COVID-19 and Health Inequality
COVID-19 and Health Inequality
Executive Summary

The most deprived neighbourhoods in England have a COVID-19 mortality rate more than twice that of the most affluent. Likewise, people in the lowest paid occupations are twice as likely as those in higher occupational groups (such as professionals and business leaders) to die from COVID-19. This report examines these inequalities in COVID-19 in more detail – contextualising them within the wider issue of health inequalities. Firstly, the report provides an overview of socio-economic health inequalities in the UK. It then summarises epidemiological evidence of socio-economic inequalities in relation to COVID-19 (both in the UK and internationally) and examines the pathways linking COVID-19 and inequality. In part three, it examines inequalities and the impact of the emergency policy response to COVID-19, including the lockdown, the emerging parallel pandemic of restricting non-COVID NHS services, mental health impacts, rising homelessness and school closures. Part four examines the emerging evidence of an unequal COVID-19 economic crisis and the impact that it could have on future health inequalities. The report concludes by outlining some key recommendations whereby local government and devolved authorities, the NHS and national government can act to reduce these inequalities.

Key Messages

• COVID-19 has magnified and exacerbated health inequalities with higher rates of illness and death from COVID-19 in more deprived communities

• COVID-19 has highlighted the importance of the social determinants of health namely: housing, income, nutrition, employment sickness benefits and financial support, social security and social care and health care

• People in lower paid jobs or living in more deprived neighbourhoods are more likely to experience adverse outcomes from the virus because of:
  o co-morbidities and reduced immune response associated with poverty and stress
  o occupational exposures and inability to shield at home
COVID-19 and Health Inequality

- overcrowding and homelessness facilitating transmission
- inadequate self-isolation and sickness benefits meaning they continue to work
- lack of access to and adequacy of health and social care services

- Children living in deprived communities are adversely impacted by school closures and poverty resulting from COVID-19
- Inequalities in COVID-19 outcomes have been exacerbated by the major disinvestment in public services over the last decade
- The COVID-19 economic crisis is likely to further increase health inequalities unless the social safety net is improved
- While the UK government has taken steps to mitigate some of the distributional impacts of COVID-19, there is an urgent need for additional action to reinvest and rebuild capacity in all public services linked to a strategy for full employment and resource redistribution.

Recommendations

To address these inequalities and support those at greatest risk of adverse outcomes from the health, social and economic aspects of the pandemic we make a number of recommendations.

To Reduce Inequalities in COVID-19 Morbidity and Mortality

1) **Patients must have access to high quality local preventative, primary and community care health services.** This is particularly the case for those who have had disruption in chronic disease management during the pandemic.

2) **The Find Test Trace Isolate policy must be properly implemented and delivered** through local primary care, public health, NHS labs and local authority services to ensure full population coverage.
3) **Testing services should be integrated with clinical care and provided locally** to address inequalities in the ability to get to testing centres and to facilitate integration with the management of pre-existing conditions.

4) **Provide adequate financial support for those self-isolating** to prevent increased workplace transmission.

5) **Enforce Occupational Risk Assessments** for all employed staff particularly for those in key worker roles. **Increase essential worker support** including, childcare, travel subsidies, financial support and risk assessment.

6) If found to be COVID-19 positive, **provide support for self-isolation** outside of overcrowded homes e.g. by providing hotel space for individuals to self-isolate in free of charge.

7) **Provide support for those suffering from long COVID** including mental health support.

8) **Integrate data on health outcomes, population demographic characteristics (ethnicity and socio-economic status), and environmental exposures** such as air pollution, overcrowded and substandard housing and access to green public space to inform strategies to reduce vulnerability in the medium and long term.

---

**To Reduce Inequalities in access to NHS and Social Services including Mental Health Support**

9) Ensure that the **NHS ‘reset and restore’ plans reduce inequalities** in access to NHS services and **target resumption of services at most in need communities**.

10) All new **digital services should undergo robust evaluation to ensure they are effective and impact assessments to ensure their accessibility and availability** to patients from **all communities with the alternative of face-to-face being always available if patients prefer**.

11) **Increase funding for the NHS and local authorities and specifically targeted increases to more deprived area.** Increase the existing ‘health inequalities weighting’ within the NHS funding formula²

12) **Increase NHS and local authority resources and service provision** for mental health and public health prevention and services for all disadvantaged groups.
To Reduce Homelessness during and after the COVID-19 Crisis

13) **Cancel rent arrears** or provide a long-term no interest loans to cover rent arrears. **Abolish ‘no fault evictions’** under section 21 of the Housing Act 1988 within the next 12 months. **Introduce a duty to provide immediate emergency accommodation** to all those with nowhere safe to stay.

To Reduce Inequalities amongst Children of the ‘COVID Generation’

14) **Rebuild and invest in children’s services by increasing government grant to local authorities**

15) **Expand free school meals** for all school age children and implement a **nationwide fruit and vegetable subsidy programme**.

16) **Double the Pupil Premium rates** for schools in deprived areas to reduce the educational attainment gap.

To Reduce Inequalities in the Economic Consequences of the COVID-19 Crisis

17) **Increase of at least £20 per week** to the child element of Universal Credit. **Abolish the benefits cap and two child limit, remove sanctions** from Universal Credit system. **Maintain and increase the additional £1000 provided for Universal Credit** so that it provides an above poverty standard of living.

18) **Introduce a ‘Short Work’ wage-subsidy programme** to support employers and employees once the furlough period ends - whereby employers reduce their employees’ working hours instead of laying them off.

19) A full employment strategy and national **Retraining Schemes** should underpin the work-search support package by the government.

20) **Have a minimum payment level for furlough payments** so that people are not pushed into poverty as a result of regional or national restrictions.
COVID-19 and Health Inequality
COVID-19 and Health Inequality

Introduction

While COVID-19 has impacted on everyone in society, there is growing evidence to suggest that the burden of the pandemic is not equally shared. Older people are most at risk of dying from COVID while people from lower socio-economic groups (in terms of occupation, education or income) and people living in more deprived neighbourhoods are at greatest risk of adverse outcomes including hospitalisation and mortality. The COVID-19 mortality rate in the most deprived neighbourhoods in England is more than twice that in the most affluent. Likewise, people in lower paid jobs are twice as likely as those in higher occupational groups (such as professionals and business leaders) to die from COVID-19. The inequalities emerging from the pandemic are not restricted though to just the immediate health effects. There is also emerging evidence of inequalities in terms of the social and economic impact of the emergency policy responses to the pandemic with the burden of the lockdown, school closures, homelessness, and the restrictions of non-COVID-19 NHS services, disproportionately falling on the more vulnerable and disadvantaged groups in our society. Further, the emerging COVID-19 economic crisis with rising unemployment levels is already demonstrating unequal social patterns with people in more disadvantaged local labour markets being most impacted. This is likely to exacerbate health inequalities further in the future.

This report examines socio-economic inequalities in COVID-19 in more detail – contextualising them within the wider issue of health inequalities. Older people and ethnic minority groups are considered in more detail in other published or reports in preparation. Firstly, the report provides an overview of health inequalities in the UK (Section 1). Section 2 summarises epidemiological evidence of socio-economic inequalities during COVID-19 (both in the UK and internationally) and examines the pathways linking COVID-19 and inequality. Section 3 examines inequalities in the impact of the policy response to COVID-19, including the lockdown, the emerging parallel pandemic of restricting non-COVID-19 NHS services, mental health impacts, rising
homelessness and school closures. Section 4 examines the emerging evidence of an unequal COVID-19 economic crisis and the impact that it could have on future health inequalities. The report concludes by outlining some key recommendations whereby local government and devolved authorities, the NHS and national government can act to reduce these inequalities. The pandemic presents an important moment for renewing our efforts to reduce health inequalities that have existed for decades.

1. Health Inequalities

1.1 Health Inequality

‘Health inequality’ refers to the systematic differences in health which exist between people and places as measured by socio-economic status (SES) (e.g. between income groups, levels of education, occupational background or area-level deprivation). Inequalities in health are “systematic differences in health between different socio-economic groups within a society. As they are socially produced, they are potentially avoidable and widely considered unacceptable in a civilised society”\(^5\). Inequalities in health by SES are not restricted to differences between the most privileged groups and the most disadvantaged; health inequalities exist across the entire social gradient\(^6\). The social gradient in health runs from the top to the bottom of society and “even comfortably off people somewhere in the middle tend to have poorer health than those above them”\(^7\).

1.2 Health Inequality in the UK

In the UK, these inequalities in health are very stark\(^8\). Londoners living in Canning Town at one end of the Jubilee tube line can expect to live five years less than those living eight stops along it in Westminster\(^9\)\(^10\). There is a 15-year gap in life expectancy between residents of the affluent Cathcart and deprived Possilpark and Ruchill neighbourhoods of Glasgow - the largest health divide in Europe\(^11\). In England, the average life expectancy at birth gap between the most and least deprived areas is nine years for men and seven years for women\(^12\). Likewise, the gap in average healthy life expectancy (how long someone can be expected to live without a disabling health conditions) is 18 years for men and around 19 years for women\(^13\). There are much
COVID-19 and Health Inequality

higher rates of non-communicable chronic diseases (NCDs) including cardiovascular disease, cancer, diabetes, COPD, and obesity in deprived compared to more affluent populations. Deaths from cardiovascular diseases are almost three times higher in the 20% most deprived areas compared to the 20% least deprived and alcohol-related hospital admissions are more than twice as high amongst men and amongst women in the 20% most deprived areas compared to the 20% least deprived areas\textsuperscript{14}. These health inequalities start very early in life with stark gaps in infant mortality rates between deprived and affluent neighbourhoods in England\textsuperscript{15}. Deprived and affluent areas - with such stark differences in health outcomes can be located very closely together – indeed just a few miles apart\textsuperscript{16}. There are also large health inequalities between people from different socio-economic backgrounds - regardless of where they live. People with higher occupational status (e.g. professionals such as teachers or lawyers) have better health outcomes than those with lower occupational status (e.g. manual workers)\textsuperscript{17}. Similarly, people with a higher income or university level education have better health outcomes than those with a low income or no educational qualifications\textsuperscript{18}.

1.3 Determinants of Health Inequality

These inequalities are explained in terms of differences in exposure to the social determinants of health\textsuperscript{19}. The social determinants of health are the conditions under which people are born, grow, live, work, and age\textsuperscript{20}. They are the everyday conditions which influence our access to health-enhancing environments and facilities and which limit our exposure to health-damaging risk factors. They include economic resources, as they can determine our ability to afford good quality services (e.g. hospitals, schools, transport infrastructure, and social care) but also allow us to avoid materially harmful circumstances (e.g. poor housing, inadequate diet, physical hazards at work, and environmental exposures such as air pollution). Besides income, the social determinants of health also include working conditions, housing and neighbourhood factors, labour market activity including unemployment and welfare receipt, and access to certain goods and services such as health and social care. These factors can have direct impacts on health (e.g. respiratory illnesses are associated with poor quality damp housing) but can also operate through psychosocial pathways (e.g. the chronic stress...
resulting from insecure housing). Different socio-economic groups are unequally exposed to these health-damaging or health-enhancing factors - resulting in health inequalities. Another way in which our socio-economic position in society influences our health is through shaping our ability to embrace health-enabling practices (often called health behaviours): the ways people spend their time (e.g. exercise) and also forms of consumption that affect health, including diet and tobacco or alcohol use. These socially-shaped health-related practices influence the size and shape of health inequalities, e.g. smoking is a social practice which reflects gender roles, social class structures, and income inequalities21.

2. Inequalities in COVID-19

In the first stage of the pandemic (March to June, 2020) clear evidence was already emerging from a variety of countries of socio-economic inequalities in COVID-19 infections, symptom severity and deaths. This section summarises this epidemiological evidence of socio-economic inequalities in COVID-19 - both in the UK and internationally - and then examines the pathways linking COVID-19 and inequality.

2.1 International Evidence of Inequalities in COVID-19

Data published by the Catalonian government in Spain suggested that the rate of COVID-19 infection was six or seven times higher in the most deprived areas of the region compared to the least deprived22. Similarly, in USA, area-level socio-spatial gradients were found in terms of infection levels in New York City, with dramatically increased risk of death observed among residents of the most disadvantaged counties23. In Canada, a higher percentage of cases was observed in the neighbourhoods with the lowest average income levels compared to the highest. For example, in Toronto, the lowest income neighbourhoods had higher rates of COVID-19 cases (113 cases per 100,000) and hospitalisations (20 hospitalisations per 100,000) compared to the highest income neighbourhoods (73 cases per 100,000; nine hospitalisations per 100,000)24. Even data from low- and middle-income countries such as India reported that area level deprivation was significantly associated with higher incidence of COVID-1925.
2.2 UK Evidence of Inequalities in COVID-19

In England, official analysis of patients admitted to hospital with COVID-19 reported that 45% of patients were from the most deprived 20% of the population - COVID-19 admissions to critical care were also far greater in the most deprived areas, with over 50% of admissions coming from the 40% most deprived areas\(^{26}\). Large scale analysis by the Office of National Statistics of deprivation and COVID-19 mortality found that the risk of death was almost twice as high in the most compared to the least deprived 20% of neighbourhoods in England. In the early phase of the pandemic (1 March to 31 May 2020) the death rate in the most deprived English neighbourhoods was 128.3 deaths per 100,000 compared to 58.8 deaths per 100,000 in the least deprived\(^{27}\). Even in summer 2020, when the death rates in all areas fell considerably, they were still double in the most deprived at 3.1 deaths per 100,000 versus 1.4 deaths per 100,000 in the least deprived neighbourhoods (1 March to 31 July, 2020)\(^{28}\). These inequalities are similar across the different countries in the UK with, for example, the COVID-19 death rate among people living in the 20% most-deprived Scottish areas of 86.5 per 100,000 more than double that of the 38.2 in the least-deprived fifth of Scottish areas (1 March to 31 May, 2020)\(^{29}\).

In terms of inequalities by occupation, large-scale analysis by the Office of National Statistics found that COVID-19 death rates were highest amongst men employed in:

- elementary occupations (e.g. construction workers, security guards, factory workers, and cleaners) with 39.7 deaths per 100,000 men
- caring, leisure and other service occupations (e.g. nursing assistants, care workers and ambulance drivers) at 39.6 deaths per 100,000 men
- process, plant and machine operatives occupations at 30.1 deaths per 100,000 men
- administrative and secretarial occupations at 26.0 deaths per 100,000 men
COVID-19 and Health Inequality

- sales and customer service occupations at 24.7 deaths per 100,000 men
- skilled trades occupations at 23.9 deaths per 100,000 men

COVID-19 death rates were lowest amongst men employed as managers, directors, senior officials and in professional occupations\(^\text{30}\). This is demonstrated in Figure 1 for England and Wales - similar patterns of occupational inequalities were also evident in the other countries of the UK (e.g. in Scotland)\(^\text{31}\). These findings - broadly along a social gradient, mirror findings from the Whitehall studies (conducted among civil servants in the 1960s, 1980s and 1990s) which found a strong association between grade levels of civil servant employment and mortality rates from a range of causes: with increasing higher mortality rates with decreasing employment grade\(^\text{32}\). Thus far from being unique to COVID-19, these parallels highlight the well characterised critical importance of socio-economic inequalities in health outcomes.
Occupational inequalities in COVID-19 death rates were not as pronounced amongst women. However, the highest death rates were amongst women employed in caring, leisure and other service occupations, which had a rate of 15.4 deaths per 100,000 women. Rates were also particularly high amongst women process, plant and machine operatives also had an elevated rate, as did sales and retail assistants (15.7 deaths per 100,000 women). In contrast, COVID-19 death rates were lowest amongst women employed as managers, directors, and senior officials, and in professional occupations. This is demonstrated in Figure 2 for England and Wales - similar patterns were found in Scotland.
Currently, COVID-19 data by deprivation or occupational class is mainly available for mortality but it needs to be noted that the deaths are merely the tip of the iceberg – likely to represent large inequalities in underpinning cases, case severity and infection rates. For example, a study of primary care patients found that people living in more deprived areas were more likely to test positive for COVID-19\textsuperscript{37}. Likewise, wide scale analysis of positive cases by Public Health England (from 1 March to 9 May 2020) found that diagnosis rates were highest in the most deprived quintile (over 300 cases per 100,000) - for both men and women – almost double that of the least deprived quintile (around 200 cases per 100,000)\textsuperscript{38}. Indeed, the rate in the most deprived quintile was 1.9 times the rate in the least deprived quintile among men and 1.7 times among women. This is particularly concerning in light of growing evidence of long COVID – whereby patients have long term impacts from infection including psychological, neurological and respiratory symptoms as well as fatigue\textsuperscript{39}. Lower socio-economic groups could disproportionately experience these long terms impacts.
2.3 Determinants of Inequalities in COVID-19

COVID-19 interacts with and exacerbates existing socio-economic inequalities. At least four potential pathways linking deprivation and lower socio-economic status to higher COVID-19 infection rates, cases, case severity and deaths, can be identified: increased vulnerability, susceptibility, exposure and transmission (as demonstrated in Figure 3).^{40}

Figure 3: COVID-19 and the Social Determinants of Health^{41}

- **Increased vulnerability**: Due to higher burden of pre-existing health conditions (such as diabetes and respiratory conditions, heart disease, hypertension, obesity) that increase the severity and mortality of COVID-19^{42}. These co-morbidities arise as a result of inequalities in the social determinants of health (e.g. working conditions, unemployment, access to essential goods and services, housing and access to health care, health-related practices).
COVID-19 and Health Inequality

- **Increased susceptibility**: Due to immune systems weakened by long term exposures to adverse living and environmental conditions. The social determinants of health also work to make people from deprived communities more vulnerable to infection from COVID-19 – even when they have no underlying health conditions - as adverse psychosocial circumstances (chronic stress) and less access to good nutrition - increase susceptibility, thereby influencing the onset, course and outcome of infectious diseases - including respiratory diseases like COVID-19. This increased susceptibility is also influenced by environmental exposures, with emerging evidence pointing to an association between long term air pollution exposure and COVID-19 deaths, and with deprived and minority ethnic groups more likely to live in the areas with higher air pollution.

- **Increased exposure**: As a result of inequalities in working conditions. Lower paid workers - particularly in the service sector (e.g. food, cleaning or delivery services) - were much more likely to be designated as key workers and thereby were still required to go to work during lock down, and more likely to be reliant on public transport for doing so. Likewise, people in lower skilled occupations are less likely to be able to work from home.

- **Increased transmission**: Inequalities in housing conditions may also be contributing to inequalities in COVID-19. Deprived neighbourhoods are more likely to contain houses of multiple occupation, and smaller houses that are more likely to be overcrowded with a lack of ventilation and outside space, as well as have higher population densities (particularly in deprived urban areas) and lower access to communal green space. This also makes it difficult to self-isolate. These may have increased COVID-19 transmission rates - as was the case with previous influenza pandemic in 1918 and 2009 where strong associations were found with urbanity.
The increased vulnerability, susceptibility and exposure to COVID-19 as a consequence of socio-economic inequality also intersects with ethnicity, as ethnic minorities are much more likely to be socio-economically deprived and/or to live in more deprived neighbourhoods, as well as to be disproportionately disadvantaged by compounding determinants. Ethnic minority inequalities in COVID-19 were addressed in detail in Independent SAGE Report 6.

3. Emergency Policy Responses and Inequalities

The impact of COVID-19 on health inequalities will not just be in terms of virus-related infection and mortality, but also in terms of the consequences of the restrictions on movement implemented in spring 2020: so-called lockdowns. These state-imposed emergency restrictions have been of varying levels of severity internationally, but all have in common a significant increase in social isolation and confinement within the home and immediate neighbourhood and were initially implemented for 8 to 12 weeks. The lockdowns and the longer term social distancing measures in place have also led to an emerging economic crisis, with unequal impacts. This section examines these inequalities in the impact of the emergency policy response to COVID-19: the emerging parallel pandemic of restricting non-COVID-19 NHS services, mental health impacts, rising homelessness and impacts on children including school closures.

3.1 COVID, Inequality and Loss of NHS services

As a result of health services having to focus on combating the pandemic, there has been a significant reduction in access to health care across the board. Given what we know about inequalities in morbidity and the need for health services, this will disproportionately impact on people with chronic long term conditions, older people and people living in more deprived communities. During the UK-wide lockdown, instead of the NHS being there for people, the public were told to ‘stay at home, protect the NHS and save lives’ - for fear of NHS services being overwhelmed. For example, four in ten people were too concerned about being a burden on the NHS to seek help from their GP. The NHS became a COVID-19 service with vast cancellations of other services. Six months on and usual NHS services are only now resuming but with an increased backlog.
COVID-19 and Health Inequality

- Total deaths at home also increased steeply, to more than double the five-year average by mid-April. Between early March and 7 August, there were about 26,500 excess deaths in care homes and 23,500 excess deaths at home compared with the 2015–19 average\(^{50,51}\).
- According to the Royal College of Surgeons of England, referrals for NHS treatment fell from 1.6 million in February 2020 to less than half a million in April 2020. In June 2020, over 50,000 patients were waiting over a year for treatment, up from 3,000 at the end of March 2020; with almost 2 million patients waiting to start treatment, compared with 600,000 in June 2019\(^{52}\).
- Emergency department attendances halved: there were 917,000 A&E attendances reported in England in April 2020, down 56.6% from April 2019\(^{53}\).
- Weekly data until April 2020 for England and Northern Ireland show falls in urgent referrals for early cancer diagnosis of between 70% and 89%, as well as falls in admissions for chemotherapy of between 45% and 66%\(^{54}\).
- In March, NHS England advised GPs of routine primary care services that could be suspended during the pandemic and that care should be delivered remotely wherever possible.
- The total number of GP consultations in England fell from 24 million in February 2020 to 16.6 million in April 2020\(^{55}\).
- Over 70% of GP consultations are being delivered remotely\(^{56}\). Access to video consultations requires computer hardware, internet connections and the skills necessary to participate in these.
- Many people are unable to afford the credit or data, or the expense of long consultation calls, and may lack the skills to navigate internet-based systems\(^{57}\). Over 5 million adults in the UK were non-internet users in 2018 (not using the internet within the previous three months)\(^{58}\).

Inequalities in the impact of the loss of these NHS services is as yet unevaluated – but given inequalities in the underpinning burden of non-communicable diseases and in access to technology, it is likely that people
COVID-19 and Health Inequality

from more deprived communities and social groups will be disproportionally impacted. Indeed, this is acknowledged in Phase Three of the NHS response to the COVID-19 pandemic which sets out a series of measures to mitigate any inequalities arising from the lockdown\(^{59}\). It states that NHS services must be restored inclusively and prioritised by need.

3.2 COVID-19 and Inequalities in Mental Health

The lockdown was particularly challenging for mental health - with concerns expressed by medical professionals about the impact of extended isolation and lack of social contact. Poor mental health increased across all socio-economic groups in England during the lockdown. The impact was greatest for those living in the most deprived areas – who had worse mental health than those in the least deprived areas even before the pandemic\(^{60}\). For both the most and least deprived quintile in English local authorities there was a deterioration in mental health before and after the COVID pandemic, but this was slightly more pronounced in the most deprived quintile\(^{61} \, 62\).

Treatment and support for mental health problems has fallen during the pandemic due to the loss of NHS services. For example, mental health referrals in England fell by 30-40% during the peak of the crisis, and it is expected that presentations will rise above pre-COVID levels as lockdown restrictions are eased \(^{63}\). Remote consultation methods in the NHS are also affecting mental health care with some users finding the methods an additional source of stress. A survey undertaken by Rethink, the mental health charity, found 42% of service users reported worsening mental health due to less support from the NHS and other providers\(^{64}\). Accessibility to mental health services has become more difficult – just as need is rising - with the already stretched services being temporarily suspended\(^{65}\). Given the disproportionate burden of mental health problems amongst low income communities, this is setting up a challenge for future health inequalities.
3.3 COVID-19 and Homelessness

A major aspect of inequalities in COVID-19 is rising rates of homelessness. Homelessness disproportionately impacts on those with low incomes. In 2017, almost 600 people died sleeping rough on the streets of in England and Wales\textsuperscript{66} aged, on average, just 47\textsuperscript{67}. It was already a major concern for local authorities: with over 70\% of surveyed local authorities reporting in 2019 that homelessness was increasing, in a quarter of these, to a “significant” extent\textsuperscript{68}. Local authority data suggest that nearly 25,000 people were recorded sleeping rough at least once in England during the latest year on record\textsuperscript{69}. Much of this pre-COVID increase is related to the austerity measures implemented since 2010 – which reduce social security and housing benefit levels as well as local authority budgets\textsuperscript{70}. However, the current pandemic is projected to increase the epidemic of homelessness in the UK. The unprecedented economic downturn – discussed further in section 4 of this report - is likely to lead to more and more people becoming homelessness.

During the lockdown, the government implemented the “everyone in” scheme. Under this, many homeless people found themselves in B&Bs, homeless shelters and hotels during the lockdown; often, in close proximity and sharing facilities with others\textsuperscript{71}. Social distancing between homeless families was difficult due to the shared cooking, bathroom and living facilities\textsuperscript{72}. The conditions of this emergency accommodation are reported to be cramped and unsuitable for families\textsuperscript{73}. Transmission of COVID-19 is much higher in such conditions.

It is reported that over 14,000 people have been given shelter during the lockdown period, as part of this scheme\textsuperscript{74}. Housing evictions were also halted until 21 August, extended by four weeks to 20 September\textsuperscript{75}. It is estimated that over 200,000 adult private renters have newly fallen into arrears, whilst around 175,000 of these private renters have already been threatened with evictions by their landlord\textsuperscript{76}. Despite the halt on evictions, an estimated 20,000 individuals were illegally evicted during the lockdown period\textsuperscript{77}. The total number of adult private renters in arrears is now double what it was last year\textsuperscript{78}. Universal Credit (UC) has increased the precarious situation of private renters. With over 2.4 million more households claiming UC since
the pandemic began, many of them for the first time, this may exacerbate homelessness since UC fails to cover the average price of rent.\(^79\)

Clinical risk factors for adverse outcomes from COVID-19 are overexpressed in homeless populations (e.g. liver disease, respiratory disease, cancer, and cardiovascular disease).\(^80\) The pandemic is also likely to lead to an exacerbation of pre-existing inequalities in access to healthcare for homeless people.\(^81\) During the pandemic, most health services were not available or had transitioned to remote consulting and digitalised therapy. Homeless people and rough sleepers lack internet access, and where there is internet access, it lacks privacy and confidentiality.\(^82\)

3.4 COVID-19 and Unequal Impacts on Children

According to ONS data there were 6 registered Covid-19 deaths for children between 0-14 years of age, registered between 28 December 2019 to 14 August 2020, in England and Wales,\(^83\) out of a total of 41,499 COVID-19 deaths in the UK, as of 30 August.\(^84\) Although children are at minimal risks of death and illness from the pandemic, an indirect burden of the COVID response falls on them, especially children from deprived and vulnerable backgrounds:

- **Homelessness and children:** The Children’s Commissioner reports that temporary accommodation provided to homeless families is often too far from the children’s original place of home; this is deeply disruptive and may lead to loneliness and isolation due to changing school and separation from friends, as well as parents being forced to pay for childcare.\(^85\) Furthermore, homelessness can lead to severe emotional trauma leading to problematic behaviour at school, can cause major setbacks in educational performance, irrespective of capability or potential.\(^86\)
COVID-19 and Health Inequality

- **Poverty and rising in living costs**: According to Child Poverty Action Group, surveys of low income families assessing the cost of food, electricity and other essentials (CPAG)\(^87\), 86% of the most vulnerable families report difficulties meeting the costs of basic subsistence: food, electricity, utilities, and child expenditure\(^88\). In addition to this, experiences of families claiming UC or Child Tax Credit has shown that the crisis is causing six in 10 of these families to cut back on essentials, six in 10 to borrow money and over five in 10 to be behind on rent or other essential bills\(^89\). Furthermore, more deprived families typically have substantially higher levels of financial debt as a proportion of marketable assets, more property debt and less savings to resort to in the face of economic shock\(^90\).

- **Food insecurity**: The pandemic has exacerbated existing food insecurity, and will continue to do so. 13% of UK households are ‘marginally food insecure’; and 8% ‘moderately food insecure’\(^91\). Focusing on children in particular, food insecurity compromises educational outcomes\(^92\), results in low birth weight, increased childhood mortality, and increased dental caries\(^93\). The long absence from school this year has proven arduous for low income families leading to increased use of food banks.

- **Educational inequalities**: Countrywide school closures have increased the “educational gap” between affluent and deprived pupils\(^94\). Within state schools, 60% of the richest fifth of families had access to interactive resources, such as video and text communication, contrasted with just 47% for children in the poorest fifth of families and 80% of private school students had online teaching\(^95\). In addition to this, children from the more affluent families were twice as likely to receive private tutoring\(^96\). The educational gap is also influenced by the technology gap: 14% students from the most deprived families struggle to access schoolwork due to deficits in technology, such as lack of personal computers or tablet devices. Additionally, the lack of suitable, dedicated study space is an impedance to productive studying for the most deprived children: 37.5% of low income background students have inadequate desk space compared to 31.2% of those from non-low income backgrounds\(^97\)\(^98\).
These differences will likely widen pre-existing gaps in test scores between children from different backgrounds\textsuperscript{99}.

- **Child protection**: School also acts as a protective factor for children experiencing abuse and neglect. Deprived children are, disproportionately, at higher risk of experiencing abuse and neglect, according to a Joseph Rowntree Foundation report\textsuperscript{100}. The health implications of childhood abuse are manifold, abuse is positively associated with adult depression aggression, hostility, anger, fear, anxiety disorders, and personality disorders\textsuperscript{101}.

- **Loss of NHS services**: Children from the poorest 20\% of households are four times more likely to have serious mental health difficulties by the age of 11, compared to those from the wealthiest 20\%\textsuperscript{102}. They will lose out from the loss of NHS mental health services. The cessation of non-urgent services during the pandemic affected children with disabilities disproportionately, such that “we have failed disabled individuals [including children] and reversed some of the progress made in their empowerment”\textsuperscript{103}.

These social, economic and educational inequalities amongst children during the pandemic all have long term implications for health inequalities. For example, the rising gap in educational achievement will likely exacerbate health inequalities in the future. Education benefits children in a multitude of ways: promotion of better mental well-being, provision of physical activity, and educating children on personal, social and health education\textsuperscript{104}. Adults living in poverty are more likely to have no qualifications, impacting upon employability, and, therefore, on health\textsuperscript{105}. Adults with no educational qualifications are less likely to eat fruit and vegetables, and more likely to consume energy dense foods: a risk factor for coronary heart disease\textsuperscript{106}. Low educational attainment in childhood is also associated with increased smoking and reduced physical activity in adulthood\textsuperscript{107}. 

\textit{COVID-19 and Health Inequality}
4. The COVID-19 Economic Crisis and Health Inequalities

Past research suggests that the longer term economic fallout from the pandemic may also be experienced unequally – leading to increased death and illness amongst the most disadvantaged communities. This section examines the emerging evidence of an unequal COVID-19 economic crisis and the impact that it could have on future health inequalities.

4.1 The COVID-19 Economic Crisis

The world economy has already been severely impacted by COVID-19 – with record levels of unemployment (e.g. 5.2 million people filed for unemployment benefit in just one week in April 2020 in the USA) despite the unprecedented interventionist measures undertaken by some governments and central banks - such as the £300 billion injection by the UK government to support workers and businesses. The pandemic has slowed China’s economy with a predicted loss of $65 billion as a minimum in the first quarter of 2020. Economists fear that the economic impact will be far greater than the financial crisis of 2007/8 and they say that it is likely to be worse in depth (but hopefully not length) than the Great Depression of the 1930s.

Emerging data is already charting the unequal economic fall-out of COVID-19 in the UK, with the sectors of the economy most hard-hit including retail, tourism, entertainment and restaurants - all of which disproportionately employ low-income workers, women, ethnic minority communities and young people. This is likely to impact more deprived areas and regions. Analysis by the Northern Health Sciences Alliance found that by April 2020, northern cities including Manchester, Liverpool, Newcastle and Durham all experienced above average increases in the rate of people claiming unemployment benefits. A report by the Communities in Control association estimated that neighbourhoods with the highest unemployment pre-COVID would suffer the greatest increases in unemployment post-COVID: neighbourhoods where over 15% of the working-age population are unemployed could see increases of up to 27.5% unemployment rates.

Further, the Institute for Public Policy Research has estimated that by 2021 there will be a national
unemployment rate of 9.8%, with 25% of private sector workers experiencing a reduction in hours, and an additional 300,000 children and 1.7 million adults falling into poverty.

4.2 Economic Crisis and Health Inequalities

The health consequences from this economic crisis are also likely to impact differently across society. Previous economic recessions have led to increases in physical and psychological morbidity and mortality, disproportionately experienced by the most deprived communities. Previous research has found that sudden economic shocks (like the collapse of communism in the early 1990s and the global financial crisis (GFC) of 2008) lead to increases in morbidity, mental ill health, suicide and death from alcohol and substance use. Following the GFC, worldwide an excess of suicides was observed in the USA, England, Spain and Ireland. There is also evidence of other increases in poor mental health after the GFC including self-harm and psychiatric morbidity.

These health impacts were not shared equally though – areas of the UK with higher unemployment rates had greater increases in suicide rates and inequalities in mental health increased with people living in the most deprived areas experiencing the largest increases in poor mental health and self-harm. Further, unemployment (and its well-established negative health impacts in terms of morbidity and mortality) is disproportionately experienced by those with lower skills or who live in less buoyant local labour markets. So, the health consequences of the COVID-19 economic crisis are likely to be similarly unequally distributed – exacerbating health inequalities.

4.3 Public Policy, Economic Crisis on Health Inequalities

However, the unequal spread of the economic fall-out can be mitigated by policy, meaning much depends on how governments choose to respond to the unfolding economic crisis. The effects of the GFC on health inequalities varied by public policy response, with countries such as the UK, Greece, Italy and Spain which
imposed austerity\textsuperscript{120} after the GFC experiencing worse population health effects than those countries such as Germany, Iceland and Sweden who opted to maintain public spending and social safety nets\textsuperscript{121}. Indeed, research has found that countries with higher rates of social protection (such as Sweden) do not experience increases in health inequalities during economic recessions\textsuperscript{122}. The importance of social protection levels for preventing health inequalities from increasing during recessions is also demonstrated within countries - for example, the increased social expenditure on old age pensioners in the UK after the GFC prevented health inequalities increasing in this group\textsuperscript{123}.

These findings are in keeping with previous studies of the effects of public sector and welfare state contractions and expansions on trends in health inequalities in the UK, US and New Zealand. For example, inequalities in premature mortality and infant mortality by income and ethnicity in the USA decreased during the period of welfare expansion in the USA (‘war on poverty’ era 1966 to 1980), but they increased again during the Reagan-Bush period (1980-2002) when welfare services and health care coverage were cut\textsuperscript{124}. Similarly, in England, inequalities in infant mortality rates reduced as child poverty decreased in a period of public sector and welfare state expansion (2000 to 2010)\textsuperscript{125}, but increased again once austerity was implemented and child poverty rates increased (2010 to 2017)\textsuperscript{126}.

5. Recommendations
To address these inequalities and support those at greatest risk of adverse outcomes from the health, social and economic aspects of the pandemic we make a number of recommendations.

To Reduce Inequalities in COVID-19 Morbidity and Mortality
1) **Patients must have access to high quality local preventative, primary and community care health services.** This is particularly the case for those who have had disruption in chronic disease management during the pandemic.
COVID-19 and Health Inequality

2) The Find Test Trace Isolate policy must be properly implemented and delivered through local primary care, public health, NHS labs and local authority services to ensure full population coverage.

3) Testing services should be integrated with clinical care and provided locally to address inequalities in the ability to get to testing centres and to facilitate integration with the management of pre-existing conditions.

4) Provide adequate financial support for those self-isolating to prevent increased workplace transmission.

5) Enforce Occupational Risk Assessments for all employed staff particularly for those in key worker roles. Increase essential worker support including, childcare, travel subsidies, financial support and risk assessment.

6) If found to be COVID-19 positive, provide support for self-isolation outside of overcrowded homes e.g. by providing hotel space for individuals to self-isolate in free of charge.

7) Provide support for those suffering from long COVID including mental health support.

8) Integrate data on health outcomes, population demographic characteristics (ethnicity and socio-economic status), and environmental exposures such as air pollution, overcrowded and substandard housing and access to green public space to inform strategies to reduce vulnerability in the medium and long term.

To Reduce Inequalities in access to NHS and Social Services including Mental Health Support

9) Ensure that the NHS ‘reset and restore’ plans reduce inequalities in access to NHS services and target resumption of services at most in need communities.

10) All new digital services should undergo robust evaluation to ensure they are effective and impact assessments to ensure their accessibility and availability to patients from all communities with the alternative of face-to-face being always available if patients prefer.
COVID-19 and Health Inequality

11) Increase funding for the NHS and local authorities and specifically targeted increases to more deprived area. Increase the existing ‘health inequalities weighting’ within the NHS funding formula.

12) Increase NHS and local authority resources and service provision for mental health and public health prevention and services for all disadvantaged groups.

To Reduce Homelessness during and after the COVID-19 Crisis

13) Cancel rent arrears or provide a long-term no interest loans to cover rent arrears. Abolish ‘no fault evictions’ under section 21 of the Housing Act 1988 within the next 12 months. Introduce a duty to provide immediate emergency accommodation to all those with nowhere safe to stay.

To Reduce Inequalities amongst Children of the ‘COVID Generation’

14) Rebuild and Invest in children’s services by increasing government grant to local authorities

15) Expand free school meals for all school age children and implement a nationwide fruit and vegetable subsidy programme.

16) Double the Pupil Premium rates for schools in deprived areas to reduce the educational attainment gap.

To Reduce Inequalities in the Economic Consequences of the COVID-19 Crisis

17) Increase of at least £20 per week to the child element of Universal Credit. Abolish the benefits cap and two child limit, remove sanctions from Universal Credit system. Maintain and increase the additional £1000 provided for Universal Credit so that it provides an above poverty standard of living.

18) Introduce a ‘Short Work’ wage-subsidy programme to support employers and employees once the furlough period ends - whereby employers reduce their employees’ working hours instead of laying them off.
19) A full employment strategy and national **Retraining Schemes** should underpin the work-search support package by the government.

20) Have a **minimum payment level for furlough payments** so that people are not pushed into poverty as a result of regional or national restrictions.
Acknowledgements

This report was written on behalf of Independent SAGE by Professor Clare Bambra, Jatinder Hayre, Professor Allyson Pollock and Dr Heather Brown.

Notes and References


4 The most common measure of area-level deprivation is the Index of Multiple Deprivation – the IMD. This produces a ranking of areas based on relative local scores for: income, employment, health, education, crime, access to services and living environment.


9 London Health Observatory, Health Inequalities Overview. 2012: London


https://www.who.int/social_determinants/thecommission/finalreport/en/
COVID-19 and Health Inequality


24 Catalan Agency for Health Quality and Assessment (AQuAS), Coronavirus SARS-Cov-2 interactive map, http://aquas.gencat.cat/content/IntegradorServeis/mapa_covid/atlas.html [accessed 22/06/20]


with permission of BMJ publishing
Society C psychiatric disorders but not to long respond to the current state and asks if that differs from his or her usual state. It is therefore sensitive to short
psychiatric disorders in the general population and within community or non-community Settings - a research agenda, Social Science and Medicine, 200: 92–98
Some of the home deaths might be covid silent hypoxia deaths https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7305055/
Measured using the GHQ. The General Health Questionnaire (GHQ) is a screening device for identifying minor psychiatric disorders in the general population and within community or non-psychiatric clinical settings such as primary care or general medical out-patients. Suitable for all ages from adolescent upwards. It assesses the respondent’s current state and asks if that differs from his or her usual state. It is therefore sensitive to short-term psychiatric disorders but not to long-standing attributes of the respondent. For more information see: https://www.gov.uk/government/collections/mental-health-questionnaire
Analysis used GHQ data from wave 9 of the Understanding Society (2017-19) and Wave 2 of the Understanding Society Covid Survey (May 2020) by deprivation measured using IMD at the local authority.
REFERENCE?
COVID-19 and Health Inequality

70Wainwright D. Homelessness: Rough sleeping five times higher than official figure: BBC News; 2020 [Available from: https://www.bbc.co.uk/news/uk-england-51398425
73Garvie D. Self-isolation? Try it as a homeless family living in one room: Shelter; 2020 https://blog.shelter.org.uk/2020/03/self-isolation-try-it-as-a-homeless-family-living-in-one-room/
74Garvie D. Self-isolation? Try it as a homeless family living in one room: Shelter; 2020 https://blog.shelter.org.uk/2020/03/self-isolation-try-it-as-a-homeless-family-living-in-one-room/
76Impact of Covid-19 (coronavirus) on homelessness and the private rented sector inquiry launched. Housing, Communities and Local Government Committee; 2020
79230,000 renters at risk of ‘Covid-eviction’ when government ban lifts: Shelter; 2020 [Available from: https://england.shelter.org.uk/media/press_releases/articles/230,000_renters_at_risk_of_covid-eviction_when_the_government_ban_lifts
80Universal Credit Statistics: 29 April 2013 to 9 July 2020. Department for Work & Pensions; 2020
84Deaths registered weekly in England and Wales, provisional: week ending 14 August 2020. Office for National Statistics; 2020
89Maddison F. A lifeline for our children: Strengthening the social security system for families with children during this pandemic. Joseph Rowntree Foundation; 2020
COVID-19 and Health Inequality


103 Poverty, economic status and skills: what are the links? Joseph Rowntree Foundation; 2003.


105 Davies S. Annual report by the Chief Medical Officer (CMO), Professor Dame Sally Davies, on the state of the public’s health in England: chapter 4.: Chief Medical Office; 2012.


118 Austerity was a deliberate policy of significant cuts in health and social protection budgets to reduce public deficit


