Item 5

Report of the Executive Director Core Services
and the Executive Director of Public Health & Communities
to the Overview and Scrutiny Committee (OSC)
on 21st March 2023

Analysis of Excess Deaths in Barnsley 2020-2022

1.0 Purpose

1.1 The purpose of this report is to provide the Overview and Scrutiny Committee with an analysis of excess death rates in Barnsley during the period March 2020 to June 2022. This includes comparison of Barnsley's rates with other local authority areas, and analysis of the driving factors behind high excess deaths, including the impact of the COVID-19 pandemic during this time period.

2.0 Introduction and Background

2.1 People's experiences of the pandemic have been shaped by their health and existing inequalities. Health inequalities had been widening in England for a decade prior to the onset of COVID-19, with the Marmot Review (2020) noting 'Worrying deteriorations in health', and that people living in more deprived areas were spending more of their shorter lives in ill health.[1] The Health Foundation's COVID-19 impact inquiry revealed that those younger than 65 in the poorest 10% of areas in England were almost four times more likely to die from COVID-19 than those in the wealthiest.[2]

2.2 Barnsley entered the pandemic in March 2020, with a population more vulnerable to infection due to existing health and economic factors. These include an older population with high rates of pre-existing illnesses; higher prevalence of harmful behaviours; and high rates of deprivation with around 40% of our population living in the 20% most deprived neighbourhoods in the country. We also have a higher proportion of people in residential care and higher rates of certain working conditions, such as highly populated indoor workspaces and key worker populations. Each of these factors can increase the risk of vulnerability to COVID-19.

2.3 Having a population with pre-existing vulnerabilities has increased the risk of serious illness and death from COVID-19. Throughout the pandemic deaths and excess deaths have been monitored nationally and locally.

2.4 In Barnsley throughout the pandemic, we constantly reviewed our actions to protect our population alongside regular reviews of our partnership intelligence and insight to understand the local impact of COVID-19. We participated in a Local Government Association (LGA) Peer Review exercise with Hull City Council. The purpose of this review into enduring transmission rates was to learn from each other's approaches and identify if there are additional approaches to tackle COVID-19 transmission and escalate any associated 'asks' of national agencies.

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[1] Institute of Health Equity (2020), 'Health Equity in England: The Marmot Review 10 Years On' https://www.health.org.uk/publications/reports/the-marmot-review-10-years-on (Accessed February 7 2023)

[2] The Health Foundation (2021), 'Unequal pandemic, fairer recovery' https://www.health.org.uk/publications/reports/unequal-pandemic-fairer-recovery (Accessed: February 7 2023)

What do we mean by excess deaths?

2.5 The term “excess deaths” refers to the number of deaths that are above the number we would normally expect to see. The expected number is estimated using a baseline number over the previous five years.

2.6 Analysis of excess deaths can be useful when there is a specific event causing more deaths than expected (in this case, the COVID-19 pandemic). Comparing the current number of deaths with previous years can provide an indication of the impact of such events.

2.7 It is important to note that using previous years as a baseline measure has limitations. It does not consider other factors such as population growth. The data on deaths between 2014 and 2019 has been reviewed in this analysis and shows a steady rise, of a similar scale to the population growth. This suggests that deaths are linked to the total size of the population and not just to specific cohorts (e.g., those aged 85+). So, as the population grows, the number of deaths increase.

Why is this an issue for Barnsley?

2.8 The recent pandemic resulted in an increase in deaths across the country and Barnsley was no exception. Excess deaths in England continued to be higher throughout the pandemic despite effective control measures, including the widespread COVID-19 vaccination programme and several lockdowns[3].

2.9 The findings in this report will support our preparatory work for the UK COVID-19 Inquiry. The UK COVID-19 Inquiry has been set up to examine the UK’s response to and impact of the COVID-19 pandemic and learn lessons for the future.

3.0 Current Position

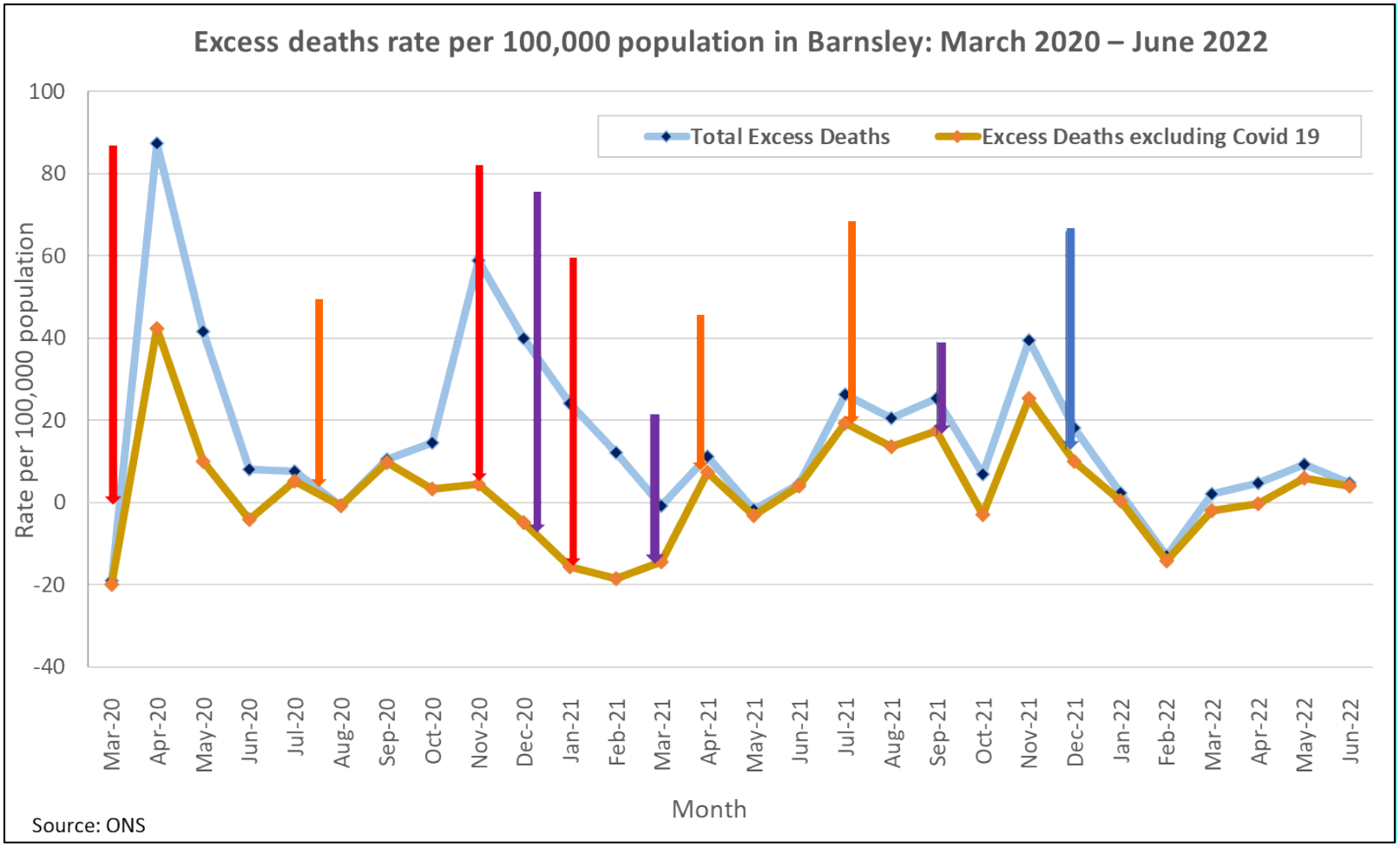
3.1 This report looks back at Barnsley’s excess deaths over the period March 2020 to June 2022. This covers the main events of the pandemic, including the peak periods of COVID-19 infections, all COVID lockdown periods and key control events, and the first winter following the vaccine roll-out.

3.2 Between March 2020 to June 2022, Office for National Statistics (ONS) data shows that Barnsley has a total excess death rate (deaths from all causes) of 19.4%, higher than the Yorkshire and Humber average of 11% and higher than all other South Yorkshire local authority areas: 9.2% in Sheffield; 14.3% in Doncaster; 14.8% in Rotherham. If we exclude COVID-19 as a cause of death, the rate falls to 4%. However, at 4%, the rate of non-COVID deaths in Barnsley is higher than the figures for Yorkshire & Humberside and England at -0.7% and -0.4% respectively.

3.3 To understand this picture in Barnsley, Figure 1 shows the trend in excess death rates over this time period. This is split into two trend lines, one covering all excess deaths (which includes deaths from COVID-19) and one showing excess deaths from other causes. Key events are also noted over the timeline.

[3] Cuffe , R., & Schraer , R. (2023, January 10). Excess deaths in 2022 among worst in 50 years. BBC. hhttps://www.bbc.co.uk/news/health-64209221

Figure 1. Timeline of Barnsley excess deaths during the period March 2020 to June 2022.



KEY:

Lockdown restrictions

Lockdown easing measures

Vaccination and booster rollouts

Omicron variant first seen in the UK

3.4 Between the period March 2020 to June 2022 the following major events occurred:

- 26th March 2020 – First national lockdown
- 5th November 2020 – Second national lockdown
- 6th January 2021 – Third national lockdown
- 20th December 2020 – COVID-19 Vaccine 1st dose rollout
- 1st March 2020 – COVID-19 Vaccine 2nd dose rollout
- 16th September 2021 – COVID-19 Booster programme

3.5 Figure 1 shows that the most notable trends in excess deaths occur before the initial roll-out of the COVID-19 vaccine programme. Other points to note:-

- There is a peak in excess deaths in April 2020, that coincides with the very first wave of the pandemic. It is likely that a proportion of these deaths were COVID-related but undiagnosed at this early stage.
- The second peak in November 2020 shows a larger gap between COVID and non-COVID excess deaths due to increased testing and diagnosis of COVID-19 infections.
- After the two peaks in COVID related excess deaths, we see a fall in non-COVID excess deaths. This may be evidence of expected deaths occurring at an earlier time, in this instance during the first two waves of the pandemic, often referred to as "mortality displacement."
- A third increase in excess deaths is noted in November 2021, which relates to a further wave of COVID-19 coupled with the winter period.

How has COVID-19 impacted deaths in Barnsley?

3.6 According to ONS, between March 2020 and April 2021, Barnsley had a recorded 716 COVID-19 deaths and a rate of 250 per 100,000 population [4].

3.7 On the GOV.UK Coronavirus dashboard, which has been a key source of information throughout the pandemic, Barnsley has consistently appeared in the top five Upper Tier Local Authorities (UTLAs) with the highest death rates from COVID. This has been the case with both measures used in the pandemic; the earlier measure of those who died within 28 days of a COVID test, and the more recent measure which counts deaths where COVID is mentioned as one of the causes on the death certificate. This is now the preferred measure as a death in someone who has tested positive becomes progressively less likely to be directly due to COVID-19 as time passes and more likely to be due to another cause.

3.8 Although this comparatively high local rate has received lots of attention since the pandemic began, the measures reported do not take into consideration the age distribution and other key characteristics of Local Authority areas to allow us to compare ourselves with other areas or the England average. To address this and provide more meaningful data, ONS provided age-adjusted COVID-19 death rates for the period March 2020 to April 2021[5].

3.9 Age adjusted rates allow for comparisons to be made between populations that may contain different overall population sizes, and proportions of people of different ages. The age adjusted COVID-19 mortality rate shows that Barnsley is the 43rd highest UTLA out of 149 in England. Whilst the rate is still high, it is considered a more robust measure of Barnsley's mortality at this time, considering the key drivers of COVID-19 infection and death.

3.10 We can benchmark Barnsley on this age-adjusted measure with our statistical "near neighbours." Figure 2 compares COVID-19 death rates in Barnsley with local authorities who have similar population characteristics to Barnsley. Here, we see that Barnsley ranks sixth out of seventeen local authorities in this comparison group and higher than the England average.

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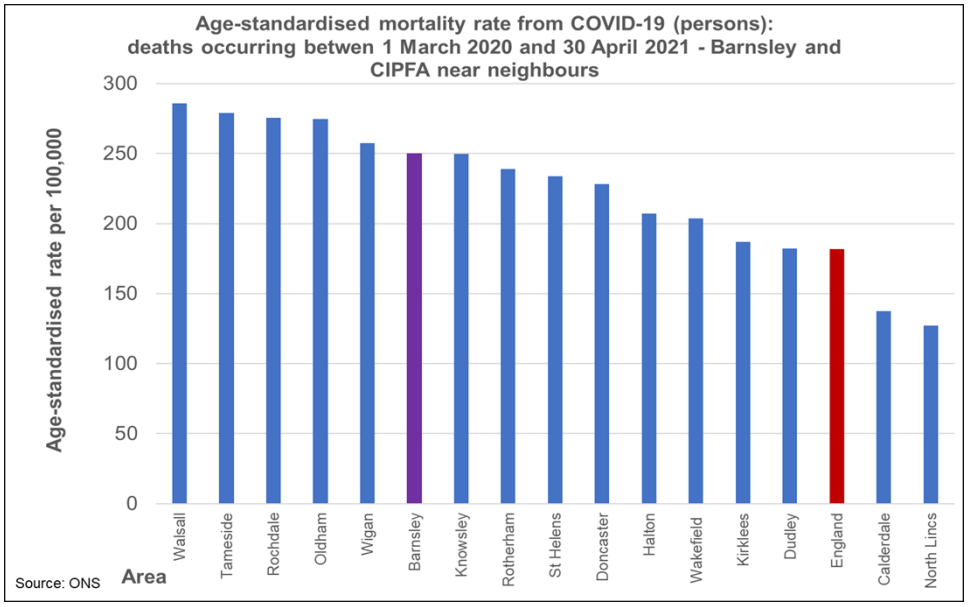
[4] ONS (2022), 'Excess deaths in England and Wales: March 2020 to June 2022' https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/articles/excessdeathsinenglandandwalesmarch2020tojune2022/2022-09-20#excess-deaths-by-geography

[5] Office of National Statistics (2021), 'Deaths due to COVID-19 by local area and deprivation.' https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/deathsduetocovid19bylocalareaanddeprivation

Figure 2. Comparing age-standardised COVID-19 death rate with local authorities that have a similar population.



What else in addition to COVID-19 might have impacted on our excess deaths rate?

3.11 We have already noted that Barnsley entered the pandemic with a population at greater risk from serious illness and death, and that the current way of measuring excess deaths does not consider population growth. There may be further secondary impacts from COVID-19 and 'hidden harms' that have increased the excess mortality rate. Government national restrictions, although needed to protect the population and limit COVID-19's spread, have had wide-ranging consequences: from unmet health needs and mental health problems to education gaps, lost employment, and financial insecurity.

3.12 National evidence[6] suggests that in England a proportion of non-COVID excess deaths may be a result of health needs not being met being (e.g., not diagnosed or treated) during the pandemic. This could be because of several reasons; unprecedented health system pressures, the national contingencies put in place for pandemic control, or because of reduced social interaction through the national lockdowns and the impact on individuals' support networks.

3.13 The management of chronic disease has been impacted during this period[7]. Patients with chronic diseases require regular disease management and close follow-up to reduce the risks of poor health outcomes. A national online survey completed by healthcare professionals during the early months of the pandemic showed that Diabetes, chronic obstructive pulmonary disease, and hypertension were the most impacted conditions due to reduction in access to care. These challenges in primary care will also have been felt locally.

3.14 National evidence is also emerging of increased harmful behaviours over the course of the pandemic, particularly in lockdown periods. For example, between August 2020 to January 2021, the proportion of the Yorkshire and the Humber population that consumed a harmful level (35-50 units) of alcohol per week increased from 4.2% to 5.6%[8]. Recently published data from the ONS revealed that in 2020, England had the highest number of deaths from alcohol specific causes on record (and 27.4% higher than in 2019). This follows a period between 2012 and

[6] Covid-19: High level of non-covid deaths may reflect health system pressures https://www.bmj.com/content/372/bmj.n44 BMJ 2021;372: n44

[7] Chudasama YV, Gillies CL, Zaccardi F, Coles B, Davies MJ, Seidu S, Khunti K. Impact of COVID-19 on routine care for chronic diseases: a global survey of views from healthcare professionals. Diabetes Metab Syndr. 2020; 14:965–7.

[8] Wider impacts of Covid-19 - Public Health England, Wider Impacts of COVID-19 on Health (WICH) monitoring tool (no date) Wider Impacts of COVID-19 on Health (WICH) monitoring tool. Available at: https://analytics.phe.gov.uk/apps/covid-19-indirect-effects/ (Accessed: February 2, 2023).

2019 where rates of alcohol-specific deaths in the UK had remained stable. The data shows a 20% increase in alcohol specific deaths in the Yorkshire and Humber region between 2019 and 2021. In 2019, Barnsley's trend rate of alcohol specific mortality rates was increasing.

What are the leading causes of death that were not COVID over this period?

3.15 Data from the ONS shows that between March 2020 to June 2022, the leading causes of death in England were:

- Symptoms, signs, and ill-defined conditions (often associated with old age and frailty) - 30% increase compared to the five-year average
- Cirrhosis and other diseases of the liver – 19.7% increase
- Diabetes – 24.4% increase

3.16 The leading causes of death with the largest decreases were influenza ('Flu') and pneumonia (a 36.7% decrease) and chronic lower respiratory diseases (a 14.7% decrease). This is likely to be due to the suppression of influenza and other respiratory infections brought about by COVID control measures.

3.17 Identifying changes in the leading causes of death at a local level is complex due to the way that deaths are recorded and would require more detailed analysis. It may also be useful to include a period beyond the pandemic for comparison and to identify any emerging impacts of current challenges such as the cost-of-living crisis. We have included a recommendation to undertake further analysis later in this report.

Summary

3.18 Having reviewed the excess deaths data for Barnsley (2020-2022) in summary:

- Deaths related to COVID-19 have been higher throughout the period of the pandemic in comparison to other local authorities. However, considering the age-distribution of the Barnsley population our position is where we might expect given our IMD deprivation ranking (43rd with an IMD ranking of 38). When we compare Barnsley to other local authorities with similar demographics (our "near neighbours"), the rate of deaths from COVID is not significantly different.

- Local authorities with higher rates of death from COVID share similar characteristics. They are older industrial or coastal towns, that entered the pandemic with older and less healthy populations, at higher risk of serious illness and death from the virus. This is true of Barnsley, where we have an older population, a higher number of care homes and greater levels of chronic disease and deprivation compared with other areas of the country.

- We have also seen higher levels of non-COVID excess deaths in comparison to regional and national averages. There are a number of factors that could account for these higher rates. There is some evidence of mortality displacement following the larger COVID peaks, and it is likely that there are other secondary impacts of the pandemic, including reduced access to health services which has led to a reduction in numbers of people seeking and receiving health care from GPs, accident and emergency, and other health care services for non-COVID conditions. Emerging evidence post pandemic also points to higher levels of 'harmful behaviours' in 2020, including increased levels of smoking and alcohol use.

- Deprivation is a key factor throughout the analysis, highlighting once again the increased risk of serious illness and poorer health outcomes for those residents living in our most deprived communities.

- A growing and ageing population means that we would expect to see a slight increase in the number of excess deaths. We are working to develop a population-based model that takes this into account.

4.0 Future Plans & Challenges

4.1 We recognise that there are other challenges faced by our residents in addition to COVID-19, that could worsen existing health inequalities and cause further fluctuations in our local excess deaths data. These include:

- The current cost-of-living crisis and its protracted impacts on levels of poverty and the health and wellbeing of our population.
- The impact of extreme pressures on hospital and ambulance services
- The return of a Flu season in the Winter of 2022, combined with a cold winter, the Strep A outbreak, and new COVID-19 variants.
- The potential that COVID-19 has reduced resilience levels in the population, leaving people more vulnerable to other diseases. COVID-19 is also still circulating and causing serious illness and deaths, especially among elderly groups and those who are unvaccinated.
- The longer-term impacts of the increase in harmful behaviours observed during the pandemic, as well as the impact of residents living in 'crisis mode' in response to the high cost of living, meaning that they are more likely to make decisions that are damaging for their health in the longer term.
- Impacts of the harm from climate and environmental changes that continue to manifest.
- Impact of wider geopolitical conflict (war in Ukraine).

4.2 Initial analysis of excess deaths in the extreme heat in summer 2022 does not show a significant increase. However, to fully investigate this further analysis of data following summer 2023 needs to be undertaken.

How will we respond to the findings of this report?

- We will continue to monitor the local excess deaths rates alongside developing a population-based approach.

- We will undertake further analysis on the leading causes of death, particularly premature deaths in Barnsley and the impact on inequalities in life expectancy and healthy life expectancy.

- The findings of this report will be shared with partners to highlight the issues raised and strengthen existing work on preventative approaches to protect and improve the health of the Barnsley population.

- Continue to support health protection programmes, such as outbreak management and vaccination as the best form of protection against serious illness from COVID-19 and seasonal influenza.

- We recognise that our population is more vulnerable coming out of the pandemic and we will work with our partners across the healthcare system to mobilise on chronic disease management, ensuring we do everything we can to make our population more resilient for future pandemics.

- High levels of deprivation and health inequalities are not new for Barnsley and the findings of this report further highlight the need for a preventative model to reducing health inequalities, focusing on the wider determinants of health (such as housing, employment, and education). We have set out our vision for a healthy Barnsley in our Health and Wellbeing Strategy 2021-30 and our Barnsley 2030 priorities.

- As a Place-based partnership we continue to work together on the recovery from the broad impact of COVID-19 in the borough to ensure our approach to tackling health and social inequalities is fair and equitable.

5.0 Invited Witnesses

- Carrie Abbott, Service Director Public Health & Regulation, Public Health & Communities, Barnsley Council
- Rebecca Clarke, Head of Health Protection & Healthcare, Public Health & Communities, Barnsley Council
- Emma Robinson, Senior Public Health Officer, Health Protection & Healthcare, Public Health & Communities, Barnsley Council
- Jamie Wike, Deputy Place Director (Barnsley), NHS South Yorkshire Integrated Care Board
- Joe Minton, Associate Director (Barnsley), NHS South Yorkshire Integrated Care Board
- Dr Andy Snell, Public Health Consultant, Barnsley Hospital NHS Foundation Trust
- Cllr Caroline Makinson, Cabinet Spokesperson, Public Health & Communities

6.0 Possible Areas for Investigation

- What lessons have been learned locally following the Covid pandemic? What would you do differently in the future?

- What areas of good practice were identified by the peer review and what did Hull City Council learn from Barnsley?

- What work is being done to help residents reduce harmful behaviours?

- What messages do you plan to communicate to residents to support 'living well' and how will this be done?

- How do you know whether your work has a positive impact upon communities?

- When do you expect to have the data on leading causes of death, including premature deaths, and what do you think it will tell you? What will you do with the information?

- What analysis has been done to determine whether specific sections of the community have been disproportionately affected?

- Which were the most impacted conditions due to reduction in access to care locally, what is being done to ensure that impact is now reduced, and which areas are currently causing the most concern?

- Which of the wider determinants of premature death are most prevalent in Barnsley and what is being done to tackle them?

- What are the current pressure points within the local health and care system that need to be addressed to minimise the impact upon excess deaths?

- How are you working with partners so that those at the end of life have an appropriate care plan to support 'dying well'?

- What can elected members do to support the work in reducing excess deaths?

7.0 Background Papers and Useful Links

GOV.UK Coronavirus (COVID-19) in the UK

ONS Excess deaths in England and Wales: March 2020 to June 2022

Barnsley Health and Wellbeing Strategy 2021 - 30

8.0 Glossary

CIPFA nearest neighbours – A tool developed to aid local authorities in comparative and benchmarking exercises considering a range of socioeconomic indicators.

Deprivation - the damaging lack of material benefits considered to be basic necessities in a society.

Excess deaths - Number of deaths that are above the number expected using a five-year rolling average (2015-2019 in this case).

Health inequalities – the unfair and avoidable differences in people's health across the population and between specific population groups.

HSC – Health and Social Care sector consists of any organisation which provides healthcare support to people, for example hospitals, dentists, and specialist support like physiotherapy, and social care support, for example, nursing homes, foster caring, and nurseries.

IMD – the Index of Multiple Deprivation is a measure of relative deprivation in small areas in England.

Local Authority - an organization that is officially responsible for all the public services and facilities in a particular area.

Local Government Association - national membership body for local authorities, working on behalf of member councils to support, promote and improve local government.

Mortality - another term for death. A mortality rate is the number of deaths due to a disease divided by the total population.

ONS - Office for National Statistics.

UTLA – Upper Tier Local Authority is a County or Shire Council.

9.0 Officer Contact

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6 March 2023