities in Health among Disabled People in England

1. Introduction

Disabled people living in England are known for experiencing persistent health inequalities, which are rooted in medical, alongside various social determinants (Government of the UK, 2025a). The Department for Work and Pensions of England is known for indicating that around 16.8 million people in the UK had a disability in the 2023/2024 financial year, which is equivalent to 25% of the total population. Overall prevalence is rising mainly with age and mental-health impairments, which is particularly common among various working-age adults (Kirk-Wade, Wong and Stiebahl, 2024). Such inequalities are also known for manifesting in higher rates of particular conditions, such as poorer employment outcomes, along with social isolation, in addition to barriers to care. This results in avoidable excess morbidity, along with significantly reduced life expectancy.

2. Contextual Background and Underlying Factors

2.1 Health Issues

2.1.1 Mental Health Disorders

The increase in disability prevalence is also known for being associated with an increase in people reporting mental health conditions, affecting nearly half of working-age disabled people (Kirk-Wade, Wong and Stiebahl, 2024). Common mental disorders, such as anxiety and depression, have been reported to have risen; however, people with limited physical conditions, on the other hand, are known to have substantially elevated rates of poor mental health, self-harm and suicidal ideation (NHS England, 2025). Such problems are also amplified by various factors, such as social exclusion, discrimination, financial strain and barriers to timely psychological support.

2.1.2 Epilepsy

Epilepsy is known for illustrating the interplay of impairment and inequality. Despite it affecting 1% of the general population, this figure is known to rise to 22.2% for people with learning disabilities, with majorities having treatment-resistant seizures (Epilepsy Society, 2026). There are also various complications, such as injury and status epilepticus, alongside premature mortality. It is essential to note that access to specialist neurology, along with medication optimisation, in addition to reasonable adjustments, remains uneven, which results in limiting independence and also increasing emergency admissions.

2.1.3 Respiratory Disease

A stamina, breathing or fatigue impairment was reported by 45% of disabled adults of State Pension age, as respiratory disease, such as asthma and COPD, indicates elevated vulnerability (Kirk-Wade, Wong and Stiebahl, 2024). It is essential to note that the prevalence and impact of COPD are known to be associated with poor socioeconomic status in many countries, including the UK (Steiner *et al.*, 2017). People with disabilities are also known for facing much greater exposure to indoor pollutants, along with poorer housing and various barriers to vaccination and pulmonary rehabilitation, which results in widening outcome gaps (Emerson *et al.*, 2018; Fenwick, 2025).

2.2 Social Issues

2.2.1 Employment Inequality

In Q2 2025, there were 5.5 million disabled people in employment in the UK. The disability employment rate was 52.8%, compared to 82.5% for non-disabled people, which resulted in a significant gap (Government of the UK, 2025b). It is also essential to note that workplace discrimination, along with inadequate reasonable adjustments and occupational segregation into various lower-paid or insecure roles, results in reduced income, thus also increasing poverty risk, which in turn damages mental and physical health (WHO, 2024).

2.2.2 Social Isolation

According to a survey report by Sense (2026), 70% of disabled people state their mental health is affected by social isolation. This results in raising concerns of a significant increase in mental health conditions. Lack of transportation is known for being significantly associated with depressive symptoms in older adults (Choi and Marti, 2025). It is also essential to note that lonely individuals have higher peripheral vascular resistance and elevated blood pressure, in addition to cognitive decline (Xia and Li, 2018).

2.2.3 Accessibility to Healthcare

It is also essential to note that overall accessibility to healthcare is also compromised by several physical barriers, such as buildings, transport, various communication challenges, along with financial costs and digital exclusion (NHS England, 2023a). Such factors result in delaying diagnosis, along with reducing uptake of various preventive services, in addition to contributing to higher rates of avoidable hospital admissions.

2.3 National Response to Reduce Health Inequalities

2.3.1 NHS Core20PLUS5

NHS Core20PLUS5 is known as a national NHS England approach for informing action to reduce healthcare inequalities at both national and system level, as it defines a target population, the “Core20Plus”, alongside identifying five focus clinical areas requiring accelerated improvement (NHS England, 2021). It is known for targeting the most deprived 20% of the population along with population groups experiencing disproportionately poor access, outcomes or experiences of care (Elliott *et al.*, 2025). However, it is essential to note that effectiveness is significantly constrained by variable local implementation, various data gaps, in addition to slow translation of process improvements into measurable outcome reductions regarding the disabled population.

2.3.2 The Equality Act 2010

The Equality Act 2010 is known to have replaced several pieces of separate legislation covering discrimination, including the Disability Discrimination Act 2005 (Evennett, 2022). Legal protections are known to have raised overall awareness, in addition to providing a framework for challenge; however, it is essential to note that enforcement is still quite weak, along with awareness among employers and providers remains incomplete. There is also the disability employment gap, which is known to have stagnated since the pandemic, reaching a pre-pandemic high of 54.2% in October to December 2019 (Government of the UK, 2025b). There is also limited impact on actual employment rates or workplace experience, which is evident by evaluations of voluntary schemes such as Disability Confident (Health, 2024).

2.4 Organisation Supporting Disabled People

2.4.1 Recommended Organisation: Scope

“Scope” is known as a leading UK disability charity, which offers both online and offline employment support (Scope, 2026). It is known for helping individuals in securing reasonable adjustments, along with navigating various Access to Work grants, in addition to challenging discrimination. At the same time, it also focuses on generating evidence on employment, accessibility and social inequalities. It is essential to note that with the combination of direct service delivery and systemic advocacy, Scope is able to address the social model of disability in a much more comprehensive manner compared to purely medical interventions (Scope, 2024). However, another crucial fact is that its overall reach is quite limited relative to the scale of need.

Conclusion

It can be stated that health inequalities among disabled people in England are quite multifactorial. There are various medical vulnerabilities that interact with employment disadvantage, along with isolation and access barriers. Various national programmes, in addition to legislation, are able to provide useful frameworks. However, there are persistent gaps present in several outcomes, which results in demonstrating the fact that several factors, such as stronger enforcement, better data linkage and sustained investment in social determinants, remain essential.

Task 2: Epidemiological Analysis of Prevalence of Asthma in England

1. Introduction

Asthma is known as a chronic inflammatory respiratory condition, which is characterised by hallmark symptoms of intermittent dyspnea, cough, and wheezing. However, due to such symptoms having a non-specific nature, it is often challenging to distinguish asthma from other respiratory illnesses (Goldin, Hashmi and Cataletto, 2024). According to prevalence data from DHSC, it was estimated that there were 3,886,879 people over the age of six years diagnosed with asthma in 2023/24. This is equivalent to 6.5% of the entire population in England (Gajjar, Rough and Burnett, 2025). It is also essential to note that the UK has one of the highest national rates of self-reported adult and childhood asthma in Europe (Bloom *et al.*, 2019). Globally, majorities of the respondents from the 2018 National Health and Wellness Survey diagnosed with asthma received prescribed treatment, with the highest proportion coming from the UK (Khan *et al.*, 2025). It is known for imposing substantial morbidity through exacerbations, impaired quality of life and, less commonly, mortality. Over 12,000 people in the UK are known to have died from asthma attacks since 2014, the majority of which were preventable (Asthma + Lung UK, 2024a).

2. Public Health Measures – Prevention, Protection and Promotion (3Ps)

2.1 Prevention

Prevention is known for focusing on reducing exposure to various key modifiable triggers. Tobacco smoke, including secondhand smoke, is known for driving inflammation, in addition to exacerbations (Bellou, Gogali and Kostikas, 2022). Hence, smoke-free legislation, along with high taxation, in addition to NHS stop-smoking services, remain crucial (NHS England, 2019). Outdoor air pollution, on the other hand, is known for being tackled through clean-air zones, along with emission controls (Government of the UK, 2020). Indoor risks, including damp, mould, in addition to house-dust mite and pet allergens, are also addressed via various housing standards, ventilation and also allergen-avoidance advice (Government of the UK, 2024a). It is also essential to note that occupational asthma is prevented through various workplace risk assessments, in addition to control of sensitisers (SOM, 2026).

2.2 Protection

Protection is known for focusing on limiting infection-related exacerbations. In England, annual influenza, pneumococcal, in addition to COVID-19 vaccination are offered to people diagnosed with asthma, particularly those with poor comorbidities or even control (NHS England, 2024; Government of the UK, 2026; Government of the UK, 2024b). There is also the early utilisation of

oral corticosteroids, which is known for significantly reducing the need for hospital admission in patients with acute asthma (Edmonds *et al.*, 2012). Primary-care monitoring, on the other hand, assists therapy to be stepped up or down, particularly according to control.

2.3 Promotion

Promotion is able to empower patients through self-management and education. Structured education is known for covering symptom recognition, proper technique of utilising inhalers, along with trigger avoidance (Martin, Townshend and Brodlie, 2022). Personalised asthma action plans are also able to educate individuals with clear guidance on daily medication, along with also when to seek help (Asthma and Lung UK, 2024). There are also NICE guidelines, which are known for promoting annual review, peak-flow monitoring, in addition to pharmacological management (NICE, 2024).

3. Determinants and Risk Factors

There are several key determinants, such as genetic predisposition, along with early-life factors, in addition to various environmental exposures (Koppelman *et al.*, 2025). Outdoor air pollution, such as particulate matter or nitrogen dioxide, along with indoor damp or mould, house-dust mite, in addition to pet allergens, are known for being well-established triggers (US EPA, 2014). Socioeconomic disadvantage is known for focusing risk through poor housing conditions, higher smoking prevalence, along with greater pollution exposure and reduced access to care. It is also essential to note that deprivation gradients are also evident in the prevalence of severe symptoms, along with emergency admissions, in addition to mortality, which is also particularly more evident in older adults (Asthma + Lung UK, 2024b).

4. Epidemiological Studies and Health Needs Assessment – Population at Risk

Children, particularly boys in early childhood, and girls in later age, are known for bearing a higher burden of incidence, in addition to admissions (James, 2022). People who are living in the most deprived areas are known for experiencing significantly higher rates of severe asthma, along with emergency hospitalisation (Alsallakh *et al.*, 2021). In various age groups, this can also lead to higher mortality rates. Evidence suggests socioeconomic and ethnic minority groups are disproportionately exposed to higher outdoor air pollution, which also leads to exacerbating already existing health inequalities (Cheung *et al.*, 2025). Occupational asthma is known for affecting particular worker groups.

5. Surveillance and Monitoring

Primary-care disease registers, along with Quality and Outcomes framework indicators, are known for tracking prevalence, annual reviews, inhaler technique checks and smoking status (NHS England, 2023b). According to hospital episode statistics, emergency admissions are captured, which includes hospital admissions for asthma under 19 years age to be 138.8 per 100,000 and aged 19 years and over to be 79.5 per 100,000 in 2024/25 (Department of Health & Social Care UK, 2022). Mortality data from the Office for National Statistics also provide significant death rates (ONS UK, 2020). There is also the former INHALE, which is an online tool demonstrating data from various sources about respiratory diseases, including COPD and asthma (Department of Health & Social Care UK, 2025). There are also limitations such as under-diagnosis, variable coding quality, along with incomplete recording of severity or triggers.

6. Public Health Impact – Short- and Long-Term Consequences

6.1 Short-term Consequences

Patients who are experiencing an acute asthma exacerbation have the potential to manage symptoms at home or need urgent medical care. This depends on their symptom severity and risk factors for fatal asthma (Goldin, Hashmi and Cataletto, 2024). This can lead to significant school absence among children, along with lost working days among adults, thus resulting in the reduction of educational attainment and productivity. Every year, there are around 100,000 hospital admissions for asthma in the UK, many of which are potentially preventable (Mukherjee *et al.*, 2024). Such acute episodes are also able to generate anxiety for patients and their families, leading to temporary reductions in social participation and also physical activity.

6.2 Long-term Consequences

It is essential to note that repeated exacerbations are able to contribute to progressive decline in lung function, along with persistent symptoms, in addition to reduced quality of life (Portacci *et al.*, 2026). Several individuals with poorly controlled asthma are known for experiencing anxiety or depression. This results in further compounding disability (Freitas and Novais, 2025). Asthma-related mortality is known to remain largely avoidable with the help of optimal management. Lung diseases such as asthma are known to cost the NHS £3 billion each year. Direct costs include primary-care consultations, medication, along with secondary-care admissions, while indirect costs come from productivity losses, in addition to informal care (Trueman, 2017). Such burdens are known for falling disproportionately on various deprived communities, along with also

reinforcing cycles of poor health. It also lowers educational and also employment opportunities, in addition to increasing health inequalities.

7. Health Intervention Programme – Proposed Intervention

A community-based asthma prevention, alongside self-management programme is proposed, which will be targeting higher risk and deprived neighbourhoods:

7.1 Core Components

There will be outreach clinics, along with home visits for education, in addition to inhaler technique training and PAAP development. On the other hand, partnerships will be conducted with local authorities for housing interventions, which will be addressing damp and mould. There will be targeted smoking cessation, along with second-hand-smoke reduction support for various households with children. There will also be various school-based programmes that will help in early recognition and peer support. Lastly, digital tools and community health-worker models will be utilised for overcoming access barriers.

7.2 Evaluation

Evaluation will be utilising mixed methods, such as observing changes in various QOF review rates, along with exacerbation rates, patient admissions, along with patient-reported outcomes, in addition to equity metrics.

8. Strengths and Weaknesses of the Epidemiological Approach

8.1 Strengths

It can be stated that epidemiological surveillance strongly excels at quantifying burden. It also has strengths in identifying various higher-risk groups, such as deprivation, age, and geography, along with being able to guide resource allocation. There is also a vast range of linked primary-care, hospital and mortality data, which helps in enabling trend analysis, along with the evaluation of various interventions.

8.2 Weaknesses

However, significant weaknesses remain, such as under-diagnosis, along with under-recording. This is particularly evident in marginalised populations. There is also the incomplete capture of environmental or occupational exposures, along with heavy reliance on healthcare utilisation data that also reflects significant inequalities in healthcare access. Lastly, there is limited granularity on disease severity or control in various routine datasets. Such limitations have the possibility to underestimate the requirement in disadvantaged groups.

9. Conclusion

It can be stated that asthma remains a crucial public-health problem in England. This is due to a substantial diagnosed population, along with preventable exacerbations, in addition to clear socioeconomic gradients. Many essential prevention methods, such as tobacco control, housing quality, equitable access to education, robust surveillance, in addition to targeted community interventions, are required. It is also essential to note that closing outcome gaps requires clinical excellence, along with sustained action on both social and environmental determinants.

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