

Potential impacts of COVID-19 on population mental health in England

PRELIMINARY EVIDENCE MAPPING

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REPORT 1: Determinants

Introduction

The Department of Health and Social Care (DHSC) mental health policy team commissioned Public Health England (PHE) to provide preliminary evidence mapping on mental health impacts of COVID-19:

How are mental health determinants likely to be impacted by COVID-19? We would like PHE to produce a map of the socio-economic determinants of mental health, and highlight areas where evidence (either secondary literature, or emerging evidence) suggests COVID (and associated socioeconomic measures and fallout) will impact on these determinants.

Aims

To provide a rapid assessment of the evidence: synthesizing academic literature; emerging intelligence and grey literature and expert knowledge to inform the policy response to mental health and psychosocial impacts of the COVID-19 pandemic in England.

Methodology

A rapid process was developed to produce this document. Evidence was gathered that had been published up to mid-June 2020 using the following methodology:

- A small team was recruited from within the PHE public mental health team and other PHE staff from the PHE COVID-19 Mental Health and Psychosocial Support (MHPSS) reference cell to plan and undertake the work. All members collected data, undertook evidence assessment and authored sections using an approach specific to this work.
- The structure for the findings is based on the Dahlgren and Whitehead model of determinants of health.¹ The team agreed by expert consensus, which determinants of mental health, taken from this model, were to be included in this evidence map. The 26 determinants have been grouped into the following broad categories:
 - **General socioeconomic, cultural and environmental conditions**
 - Recession, socioeconomic inequalities, social protection, discrimination, air pollution
 - **Living and working conditions**
 - Education, unemployment, debt/poverty/financial insecurity; access to natural environment; Voluntary and Community sector (VCS);

- working conditions; housing infrastructure, access to health and care services
- **Social and community**
 - Community resilience; social support; family relationships and parenting; social connections/isolation; domestic violence; crime; media
- **Individual**
 - Substance use; sleep; ethnicity; age; sex; pregnancy

For each determinant, evidence was drawn upon charting the impact of the determinant on mental health and how this is likely to change in the context of the COVID-19 pandemic.

- No formal search strategy was undertaken to gather relevant evidence. The PHE team used their expert knowledge to agree a list of existing summaries of evidence of public mental health. These sources were scrutinised for evidence by the team to include in this report that related to the 26 determinants. We also identified a list of publicly-available COVID-19 evidence collections to scrutinise for emerging mental health-related evidence from the current pandemic. We also drew from evidence from ongoing population surveys in the UK set up since the start of the pandemic. Evidence was gathered from the following sources:

Public Mental Health Documents:

- Royal Society for Public Health²,
- Centre for Mental Health³,
- Faculty of Public Health⁴,
- University of Bristol Rapid Review⁵
- VicHealth⁶
- COVID-19 internal summary documents shared with the team from the National Health Service (NHS), DHSC, Department for Education and Northern Ireland Health and Social Care.

COVID-19 Academic and Grey Literature Collections:

- PHE COVID-19 Literature Digest⁷
- Evidence for Policy and Practice Information (EPPI) Centre living map of COVID-19 evidence⁸,
- Norwegian Institute of Public Health map⁹
- COVID Minds¹⁰
- Cochrane COVID-19 special collection¹¹
- Mental Health and Psychosocial Support Network COVID-19 Toolkit (1.0)¹²

COVID-19 surveys:

Data from COVID-19 survey results were identified through work PHE has been undertaking on real time mental health surveillance. Studies consist of a mix of longitudinal and cross-sectional studies with varied convenience and

representative sampling. Data has also been drawn from other national surveys from sources such as the Office for National Statistics (ONS) and YouGov, and from PHE Fingertips tools.

These sources of data are discussed and presented in further detail in the [PHE COVID-19 Mental Health and Wellbeing surveillance report](#).

- **Strength of evidence**

The quality of evidence can vary depending on the research methodology and the execution of that methodology in different studies. We categorised evidence using a crude approach combining these two aspects of study quality. The first aspect used broad categories of study design within a hierarchy (with preference given to meta-analysis and systematic reviews). The second aspect assessed the extent to which the researchers maintained fidelity to the stated methodology. This crude assessment has been applied to the summary statements in the table and should be interpreted with caution.

Strength of Evidence	Quality	Fidelity
A) One or more systematic review or meta-analysis, including review of reviews, with good quality methodology	Good quality methodology	Systematic review/ randomised controlled trial/cohort study/ cross sectional survey with representative sample (if descriptive)/ qualitative study with appropriate methodology/ case control with appropriate adjustment of confounding factors; should be peer reviewed; no known methodological flaws
B) Several good quality methodology studies in appropriately translatable context		
C) Several studies of moderate to high quality methodology or one high quality methodology study in appropriately translatable context	Moderate quality methodology	Any of the above with known methodological flaws e.g. unadjusted case control or cohort study; or non-peer reviewed
D) One or more study of low to moderate quality methodology or any study with moderate to high quality methodology in a different context where it is unclear that findings will be applicable		
E) Expert opinion/narrative/ editorial/ media reports	Low quality methodology	Cross sectional survey with non-representative sample (which is not adjusted for); pre-post without control group; other study with poor/inappropriate or unknown design; not peer reviewed

Notes on interpretation and use

The methodology has been designed to provide a rapid response to the DHSC commission to map the evidence on determinants of mental health during the COVID-19 pandemic. It suggests the key determinants and likely impacts to consider in planning system leadership to mitigate worsening population mental health due to COVID-19.

The document contains a tabular summary of evidence with assessment of strength of evidence, followed by further narrative explanation on key determinants.

Key limitations

This evidence mapping is not a systematic review of the evidence and should not be regarded as exhaustive. The determinants and the sources of evidence have been identified through expert knowledge and known sources: decisions on what evidence to include may be prone to author bias. Therefore, there will be gaps where authors have failed to identify relevant sources of evidence.

The rapid nature of the pandemic means that some evidence we have included using COVID-19 data will be less robust (such as smaller surveys, media coverage and non-peer reviewed research papers). Caution should be taken in drawing conclusions from this evidence.

Quality assessment of the evidence has been carried out using a bespoke rapid methodology rather than validated tools; and has not included in-depth critical appraisal. The assessment of quality should therefore be interpreted with caution. We would expect further systematic and/or technical appraisal before evidence in this document is used to inform policy and interventions.

Literature from all settings was considered but priority given to inclusion of UK/European data. Relevance of context has been taken into account in the narrative and in the strength of evidence assessment process.

This document does not contain evidence published after mid-June 2020.

Authors and acknowledgements

The following individuals at PHE have contributed to the development of these documents:

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Executive summary of the determinants of mental health during COVID-19 pandemic

Determinant of Mental Health	Population groups affected	High-level evidence summary: - Determinant's impact on mental health - Likely change during COVID-19 ¹	Real-time data summary: - Change to determinant during COVID-19 - Impact of determinant on mental health (where available)
General socioeconomic, cultural and environmental conditions			
1. Recession	<i>All (disproportionate effect on those from deprived areas; with insecure employment or experiencing financial loss during lockdown)</i>	Economic recession has a negative impact on mental health.(B) Increased psychological stress due to financial hardship (including financial losses when in isolation) and strain on family relationships may lead to increased prevalence of mental health conditions.(D) Unemployment and indebtedness in relation to the 2008 recession was associated with increased suicides.(B) Recession is likely to impact different areas of the country differently: those from BAME backgrounds and more deprived areas are likely to be disproportionately impacted(B).	Based on a scenario of 3 months lockdown and then 3 months partial lockdown, the Office for Budget Responsibility has forecast Real Gross Domestic Product (GDP) will fall 35 per cent in the second quarter but bounce back quickly. GDP in 2020 is forecast to reduce by 12.8%. https://obr.uk/coronavirus-analysis/ <i>*In August 2020 UK officially entered recession with 20.4% fall in GDP in Q2. ONS</i> ONS are collecting data via their Business Impact Survey . Of businesses who reported they continued to trade, 61% reported a substantial decrease in turnover, 4% reported they had no cash reserves, 76% had applied for the Job retention scheme and 59% had applied to the Deferring VAT Payments scheme.
2. Inequalities	<i>All</i>	Greater social inequality is associated with poorer mental health for the whole population(D). The impacts of COVID-19 including, mortality, morbidity and hardship associated with lockdown measures are unevenly distributed (for example higher amongst Black Asian and Minority Ethnic (BAME)	No inequalities data is available yet during COVID-19, however ONS report a smaller change in expectations for equality in Britain. Just under 1 in 5 adults (15%) felt that Britain was somewhat or very equal before the pandemic, with the proportion feeling that

¹ References for statements included in **Notes** section from page 19. Links to relevant sections are provided in first column. See introduction for grading methodology.

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		and deprived communities) and thus likely to exacerbate inequalities which could be detrimental to population mental health and wellbeing(E).	Britain would be equal after the recovery from the coronavirus pandemic rising to 22%. Again, more women than men believed that Britain was very or somewhat equal both before and after the pandemic, and women saw a greater change in attitude, from 16% before the pandemic to 24% after we have recovered.
3.Social protection policies	<i>Deprived groups, unemployed</i>	Strong welfare policies are a protective factor for mental health as they reduce vulnerability to financial and employment insecurity(B). Insufficient levels of social protection and poorly administered programmes can result in worse mental health (C). Temporary COVID-19 related measures are likely to be of immediate benefit. Previous changes to the welfare system (Universal Credit) have been shown to have a negative impact on mental health (B); possibly associated with difficulty in navigating the new system and thus reduced access to support; and negative experiences with conditionality of support offer(C).	No available data was identified during this work. However, benefits has been released on PHE Fingertips tool in June 2020.
4.Discrimination	<i>Those infected with COVID-19, BAME</i>	Experience and fear of stigma and discrimination and racism are associated with worse MH outcomes(A). Stigma related to those infected or at high risk has been a feature of previous infectious disease outbreaks. There may be racial discrimination associated with the outbreak; early reports suggest British-Chinese discrimination (E) but there is potential for further developments in	PHE analysis found that people of Bangladeshi ethnicity had twice the risk of death; and people of Chinese, Indian, Pakistani, Other Asian, Caribbean and Other Black ethnicity had between 10 and 50% higher risk of death from COVID-19 when compared to White British.

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		relation to disproportionate impact on certain ethnicities or other vulnerable groups (E).	Calls to The Monitoring Group (TMG) for advice and help regarding racism have doubled since the same time last year from 140 to 250. Referrals from police and other agencies have increased from around 20 to 100 cases. http://www.irr.org.uk/news/race-hate-crimes-collateral-damage-of-covid-19/
5.Air pollution	<i>All and particularly those who live in urban areas.</i>	Long-term exposure to air pollutants is associated with worse mental health, although causal mechanisms are difficult to define. (A) COVID-19 has led to reduced emissions and improved air quality in the short term. (C): it is unclear what impact this may have on mental health.	NO ₂ levels appear to have reduced substantially in some UK cities during lockdown. However, high levels of PM _{2.5} and PM ₁₀ have also been recorded. https://eprints.soton.ac.uk/439813/1/Anderson_Dirks_2020_DEFRA_AirQual_EvidenceResponse_Southampton.pdf
Living and working conditions			
6.Education	<i>CYP (particularly those from low SES, with poor home environment; at transitional stages)</i>	Low educational attainment and school absence are risk factors for poor mental health and wellbeing in the short term and depression in later life; although there is a bidirectional relationship. Conversely, access to education improves educational attainment, which is positively associated with better mental health (A). Prolonged or repeated school closures are likely to both limit academic progress, impact upon key development transitions and reduce opportunity to connect with peers; which are associated with a reduction in CYP wellbeing (B). Inequalities in home learning environment and deprivation or	10 million UK children out of school, possibly over 700 million days of education lost. (UNICEF UK, Children in Lockdown https://www.unicef.org.uk/coronavirus-children-in-lockdown/) The ONS Opinions and Lifestyle Survey covering the period 24 April to 3 May 2020 report around 60% of respondents home schooling children. Of these 1 in 3 report it is putting a strain on relationships in the household (up from 25% week before). Nearly 3 in 4 adults (75%) said they had access to the resources they needed to

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		abuse in the home may exacerbate the effects of school closures on children (B).	home-school their children well, with 75% saying their child or children were continuing to learn.
7.Unemployment	<i>Working adults (working age, plus adults over 65 who continue to work), also impacts on wider household</i>	<p>Unemployment, particularly long-term unemployment is associated with increased risk of mental health problems and increased suicides (B).</p> <p>Emerging evidence suggests some sectors, such as accommodation, food and construction, may be more disadvantaged (C).</p> <p>These issues are likely to disproportionately affect groups who are already disadvantaged in the job market. Unemployment is higher in some BAME communities compared with White British people (B).</p> <p>Evidence indicates parental unemployment is associated with poor mental health outcomes for children and young people (C).</p>	<p>Average forecasts for this year predict unemployment to rise from 4% to 6.4%, falling back to 5.3% in 2021/22. https://www.centreformentalhealth.org.uk/covid-19-nations-mental-health</p> <p>The Office of Budgetary Responsibility forecasts 10% unemployment in Q2 2020 and 8.5% in Q3.</p> <p><i>*Current Q2 unemployment rates are below these predictions, at 3.9% for Q2 ONS.</i></p> <p>ONS Employment weekly data suggest that large falls in average actual hours for week 12 and week 13 of Quarter 1 2020 were seen. For example, the average hours worked in 2020 in week 13 was 24.8 compared to 33.2 in 2019. Accommodation and food services had the largest decrease of 3.4 hours to 24.9 hours per week, followed by construction, down 2.2 hours to 35.1 hours per week. Human health and social work activities had the smallest annual decrease of 0.1 hours to 29.6 hours per week.</p>

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			<p>The Claimant Count increased in April 2020 to 2.1 million: a monthly increase of 69.1%.</p> <p>A Survey of 1000+ employers from the Manpower group indicates 72% of those in hotel and retail and transport and communications sectors report over 50% loss of business, compared to 40% of finance and business services. Greatest employment loss to date was reported by transport and communications sector (-22% cf. -12% average across all sectors).</p>
8. Debt and poverty, financial insecurity	<i>Lower SES groups and those at risk of moving into SES group</i>	<p>Socio-economic inequality underpins many other risk factors for mental disorders. People on low income are likely to be severely affected by the economic impact of COVID-19 and more likely to develop mental health issues because of COVID-19 (B).</p> <p>The indirect economic consequences of COVID-19 are also likely to disproportionately affect those with existing mental health conditions. There will also be significant overlap with other socio-economically disadvantaged groups. Poverty and ethnicity are strongly related, with poverty twice as higher among all ethnic minority groups than among white British people in the UK (C)</p> <p>There is clear evidence that the prevalence of mental illness rose between 2009 and 2013, both in</p>	<p>ONS report nearly a quarter of people (23%) saying their household finances had been impacted by coronavirus.</p> <p>The ONS also found those who think they will not be able to save money in the next year reported anxiety 33% higher on average compared with those who think they will. 20% of adults said they experienced a reduction in income. People who had experienced a reduction in household finances because of the coronavirus (COVID-19) reported 16% higher anxiety on average. The Understanding Society COVID-19 Survey found that 23% of individuals reported loss of more than 20% of household earnings</p>

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		the UK and across Europe, during the economic downturn. Most research in this area has shown that gaps in inequality (and consequently in mental wellbeing) between deprived areas and less deprived areas widened significantly in the period following the implementation of austerity policies internationally(B).	Business intelligence analysis from BVA BDRC (fieldwork conducted 20th - 22nd April) reports 39% of people said they had been financially impacted to some extent, with 13% 'hit hard'.
9. Access to the natural environment	<i>All</i>	<p>Exposure to green and blue spaces promotes good mental health and wellbeing (A).</p> <p>Inequalities in mental health are narrowed for socioeconomically disadvantaged groups living near green spaces (B). During lockdown some groups are accessing the natural environment more, while others are accessing it less. (C)</p>	<p>ONS report social impacts survey on 22nd May showed 39% of the public accessing parks and public spaces in the previous 7 days.</p> <p>Other ONS data suggests that one in eight households (12%) in Great Britain has no access to a private or shared garden during the coronavirus (COVID-19) lockdown. This rises to more than one in five households in London (21%). In England, Black people are nearly four times as likely as White people to have no access to outdoor space at home.</p>
10. Voluntary and Community Sector (VCS) infrastructure	<i>All (and specifically those receiving mental health support from VCS)</i>	VCS contribute a substantial amount to the economy and in providing mental health support to 1.5m people each year. Organisations report both increase in demand on services and concerns over a threat to their funding, particularly small charities and social enterprises (E).	Face to face contact greatly reduced. Sharp increase in demand for telephone support from specific helplines e.g. Anxiety UK. https://amhp.org.uk/covid19-vcse-mental-health-sector/
11. Working conditions	<i>Working adults (working age, plus</i>	Whereas good work can be protective of mental health and support recovery, poor working conditions (long hours, high job demands, low job	During the last recession unemployment was accompanied by rising job insecurity and poor

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	<i>adults over 65 who continue to work),</i>	control, job insecurity etc.) are all associated with poorer mental health (A). There are also specific challenges relating to COVID-19 – those in lower socio-economic groups (including some BAME groups) are more likely to be in low paid jobs and jobs that cannot be done from home, with impact on earning and additional issues for those who are shielding or are clinically vulnerable / in a household with others in these categories. (B)	wage growth. It took over a decade for average real wages to recover. https://www.ons.gov.uk/economy/grossdomesticproductgdp/timeseries/cwnj/qna ONS report in May, women were more likely to report (18.8%) finding it difficult to work at home than men (10.7%) and have concerns about their health and safety and work longer hours. Understanding Society COVID-19 survey reports a significant reduction in working hours: with furlough and loss of self-employment as common reasons.
12.Housing	<i>Urban</i>	Homes in a poor condition, that don't meet their residents' needs and are insecure are associated with increased risk of poor mental health. Conversely a home that is healthy, suitable and stable for its occupier(s) contributes to better mental health and supports recovery from mental illness (B). The pandemic is likely to result in increased overcrowding, greater housing insecurity, delays in making essential repairs or adaptations, delays or reductions in home moves to more suitable or safer accommodation and increases in homelessness. (E)	No data was identified for this summary on housing during COVID-19
13.Access to health & care services	<i>Those with existing or new mental disorders, ICU survivors</i>	Access to services contribute 15-40% of population health (D). There have been changes to service configuration, particularly reduction in face to face	Intensive Care National Audit Research Centre (ICNARC) (as of 13.5.20) – based on this data it is predicted that there will be 750 more cases of PTSD and 1,600 more cases of

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		<p>contact; which may impact support received for those with mental health problems (E).</p> <p>There are larger numbers of people treated and surviving ICU with greater risk of depression, anxiety and PTSD (A).</p>	<p>depression/anxiety in the next 12 months (England, Wales, NI).</p> <p><i>*Latest report from ICNARC published 31 July 2020. 10624 people admitted to intensive care with COVID-19; therefore 2125 cases of PTSD and 4675 cases of anxiety/depression predicted</i></p>
Social and community			
14. Community resilience/ social capital	All	<p>Community resilience and social capital improves coping capacity and is shown to have a positive impact on mental health related outcomes (A), particularly in the context of disaster response and recovery (C).</p> <p>Across the country there is currently increased community and civic engagement (as seen through high levels of participation in volunteering, mutual aid groups etc) which is likely to lead to improved community resilience and social capital, although more available in affluent communities (D).</p>	<p>ONS weekly research into social impacts of COVID-19 conducted between 14 and 17 May showed that 22.3% of respondents thought Britain was very or somewhat united before the COVID-19 outbreak, and 49.1% think Britain will be very or somewhat united after we have recovered from the COVID-19 outbreak.</p> <p>Similarly, 41.7% of respondents thought people in Britain were somewhat or very kind before the outbreak, and 60.5% think people will be somewhat or very kind after the outbreak.</p> <p>Since COVID-19 started 5,000+ neighbourhood-based mutual aid groups have been established and 750,000+ people signed up to become NHS volunteers, including community response roles. The Bennet institute indicates variation between local</p>

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			authorities with an equivalent of between 1 and 58 groups in a local authority of 250,000; and suggests this is positively correlated with social advantage.
15.Social support systems	<i>All (particularly the isolated)</i>	<p>Having good social support helps protect our mental health (A). Lockdown and other social distancing measures are reducing usual social support systems including family, friends and peers (D).</p> <p>Older people and those living with a disability are likely to be disproportionately affected by this, as well as those who are digitally excluded and those who are shielding/isolated.</p> <p>Those with no support other than voluntary or social services may be at additional risk as pressure on these services increases and some temporarily closed (E).</p>	<p>ONS weekly research into social impacts of COVID-19 has seen a steady increase in community spirit in recent weeks (April 23rd); nearly two thirds of adults (64.1%) saying other local community members would support them if they needed help during the pandemic (up from 57% previous week), three in four adults (77.9%) saying they thought people are doing more to help others since the pandemic (up from 67.9% previous week). Nearly two in three adults (62.6) had checked in on neighbours who might need help at least once in the last seven days (up from 53.8% previous week). Over one in three adults (37.5%) had gone shopping or done other tasks for neighbours (up from 27.7% the previous week).</p>
16.Family relationships & parenting support	<i>Children and young people (CYP)</i>	<p>Positive family relationships are protective for mental health of children facing adversity(A).</p> <p>Parental mental health influences child mental health: Increased risk of behavioural or mental health problems in children are associated with harsh, overinvolved or under-involved parenting</p>	<p>20.8% of people report their relationships being affected. Of those who reported being concerned about the impact of the pandemic on their wellbeing, 24.6% reported a strain on personal relationships and 22.2% reported spending too much time with people in their household. ONS</p>

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		<p>styles, parents with MH problems (A) or both parents being out of work (C).</p> <p>Links between parental and child mental health during pandemics may be due to exposure to the same traumatising factors and may be mediated by quality of relationship and parenting behaviours (C).</p>	<p>Parents and carers of children are among the groups reporting higher levels of stress and anxiety than the population average. https://psyarxiv.com/hb6nq</p> <p>Those living with children report consistently higher stress about covid19, stress about finances. https://www.marchnetwork.org/research</p>
17.Social connections/ isolation	<i>All (particularly older people, shielded, single households)</i>	<p>Social isolation and loneliness are risk factors for poor mental health (A). COVID-19 is likely to result in increased levels of social isolation and loneliness in the general population, and especially amongst older people, single households and those in isolation/shielding (D). It is also important to note that social withdrawal can be a symptom of some mental health problems and to there is likely to be a bidirectional relationship in those with mental health problems.</p> <p>Those who are digitally excluded may be increasingly at risk as current responses to alleviate social distancing, isolation and loneliness are often digital or technology based (E).</p>	<p>Data from the ONS Opinions and Lifestyle Survey collected during the 14th to 17th May showed that 6% of respondents said they had often or always felt lonely. This compared to 5% in the period from 24th April to 3rd May. For those aged 70 or over it was 7% and for those with an underlying health condition it was 13%. The corresponding figures for the period 24th April to 3rd May were 3% and 10% respectively.</p> <p>Ipsos MORI found one in five (21%) are concerned about isolation. In addition, 13% are worried about social distancing, including the lack of social contact (5%) and loneliness (4%). https://www.ipsos.com/ipsos-mori/en-uk/public-opinion-covid-19-coronavirus-pandemic</p>
18.Domestic Violence	<i>Women, older adults and CYP</i>	Intimate partner violence, including psychological, physical and sexual abuse, elder abuse and child abuse are all associated with increased risk of	Refuge has reported a 25% increase in calls after COVID-19 restrictions.

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		<p>mental health problems (A). Women are five times as likely as men to have experienced domestic violence in their lifetimes (C).</p> <p>Pandemics can increase rates of violence against women and girls, through effects of increased social stressors such as economics, restriction of movement, conflict/instability; exposure to exploitative relationships and reduced access to support (C).</p>	<p>https://www.refuge.org.uk/25-increase-in-calls-to-national-domestic-abuse-helpline-since-lockdown-measures-began/</p> <p>Women's Aid has seen a 41% increase in users visiting its Live Chat site since the lockdown was imposed.</p> <p>https://www.independent.co.uk/life-style/women/womens-aid-domestic-violence-coronavirus-lockdown-campaign-risk-a9452621.html</p>
19.Crime	<i>All (particularly Victims of crime and those living in neighbourhoods with low safety)</i>	<p>Witnessing violence, fear of crime and low neighbourhood stability and safety are associated with poor mental health.</p> <p>Currently there is little evidence of change of reported crime (D), although this may reflect underreporting. Complex determinants mean predictions in crime rates are difficult.</p>	<p>Latest crime survey data is published up to march 2020 and does not reflect the pandemic period.</p>
20.Media Exposure	<i>All</i>	<p>Evidence suggests that uptake of media across traditional and digital platforms is significantly up since March 2020 and this trend is likely to continue during the pandemic (C).</p> <p>Repeated exposure to information about the pandemic is likely to exacerbate stress responses, amplify worry, and impair functioning (B). Anxiety and uncertainty can drive additional media consumption and further distress, creating a cycle that can be difficult to break. This may have a greater impact on those with pre-existing mental health problems (C).</p>	<p>Research from Ipsos MORI found a 48% increase in social media usage in the week beginning 23rd March compared to Q1 2020 average.</p> <p>Ofcom have commissioned a weekly online survey of around 2,000 people to track media consumption and attitudes. Data as of 2 June (week 8) found that:</p> <ul style="list-style-type: none"> • Nine in ten respondents (92%) are still accessing news about Covid-19 at least once a day (vs. 99% in week one). But

Determinant of Mental Health	Population groups affected	High-level evidence summary: <ul style="list-style-type: none"> - Determinant's impact on mental health - Likely change during COVID-19¹ 	Real-time data summary: <ul style="list-style-type: none"> - Change to determinant during COVID-19 - Impact of determinant on mental health (where available)
		<p>Social media can also be a source of rapidly disseminated misinformation, amplifying perceptions of risk from COVID-19 and leading to increased stress and anxiety (C).</p> <p>A recent population study from China found a high prevalence of mental health problems, which was positively associated with frequent social media exposure during COVID-19 (C).</p>	<p>less than one in ten (8%) are now accessing news about the pandemic at least twenty times a day (vs. 24% in week one).</p> <ul style="list-style-type: none"> • Use of social media as a source of information about the pandemic has started to decrease (37% in week eight vs. 49% in week one) • 43% of respondents say they have come across false or misleading information about Covid-19 in the last week.
Individual			
21. Substance use/dependence	<i>Adults and CYP misusing substances (and their dependents)</i>	<p>Substance misuse is a risk factor for poor mental health (C) although is often classed with mental health problems. Societal restrictions during COVID-19 have affected the supply of drugs and alcohol. (E) There is the potential for a spike in alcohol misuse, relapse, and potentially, development of alcohol use disorder in some individuals. (D)</p> <p>There may be effects of hazardous alcohol misuse on frontline healthcare workers (D) and possible relapse for service users due to changes in psychosocial support and limited access to services (E), with reduced local authority spending on drug and alcohol treatment in recent years (C). However, a recession might reduce overall consumption of alcohol but increase binge drinking among unemployed drinkers and increased consumption of cheaper, illicit drugs. (A)</p>	<p>A YouGov survey indicates consumption of alcohol has largely stayed the same or possibly increased during lockdown. https://yougov.co.uk/solutions/sectors/covid-19-monitor</p> <p>However, there has been a reported 30% increase in calls to NSPCC helpline by adults concerned about children affected by parental alcohol and substance misuse</p>

Determinant of Mental Health	Population groups affected	High-level evidence summary: <ul style="list-style-type: none"> - Determinant's impact on mental health - Likely change during COVID-19¹ 	Real-time data summary: <ul style="list-style-type: none"> - Change to determinant during COVID-19 - Impact of determinant on mental health (where available)
22.Sleep	<i>All</i>	<p>Insomnia and poor-quality sleep is associated with increased risk of depression, anxiety disorders, bipolar disorder and suicide in adults and adolescences. (A)</p> <p>The impact of COVID-19 and self-isolation can lead to disruption/ changes in daily life (i.e. changing working patterns, not being able to follow usual routines such as daily exercise) that can affect sleep patterns. (E) Increase screen time, and increased reliance on social media and internet can further impact on sleep duration and quality. (D)</p>	<p>43% of respondents are now finding it harder to fall asleep. 75% report the pandemic is affecting their sleep. 77% report the lack of sleep is interfering with their ability to function in the day (daytime fatigue, concentration, mood)</p> <p>National Sleep Survey at https://sleepcouncil.org.uk/survey-reveals-covid-19-having-severe-impact-on-sleep/</p>
23.Ethnicity	<i>People in BAME groups</i>	<p>There is an established link between minority ethnicity and certain serious mental health conditions such as psychosis (A). However, evidence for a link with common mental disorder is mixed (B).</p> <p>The differential effect that Covid19 has had some Black Asian and Minority Ethnic (BAME) communities may contribute to higher levels of stress and anxiety among BAME people and keyworkers (D).</p> <p>Longer term, some BAME communities will economically suffer disproportionately from the recession (C) and face an additional mental health burden.</p>	<p>During lockdown, levels of anxiety and stress are higher for the BAME population compared to the White population average, but it is unclear to date if this gap differs from background rates.</p> <p>(PHE Covid-19 Mental health Surveillance Tracker- due for publication September 2020)</p>
24.Age (life course)	<i>All</i>	<p>Pre-existing mental health problems are not distributed equally across age groups. Baseline prevalence of anxiety and depression peak in</p>	<p>Early population level data summarised within PHE's surveillance tracker indicates that the mental health of young adults (aged 18-30)</p>

Determinant of Mental Health	Population groups affected	High-level evidence summary: <ul style="list-style-type: none"> - Determinant's impact on mental health - Likely change during COVID-19¹ 	Real-time data summary: <ul style="list-style-type: none"> - Change to determinant during COVID-19 - Impact of determinant on mental health (where available)
		middle age. PTSD peaks in young adulthood (16-24) and then decreases with age (B). Emerging evidence indicates the mental health impacts of COVID-19 are likely to be similarly unequal (D).	mental health has worsened to a greater extent during COVID-19 than older people. (PHE Covid-19 Mental Health Surveillance Tracker)
25. Sex	<i>All</i>	Pre-existing mental health problems are not distributed equally by sex (B) Rates of common mental disorders (CMD) and PTSD are higher for women than men (B). Evidence suggests CMD and PTSD are likely to have increased incidence during COVID-19 (B).	Early data summarised within PHE's surveillance tracker indicates that women are reporting higher rates of mental distress than men, but it is unclear to date if this gap differs from background rates. (PHE Covid-19 Mental Health Surveillance Tracker)
26. Pregnancy	<i>Pregnant women</i>	The impact of poor mental health can be greater during the perinatal period, particularly if left untreated, and can also impact mental health of children in the longer term (C). Poor mental health in pregnancy is predicted to rise during COVID-19 due to lack of social support, disrupted services, domestic violence, adverse life events and food insecurity. (B)	No available data was identified for this summary during COVID-19.

Notes

General socioeconomic, cultural and environmental conditions

1. Recession

There are negative associations between recession / financial hardship and adult mental health. Analysis of Health Survey for England (HSE) data through the 2008 recession found that population mental health in men had deteriorated within two years of the onset of the recession. These changes, and their patterning by gender, could not be accounted for by differences in employment status¹³. Research has also found that the 2008 recession resulted in increased rates of suicides, with the highest rates occurring in regions most impacted by economic decline¹⁴. In a study looking at European data, male suicide increases were significantly associated with each percentage point rise in male unemployment, by 0.94% (95% CI: 0.51–1.36%), and indebtedness, by 0.54% (95% CI: 0.02–1.06%). Spending on active labour market programmes and high levels of social capital moderated the unemployment–suicide association. There was no interaction of the volume of anti-depressant prescriptions, monetary benefits to unemployed persons or total social protection spending per capita. Active labour market programmes and social capital were estimated to have prevented ~540 and ~210 male suicides, respectively, arising from unemployment in the countries studied¹⁵. There is some evidence of association between recession and child and adolescent mental health, mediated through relationships with parents.¹⁶

The current lockdown and social distancing measures are expected to cause economic recession in the UK and around the world¹⁷. The government has forecast a drop in GDP growth for May 2020 of 8.6%¹⁸. (*Latest figures are now available via [ONS](#)*). Previous studies have shown that financial loss from quarantine creates significant socioeconomic distress and is found to be a risk factor of developing symptoms of psychological disorders¹⁹.

The health impacts of adverse economic conditions will differ across socio-economic groups and regions¹⁷ and therefore it is likely there will be an unevenly distributed increased prevalence of mental illness. A UK study of the impact of the 2008 recession and austerity measures by ethnicity²⁰ found that average incomes fell across all ethnic minority groups other than for Pakistanis, whose average household incomes increased slightly (after deducting housing costs). However, most likely to be in persistent poverty following recession were the Pakistani and Bangladeshi groups, followed by Black African and Black Caribbean groups.

If the UK experiences a similar economic impact as a result of COVID-19 to that of the 2008 recession, there would be an expected additional 500,000 people who experienced mental health conditions²¹. Given the Chancellor has recently predicted a significant recession worse than 2008²², these estimates could increase.

Research has shown that high rates of unemployment result in increased rates of suicides²³, therefore if the financial impact of COVID-19 causes high rates of unemployment, there is a significant risk of rates of suicide increasing as a result.

National data from 2014 indicates nearly 50% of Employment and Support Allowance (ESA) claimants have attempted suicide at some point.²⁴

2. Inequalities

Greater income inequality is associated with higher prevalence of mental illness and drug misuse in rich societies. Multi-country analysis has found threefold differences in the proportion of the population suffering from mental illness between more and less equal countries. This relationship may be mediated by the impact of inequality on the quality of social relationships and the scale of status differentiation in different societies.²⁵

There are three key theoretical mechanisms that help understand mental health impact of socio-economic inequalities:

- social divisions - mental health problems both reflect deprivation and contribute to it
- social drift - the social and ecological impact of adversity, including the impact of physical health problems and the cycle of invisible barriers which prevent or inhibit people from benefiting from opportunities
- social injuries – mental distress as an outcome of demoralisation and despair.²⁶

Association of inequality and mental health is also mediated through risk factors for common mental disorders being heavily associated with social inequalities.²⁷ Poor mental health is thus both a cause and a consequence of the experience of social, economic and environmental inequalities.

COVID-19 and the response measures may have disproportionately affected different disadvantaged groups and inequalities are likely to widen as a result. This affects the whole population as well as those with mental health problems.

The Equality and Human Rights Commission has acknowledged that the equality implications of COVID-19 are far-reaching, affecting people with different protected characteristics in different ways. This includes raised concerns about the impacts of the situation on disabled and older people's access to treatment and support, how redundancies may affect the most vulnerable, and concerns around the practicing of religious traditions when bereaved²⁸.

PHE have been involved in work outlining suggestions for mitigating the impact of health inequalities at a local level²⁹. (see also section below on 'Individual factors')

3. Social protection policies

Social protection and minimum income policies protect population mental health through the alleviation of poverty and material disadvantage.³⁰ The financial support packages put in place during COVID-19 have provided immediate social protection to many individuals and are likely to be beneficial.

However, recent changes to existing social protection systems in England, such as the implementation of Universal Credit, have been shown to impact negatively on people's mental health in terms of meeting clinical thresholds for depression.^{31,32} Qualitative research suggests this may be linked to difficulty in navigating a new

system (leading to increased financial hardship in some cases) and stress associated with the conditionality and threat of sanctions.³³

Any change in the temporary measures implemented during COVID is likely to impact on population mental health. Measuring the impact of future changes to the welfare system on people's mental health is therefore important.

4. Discrimination

Discrimination influences mental health, mental illness and stress responses.^{27,34} Discrimination is closely linked to social status, disempowerment, marginalisation and socioeconomic disadvantage, which impact people's health throughout the life course³⁵.

Racial discrimination may be a factor during COVID-19. There were early media reports of stigma, for example with British-Chinese people³⁶ being labelled as associated with virus.³⁷ BAME groups are at higher risk of contracting COVID-19³⁸ and issues of associated discrimination including structural discrimination (e.g. the over-representation of people from black and ethnic minority backgrounds in lower paying jobs, overcrowded housing and poverty) are being highlighted³⁹, however as yet this is not supported by robust empirical evidence. In a recent survey from the British Medical Association more BAME doctors reported difficulties in obtaining adequate PPE than white counterparts⁴⁰. LGBTQI+ organisations have reported increased calls and highlighted potential for LGBTQI+ people to be isolated with bi/trans/homophobic people; increasing risk of domestic abuse.⁴¹

WHO recognises that social stigma is associated with COVID-19, for example amongst those who contract the virus, and that action is needed to address this, including through good communication strategies.⁴²

5. Air pollution

Long term exposure to particulate matter (PM) could be a component cause of multiple psychiatric disorders including anxiety, depression⁴³ and schizophrenia⁴⁴. An association was found between short-term exposure to PM and suicide with a 0-2-day lag; however causal mechanisms are difficult to define.¹⁰ During the COVID-19 incident, the 'lockdown measures' taken by many governments internationally are suggested to have significantly reduced emissions of environmental pollutants⁴⁵. Therefore, the reduced air pollution levels may result in better mental health outcomes across the population, although the evidence is limited on the impact of short-term pollutant level reductions. Continued acceleration of climate change action is likely to benefit mental health.⁴⁶

Living and working conditions

6. Education

School absence is associated with increased risk of adolescent mental disorder,⁴⁷ although this is a complex bi-directional relationship and previous findings may not translate easily to the COVID-related school closures. There is some evidence that

being out of school, and the experiences during that time, can have a role in mental health outcomes. During summer holidays, children in Wales from poorer families experienced more loneliness and less interaction with peers which was associated with reduced levels of wellbeing when they returned to school.⁴⁸ It should be noted that currently most children at home are not on holiday but receiving some education.

Academic achievement has a small to medium correlation with subjective wellbeing in young people⁴⁹ and depression in adulthood.⁵⁰ Evidence of a ‘summer learning loss’ (where academic achievement in primary school age children drops over the summer) is well evidenced. There is evidence that this is more pronounced for children from lower socioeconomic groups⁵¹, average students compared with high-achieving students⁵² and with steeper declines in maths than reading.⁵³ It is not unreasonable to assume that this learning loss will be more marked during 2020. Estimates from researchers in the US suggest achievement during this current academic year may be 70% of the usual year’s progress in reading and 50% of the usual progress in maths; although the context and setting may not be directly applicable to UK.⁵⁴ It is plausible this could affect long term educational attainment.

For those children in transition (nursery to primary, primary to secondary, secondary to higher) the impacts could be greater as these are key developmental points.⁵⁵ With schools closed there is also the potential for a reduction in help-seeking behaviour for children experiencing violence and abuse, as school is often the place that children seek help.⁵⁶

7. Unemployment

Unemployment is associated with increase in mental health problems and increased suicides: one study looking at 26 European countries found that more than 3% increase in unemployment had a greater effect on suicides at ages younger than 65 years (4.45%, 95% CI 0.65–8.24; 250–3220 potential excess deaths [mean 1740] EU-wide) and deaths from alcohol abuse (28.0%, 12.30–43.70; 1550–5490 potential excess deaths [mean 3500] EU-wide).⁵⁷ Changes in employment status have both direct and indirect effects, through changes in financial circumstances and subsequent psychological distress.⁵⁸ People in Great Britain who are unemployed are between four and ten times more likely to develop anxiety and depression,⁵⁹ and evidence also indicates a higher risk of other common mental health disorders for this group.⁶⁰

Loss of employment and financial stressors are well-recognised risk factors for suicide. Research has shown associations between country level unemployment, poverty and foreclosure, and suicide rates during the 2008 global economic recession leading to increased suicide rates in American (6.4%) and European (4.2%) countries.⁶¹ There is also a likely impact on the next generation – studies have found that children with both parents working were at significantly lower risk of mental disorders than children with neither parent working.⁶²

Evidence also suggests that unemployment and related financial challenges are more likely to affect disadvantaged groups, in particular:

- those with low income, who are more likely to be on precarious contracts or self-employed, have less financial reserves and are more likely to already have poorer health.⁶³
- people with chronic health conditions – especially mental health – who experienced the most severe adverse effects of changes in employment in the 2008 economic crisis.⁶⁴
- Those working in the hospitality, leisure, travel and tourism, who will be disproportionately impacted by lockdown. Employees in this sector are more likely to be young, migrants, poorly paid and in rented accommodation. There is also a corresponding risk to their mental health and ability to access support services.⁶⁵
- Young professionals have emerged as the most vulnerable demographic in the workplace. They are twice as likely to suffer from depression as the average worker, and more susceptible to leave-ism⁶⁶ and financial concerns.⁶⁷
- One in ten disabled people in work fall out of work each year, compared to one in twenty non-disabled people.⁶⁸
- Some BAME groups are more likely to experience unemployment (particularly White Gypsy/Irish Traveller groups, African groups and Mixed White and Caribbean groups), some have higher rates of economic inactivity (women from Pakistani and Bangladeshi backgrounds), more likelihood of receiving low pay or being in low quality/insecure jobs when in work a lack of return on educational qualifications – many are overqualified. Where BAME groups live and work has a great influence on their rates of unemployment – there are some regions in the UK, for example, Birmingham, where unemployment rates for Pakistani, Indian, Chinese and African groups are particularly high.⁶⁹

8. Debt and poverty

There is a clear relationship between socioeconomic disadvantage, debt and mental health. Debt and poverty increase the risk of mental health problems. Children and adults living in households in the lowest 20% income bracket in Great Britain are two to three times more likely to develop mental health problems than those in the highest.⁷⁰ People who are in debt have higher odds of mental illness, even after controlling for low income.⁷¹

Those with mental health issues are likely to experience worse economic consequences in an economic downturn. Research on the 2008 economic crisis suggests that people with chronic health conditions – especially in mental health – experienced the most severe adverse effects of changes in employment.⁷² This may be compounded by financial exclusion (the inability to access recognised financial services in an appropriate way).⁷³

Those on lower incomes are also at greater risk of additional financial insecurity and of developing mental health issues as a response to COVID-19, as they already have poorer health and are more likely to be in insecure work without financial reserves.⁷⁴ This effect has been evidenced in communities who experienced flooding in the UK.⁷⁵

The Understanding Society COVID-19 Survey of over 10 000 households⁷⁶ found that 23% of individuals reported loss of more than 20% of household earnings; and losses

were particularly severe for single parents. Twice as many people reported expecting their financial situation to get worse as those who expect it to get better, with higher rates in lower quintiles and with single parents.

A survey by the Money and Policy institute⁷⁷ of 2096 people, weighted to be nationally representative, suggested that those with experience of mental illness were likely to be harder hit: with increased financial strain before the pandemic (29% of people with experience of mental health problems say they couldn't make ends meet for longer than a month compared to 14% who have never experienced a mental health problems). Qualitative findings suggested reduced problem-solving skills and increased anxiety may make dealing with these issues more difficult for those with mental health problems. They found that 38% have experienced a mental health problem reported that their household monthly income had reduced as a result of the crisis; 31% reported having spent less on essentials like food or heating 10% reported having missed a debt repayment. It is not clear whether these rates are different to those without experience of mental health problems.

8.1 Ethnicity and poverty

In 2012/13, people from ethnic minority groups (except the Indian group) were more likely than White British people to live in the most deprived 10% of neighbourhoods in England. Pakistani and Bangladeshi people were over 3 times more likely than White British people to live in the most deprived 10% of neighbourhoods in England.⁷⁸ Poverty and ethnicity are strongly related, with poverty twice as higher among all ethnic minority groups than among white British people in the UK⁷⁹. The migration status of an individual and the experience of racism and discrimination when seeking and attempting to progress in work can create barriers to being able to move out of poverty. In England, child poverty is associated with reduced employment opportunities across the life course and the probability of being in employment aged 34 years reduced by between 4 - 7%⁸⁰ with children from Pakistani and Bangladeshi the most affected. For every ethnic minority group, there is an association between poor English skills and persistent poverty. Having English as a first language reduced the probability of being in persistent poverty by 5 percentage points. In terms of income reduction during the recession, groups which saw the largest relative falls in average income were Chinese (30%) followed by Black African, Indian and Other White (10%).

9. Access to the natural environment

Living in urban areas with more green space in the UK is associated with both lower mental distress and higher wellbeing after controlling for individual and regional factors.⁸¹ The quantity of green space in the living environment (particularly in urban areas) is associated with improved mental health including reduced stress, fatigue, anxiety and depression.^{82,83} People who visit nature regularly feel their lives to be more worthwhile after controlling for other factors.⁸⁴ The relationship is similar in children, with access to green space being associated with improved mental wellbeing, overall health and cognitive development.⁸⁵ There is also emerging evidence of a positive association between greater exposure to outdoor blue spaces (lakes, rivers etc) and benefits to mental health and well-being.⁸⁶ People in socioeconomically

disadvantaged groups generally have less access to good quality greenspace and visit the natural environment less often than their more affluent peers.⁸⁷ However, for those in deprived groups with good access to green and blue spaces, the inequality in mental wellbeing is narrower, compared to those with less access.⁸⁸

Overall, the evidence for the positive effect of the natural environment on wellbeing is clear. This is now a key consideration in Government planning guidance.^{89, 90}

9.1 Accessing the natural environment during COVID-19

Early evidence suggested a significant part of the population were getting out less with Ipsos Mori reporting that during the first two weeks of the lockdown, half the population did not leave home for exercise, which is a much lower proportion than the long-term average.⁹¹ Google's location data shows that across the UK, visits to places like national parks, public beaches, marinas, dog parks, plazas, and public gardens were reduced by 37% compared to the historic baseline until April 11th but are now up by 51% (up until May 23rd) following ease of social distancing measures.⁹²

Emerging data also suggests inequalities in accessing the natural environment may be increasing. YouGov's Coronavirus Monitor suggests that, daily, about a third of the adult population is leaving their home to exercise. This contrasts with the long-term average of 16% getting out to green spaces daily.⁹³ A poll conducted for the RSA Committee on Food and Farming suggests similar polarisations: although 9% feel fitter and 27% are getting more exercise, more people (36%) say they are getting less exercise than before.⁹⁴ Sport England polling also shows differing activity levels: with older people, those on a low income and those in urban areas reporting less activity under lockdown.⁹⁵

9.2 Active Travel

Active travel (walking and cycling) is beneficial for physical and mental health.⁹⁶ In 2017-18 over 40% of urban journeys were under 2 miles and thus amenable to walking and cycling. Current data suggests that social distancing measures have increased use of cycling and walking: in some places, a 70% rise in the number of people on bikes - for exercise, or for safe, socially distanced travel has been reported.⁹⁷ The current situation provides an opportunity to reinforce and enhance these changes, for example through infrastructure changes to enhance ease and safety of cycling and walking.⁹⁸

10. Voluntary and Community Sector (VCS) infrastructure

Many people rely on VCS for mental health support, with around 1.5 million people accessing CCG-commissioned mental health support from the VCS in 2017/18.⁹⁹ The VCS also plays an important role in the economy with an estimated annual contribution of £17.1bn or 0.85% GDP¹⁰⁰ and an additional £23.9bn or just over 1% of GDP was contributed by volunteering.¹⁰¹ The NHS Long Term Plan (2019) presents an ambition for VCSE organisations to play a significant role in health care provision. Whether participating in 'Integrated Care Systems' (ICSs), working alongside primary care

networks, or expanding coverage of alternative forms of service provision such as crisis support.¹⁰² Charities spend over £12bn providing services to people each quarter (£50.6bn per year)¹⁰³ and there is concern within the sector that they may have lost a quarter of their income through the lockdown.¹⁰⁴

In the first few weeks of the pandemic, some VCS mental health organisations¹⁰⁵ experienced a substantial rise in demand for their services especially those providing diagnoses-specific helplines, such as Anxiety UK. Some organisations also reported that their staff, including care coordinators, had been seconded to the NHS to respond to the pandemic. In April, concerns were reported around supplies of Personal Protective Equipment (PPE) and the lack of clear guidance on its use. Nevertheless, many organisations described positive engagement with commissioners in relation to current contracts. Overall, organisations report working swiftly to adapt, modify, and change the delivery of their services to ensure they can continue supporting as many people as they can. However, financial concerns remain a key issue for the sustainability of the sector, particularly for smaller organisations and social enterprises which may impact on support available for the population and for those with mental health problems in the medium to long term.

11. Working conditions

Several aspects of working conditions that could be affected by COVID-19 can increase risk of mental health problems. High job demands, low job control, high effort-reward imbalance, low relational and procedural justice, role stress, low social support and bullying were associated with increased risk of common mental disorders.¹⁰⁶ Job strain was associated with increased risk of clinical depression which was similar across sociodemographic subgroups.¹⁰⁷ Excessive hours are also associated with higher risk of mental health disorder,¹⁰⁸ and there are additional risks for new onset risky alcohol use.¹⁰⁹ Job insecurity increases the risk of common mental disorders by 33%¹¹⁰ and poses a comparable threat to mental health as unemployment.¹¹¹

Job quality is also associated with worse mental health. Evidence from Australia indicates the mental health of those who were in jobs of the poorest psychosocial quality was comparable or worse to those who were unemployed.¹¹² Analysis from the Adult Psychiatric Morbidity Survey (APMS) in England found moving from unemployment into a high-quality job led to improved mental health (mean change score of +3.3) although moving from unemployment to a poor-quality job was more detrimental to mental health than remaining unemployed (5.6 vs 1.0). Prevalence of common mental disorders was similar for people who were unemployed and in poorest quality jobs.¹¹³

The Understanding Society COVID-19 Survey¹¹⁴ reported a significant decline in positive working hours, with 43% of those with reduced hours reporting being furloughed, and 14% reporting loss of self-employment business.

There are disparities between employment in different sectors. National data¹¹⁵ indicates:

- combined Pakistani and Bangladeshi (30.7%) and Other (23.7%) ethnic groups had the highest percentage of workers in the distribution, hotels and restaurants sector
- Black workers had the highest percentage of any ethnic group working in public administration, education and health (43.6%)
- White workers had the highest percentage working in construction (7.7%)

11.1 Frontline NHS and Care Staff

The workplace risk of developing mental health problems, including PTSD is well evidenced for frontline healthcare staff during a pandemic. Evidence from the SARS outbreak indicated higher risks for those with most direct patient contact, occupational stressors like being quarantined, compromised ability to do one's job, lack of control over work, and perceived risk to infection; and negative social experiences like rejection/ isolation/ discrimination.¹¹⁶ A recent study from China of 1,257 healthcare workers treating patients with COVID-19 in early Feb 2020 reported high levels of mental health symptoms in a voluntary online survey. 50% reported depressive symptoms, 45% anxiety symptoms, 34% insomnia and 72% reported being distressed. However, this is likely to be an over-estimate due to volunteer bias (where people who are experiencing these symptoms are more likely to complete this type of survey).¹¹⁷ Another study among 994 hospital clinicians in Wuhan, China measured mental health using several screening tools (PHQ-9, GAD-7, ISI, IES-R) in late January. The researchers then clustered the participants into categories according to a composite measure of MH disturbance using all these tools. They identified 34% of healthcare workers had mild MH disturbances, 22% had moderate MH disturbances, and 6.2% had severe MH disturbances.¹¹⁸

Most predictive factors for PTSD occur after the incident and are amenable to change via directed interventions. The two main post-incident factors^{119 120}are -

- 1) access to effective social support (including colleagues, supervisors, family and friend)
- 2) the pressure that people experience as they try to recover from the traumatic experience itself and/or from secondary stressors (e.g. financial, relationship or working related problems).

12. Housing

COVID-19 and the likely subsequent economic downturn could lead to greater housing problems, homelessness and reductions in standards of housing, all of which are linked to increased mental health risks.

Stable housing contributes to someone being able to maintain good mental health and are important outcomes for recovery for those who have developed mental health problems, with many people with severe mental illnesses having a range of supported housing needs.¹²¹ Quality of housing also affects mental health - not being able to heat the home in winter, having a combination of fuel and other debt, having

mould and limiting fuel use because of cost all predict CMD.¹²² Having a cold home, particularly the living room, contributes to social isolation and may be associated with stigma,¹²³ which may be a particular issue for older people (see *section on social isolation*).

Homelessness and other forms of insecure housing create significant risks for mental health and mental health issues increase risk of homelessness. Common mental health disorders are over twice as high among people who are homeless compared with the general population, and psychosis is up to 15 times as high.¹²⁴ The experience of homelessness and rough sleeping itself leads to isolation and can take a serious toll on mental wellbeing.¹²⁵ Outside of London, where people are more likely to sleep rough for longer, support needs may be higher.¹²⁶ 31% of homeless people have complex needs (two or more support needs) and additional financial, interpersonal and emotional needs will make engagement with mainstream services difficult without proactive engagement.¹²⁷ Many parts of the country with large numbers of rough sleepers do not have specialist mental health support and access to mainstream services is challenging;¹²⁸ improving mental health support for rough sleepers is an acknowledged commitment in NHS and DHSC plans from 2019¹²⁹.

13. Access to health & care services

There is much debate about the contribution of healthcare services to overall population health. The most plausible estimates suggest that 15-40% of population health is determined by the healthcare system in place.¹³⁰ Although estimates do not exist for mental health specifically, it is not unreasonable to assume the impact is likely to be within the same range.

13.1 Access to mental healthcare services

The social restrictions applied during COVID-19 have caused mental health services to overhaul the way they offer their services to people with psychiatric disorders. In Italy this shifted to remote and virtual approaches where possible.¹³¹ In China this created a serious challenge to the delivery of mental health service, with more psychological crisis lines, educational resources and clinicians stationed at designated isolated hospitals.¹³² In the UK, similar challenges have been reported and guidance has been set out for altered service configuration¹³³. Data is still emerging, and analysis of the Mental Health Services Data Set (MHSDS) is currently being undertaken at a national level in England to understand changes in activities among NHS mental health Trusts. *Latest MHSDS reports are available via this [link](#).*

13.2 Access to general healthcare services

There is also concern about reduced attendance to general practitioners and emergency departments for non COVID-19 related serious health conditions such as symptoms of cancer, heart attacks or strokes due to fear of the disease.^{134,135} This

may result in increased morbidity and mortality as well as increased waiting lists when services return.

13.3 Intensive care and ICU admissions

At least 20% of those in critical care will suffer significant symptoms of PTSD during the 12 months after discharge.^{136,137} Evidence from the UK, indicates that 44% of patients remained significantly anxious or depressed a year after ICU discharge.¹³⁸ As of 13th May 2020, 3,721 ICU patients with COVID-19 were discharged from units across England, Wales and Northern Ireland.¹³⁹ Extrapolating from the estimates within these reviews, approximately 750 could experience significant symptoms of PTSD and 1,600 may be anxious or depressed in the next 12 months.

Social and community

14. Community resilience/ social capital

Community resilience, social capital and strong social support systems are critical to the wellbeing of communities^{140,141,142} and are considered to be a critical component of effective disaster response and recovery. Studies of disaster-affected populations have found an association between social capital and disaster mental health outcomes (PTSD, anxiety, and depression) in combination with individual factors (appraisal, coping behaviour, and social support)¹⁴³.

Social capital can be manifested through community action, including local place-based volunteering. Evidence suggests significantly increased numbers of people are currently engaged in volunteering through mutual aid groups, the NHS volunteer scheme and other community initiatives. Data on mutual aid groups so far suggests there is significant variation across communities, with some seeming to show little to no mobilisation, while others are seeing considerable mobilisation efforts and a proliferation of community networks. Analysis from Cambridge University has found a positive correlation between the number of reported mutual aid groups per 10,000 people and measures of socio-economic advantage¹⁴⁴. This indicates that whilst social action has been positive there are inequalities in who benefits from and has capacity to participate in social action.

ONS captures ongoing data on how the UK is faring in four domains of social capital: personal relationships, social network support, civic engagement, and trust and cooperative norms – tracking change over time¹⁴⁵. This will provide potentially valuable insights into changes in social capital during response and recovery from COVID-19. Public Health England are also undertaking a rapid evidence review to assess the role that community resilience and social capital play during health emergencies and disasters, with the findings due to be available in June 2020.

15. Social support systems

Accessing formal and informal social support is key to protecting individuals from increased risks of trauma and suicidality following disasters¹⁴⁶ and to allow communities to adapt positively¹⁴⁷. While there is limited research assessing the role and changing nature of social support systems during COVID-19, a new cross-sectional study (pre-print) of UK adults during COVID-19 found that perceived social support was associated with higher wellbeing and lower depression and anxiety¹⁴⁸.

Lockdown and other social distancing measures are reducing the amount of interaction individuals are having with those outside their household including family, friends and local community. It is also changing the dynamics of social support systems – with many people having to adapt to reduced or changing access to their usual formal and informal support networks.

Data from Understanding Society and the Community Life Survey shows that a significant number of older adults and those with a self-defined disability (or who are Equality Act Disabled) regularly rely on informal support from their family, friends and wider community – including providing meals and shopping and caring for children¹⁴⁹. This may be significantly affected by COVID-19 and associated social distancing measures, resulting in reduced coping capacity and poorer mental health outcomes.

Social support systems are also significantly affected by the temporary closure of social services and community hubs. Key face-to-face services, providing much needed support and social interaction, have been reduced or are not running during lockdown. This may include support groups, social activities in the community, befrienders or day care centres.

16. Family relationships & parenting support

Children of parents with mental health problems are likely to be at increased risk of behavioural or mental health problems themselves¹⁵⁰. Parental stress may lead to interparental conflict, substance misuse and altered parenting behaviours which are all Adverse Childhood Experiences (ACES)¹⁵¹. An economic downturn may also lead to an increase in worklessness, which increases parental stress and is also related to poor mental health outcomes in children.¹⁵²

ONS data indicates that 20.8% of people report relationships affected since the start of the pandemic. Of those who reported being concerned about the impact of the pandemic on their wellbeing, 24.6% reported a strain on personal relationships and 22.2% reported spending too much time with people in their household¹⁵³. Parents and carers of children are among the groups reporting higher levels of stress and anxiety than the population average. Those living with children report consistently higher stress about COVID-19, including stress about finances.¹⁵⁴ Work is reported as the main stressor for parents and carers (53%), followed by their child's wellbeing (50%), friends and family outside the home (46%), the child's education (43%) and screen-time (43%)¹⁵⁵

A study following the SARS epidemic in the US found higher levels of self-reported Post Traumatic Stress Disorder (PTSD) symptoms in both parents and children who have been in isolation or quarantine in pandemics; 86% of parents with PTSD scores above threshold also had children with PTSD scores above threshold¹⁵⁶.

Links between parental and child mental health during the pandemic may be due to exposure to the same traumatising factors but also may be mediated by quality of relationship and parenting behaviours. Several parenting styles have been identified as risk factors for anxiety and depression in young people, including higher levels of authoritarian parenting, aversiveness, inconsistent discipline, inter-parental conflict, over-involvement and withdrawal¹⁵⁷

Positive family relationships and parenting behaviours including parental warmth, involvement, high levels of trust, family cohesion, immediate and extended family support are protective for mental health of children facing adversity^{158, 159}.

17. Social connections/ isolation

A recent population survey by Ipsos Mori revealed widespread concerns about the effects of social distancing measures on mental health¹⁶⁰. The survey found that one in five (21%) are concerned about isolation, including not being able to go out in general (18%) and being in isolation for a long time (2%). Related to this, 13% are worried about social distancing, including the lack of social contact (5%) and loneliness (4%).

Isolation, lack of social connections and loneliness are strongly associated with anxiety, depression, self-harm, and suicide attempts across the life course – presenting a significant risk to public mental health during COVID-19^{161, 162}. There is a bidirectional relationship as social withdrawal is also a recognised symptom of depression, psychosis and some other mental health problems. Beyond immediate social distancing measures – the impacts of COVID-19 including increased uncertainty/precariousness around employment, housing and personal finances, means there is a risk that feelings of connectiveness will deteriorate further¹⁶³.

Emerging evidence (pre-print) suggests that, at this stage of the outbreak, risk factors for loneliness were almost identical prior to and during the pandemic¹⁶⁴. Young adults, women, people with lower education or income, the economically inactive, people living alone, and urban residents had higher odds of being lonely. Some people who were already at risk for being lonely (e.g. young adults aged 18-30, people with low household income, and adults living alone) experienced a heightened risk during the COVID-19 pandemic compared to usual. Being a student also emerged as a higher risk factor during lockdown than usual.

18. Violence

Women and children are disproportionately affected by domestic violence, which has secondary impacts on mental health. Women are five times as likely as men to have experienced extensive physical and sexual abuse during their lives: of those who have, 36% have attempted suicide, 22% have self-harmed and 21% have been homeless¹⁶⁵. Intimate partner violence, including psychological, physical and sexual abuse, is associated with higher levels of depression and anxiety, and exposure to multiple types of abuse is associated with increased risk of depression¹⁶⁶. Elder abuse is associated with reduced wellbeing.¹⁶⁷ Child abuse is associated with poor mental health, risky sexual behaviour and drug use in children.¹⁶⁸

The Centre for Global development has summarised the various pathways through which pandemics can lead to increased violence against women and girls: through effects of (on) increased social stressors such as economics, restriction of movement, conflict/instability, exposure to exploitative relationships and reduced access to support.¹⁶⁹ Current evidence indicates an increase in helpline usage for both domestic abuse and child abuse hotlines in the UK and internationally^{170, 171}. US data indicates increased domestic abuse reports but not increased domestic assaults, indicating most calls are linked to emotional or other forms of abuse without physical violence¹⁷². We found no published analysis of UK data that addresses the severity of impact of domestic violence.

19. Crime

Living in neighbourhoods with high exposure to violence, crime, unemployment and poverty is associated with higher rates of depression and anxiety. A protective factor for lower levels of anxiety was found to be neighbourhoods with high stability.¹⁷³ Fear of crime can impact on mental health but is also exacerbated in the presence of other mental health problems; and thus, is in a complex relationship with community stability:

- (1) The anxieties induced or expressed by fear of crime may have an impact on mental health, and indeed may be considered a wellbeing outcome in themselves.
- (2) Poorer health, particularly mental health, may exacerbate fear of crime.
- (3) Fear of crime may lead to avoidance behaviours such as limiting one's movement outside the home, which may have a negative impact on
 - a. social interaction and,
 - b. physical activity.
- (4) Fear of crime may have an impact on social wellbeing at an ecological level.¹⁷⁴

Neighbourhood safety, discrimination and witnessing violence have been included in some definitions of childhood adversity¹⁷⁵.

Emerging international evidence indicates limited impact or reduced levels of crime in the context of pandemic social distancing measures; but that these are not consistent, with some localities reporting rates of non-residential burglaries and vandalism comparatively increased compared to other crimes^{176,177,178}.

Trends for most crime types in the UK did not change or declined last year, except for robbery which showed a 12% increase and the use of knives or sharp instruments which increased by 7% (both crime types continuing an upward trend)¹⁷⁹. There is no national published crime data available for the pandemic period.

20. Media Exposure

Infectious disease outbreaks share unique features that increase the sense of fear (e.g. being transmissible, imminent and invisible; being ominously covered by the media). While some fear can stimulate action in the form of preventive health behaviours, extreme fear can lead to adverse psychological and behavioural response (e.g. denial, rumours, misconceptions, stigmatization, avoidance behaviours)¹⁸⁰. Prospective, longitudinal studies have demonstrated that heightened stress responses during and in the immediate aftermath of a threatening event are associated with adverse mental health outcomes over time¹⁸¹. The media play a major role shaping these responses and in the social construction of risk¹⁸².

Repeated media exposure can cause individuals to inaccurately assess personal risk as well as the threat to their own communities. For example, the incidence of Ebola in the United States was quite low during the 2014 outbreak, but a nationally representative sample of U.S. residents (N = 3,447) showed that heightened media exposure to Ebola-related stories was associated with increased distress, worry, and impaired functioning¹⁸³. Meanwhile a number of studies have demonstrated that both the type and amount of media exposure affect psychological and physical responses to a disaster or other traumatic event. Research from the Boston Marathon bombings found that people who reported the highest media exposure reported higher acute stress than did people who were directly exposed to the bombings¹⁸⁴. People already exhibiting anxiety may seek out more media coverage of the event, further increasing their stress response¹⁸⁵.

Social media adds another layer to the complex processes through which information, social norms and risk perceptions diffuse across populations¹⁸⁶. While it can be used positively to promote public health messaging¹⁸⁷ as well as to facilitate social connection and interaction during social distancing, social media can also be a source of rapidly disseminated misinformation, amplifying perceptions of risk, and repeated exposure to information about an outbreak can exacerbate stress responses, amplify worry, and impair functioning^{188,189}. Anxiety and uncertainty can drive additional media consumption and further distress, creating a cycle that can be difficult to break¹⁹⁰.

An online cross-sectional study of approximately 5,000 people aged over 18 in China explored the association between mental health problems and social media exposure during the COVID-19 outbreak. Researchers found a high prevalence of mental health problems, which positively associated with frequent social media exposure during the COVID-19 outbreak¹⁹¹. The results showed that 82% of respondents reported being frequently exposed to information about the pandemic through social media. Nearly half of respondents (48%) made the cut off for depression and nearly a quarter (23%) met criteria for anxiety. Around 19% of respondents met criteria for both disorders. These findings were significantly higher than the latest national sample which showed prevalence rates for depression at around 7% and anxiety at around 8%. Exposure to social media was associated with greater odds for anxiety as well as a greater

likelihood for a combination of anxiety and depression. No relationship was found between social media exposure and odds for depression on its own.

Against the backdrop of the Coronavirus pandemic, data suggests increased media consumption across both traditional and digital platforms¹⁹². In the UK, cross-media measurement research conducted by Ipsos MORI also found a 48% increase in social media usage in the week beginning 23rd March compared to Q1 2020 average¹⁹³, coinciding with the announcement of strict social distancing measures, with indications this trend has continued over April and May. Ofcom have commissioned a weekly online survey of around 2,000 people to track media consumption and attitudes including factors such as frequency and specific platform usage (e.g. online, TV, radio etc.) as well as exposure to misinformation. A number of UK studies are currently underway to explore the impact of media exposure and social media use on mental health outcomes during COVID-19, including several looking specifically at children and young people.

Individual level factors

21. Substance use/dependence

There is established evidence for the impact of substance misuse on mental health¹⁹⁴. The pandemic is likely to have both long- and short-term implications on substance use. Heightened risks include concerns about individual or loved one's health, bereavement and uncertainty about the future economic impact¹⁹⁵. Stress is a risk factor for substance misuse.¹⁹⁶

The effects of social distancing and isolation on alcohol use and misuse are unclear. In some individuals, long term, excessive alcohol misuse might escalate into an alcohol use disorder. Experts believe that this period of isolation might lead to a spike in alcohol misuse, relapse, and potentially, development of alcohol use disorder in at-risk individuals, therefore placing further strain on addiction and drug and alcohol services, and the health service in general, during and after the pandemic¹⁹⁷. Front line healthcare workers might be at particular risk - one study during the SARS epidemic found that alcohol use or dependency symptoms were positively associated with having been quarantined as a health care worker.¹⁹⁸

The UN Office for Drugs and Crime reports¹⁹⁹ both short term unique characteristics of COVID-19 on illicit drugs supply and longer-term implications. In the short term, COVID-19 transport restrictions and increased surveillance, means that the drugs supply chain is currently disrupted with mixed results. Drug supply shortages can go together with an overall decrease in consumption (for example, of drugs that are mostly consumed in recreational setting such as bars and clubs) but may also, especially in the case of heroin and amphetamines (noted to be in short supply), might lead to the consumption of harmful domestically-produced substances, as well as more harmful patterns of drug use by people with drug use disorders. This may have adverse consequences for mental health.

For longer term impacts of a recession, a systematic review of the effects of the 2008 financial crisis found mixed effects at a population level in European countries²⁰⁰. The

results show that effects of the recession have differential impact. Alongside a reduction in a population's overall substance use, several vulnerable subgroups experience serious negative effects. Risk factors include job-loss and long-term unemployment, and pre-existing vulnerabilities. This review also found that the relationship between substance use and unemployment is likely to be influenced not only by the duration of the unemployment but also by the overall employment rate for the area (i.e. recession or time of growth) and pre-existing mental health vulnerability. At a population level although alcohol use reduced due to income constraints, there was an increase in illicit drug use due to market flexibility and reduced pricing, and strong relationship with unemployment.²⁰¹ Analysis of data from the Health Survey for England found that England's recession was associated with less hazardous drinking among the population overall, but with rises in binge drinking among a smaller high-risk group of unemployed drinkers with greater impact on white British adults, 2004–2010.²⁰²

Access to drug and alcohol services may also be limited: analysis from 2018/ 2019 to 2019/2020 of local authority spending budgets suggested that spending on drug and alcohol services reduced by 7% for adult services and 6% for children's services.²⁰³

20.1 Data during COVID-19

YouGov data²⁰⁴ shows that most people are either drinking the same amount as before the lockdown, or in fact, more than before. Of those who do drink, 75% say they are drinking the same amount or more since the lockdown began, with 57% drinking as normal, and 17% drinking either a bit or much more. On the other hand, a quarter of British drinkers (25%) say they have cut down on their alcohol content. According to YouGov, younger people are most likely to be changing their alcohol intake, with those aged between 18 and 24 the most likely to be both drinking more (25%) and drinking less (28%) when compared to the other age groups. Lockdown may be creating substance misuse related stress within the home. Data from the National Society for Prevention of Cruelty to Children (NSPCC) helpline²⁰⁵ suggests that there has been a 30% increase in calls related to parent/adult alcohol and substance from people worried about children living in adversity. There are early signs of the heroin and crack markets destabilising in England lower purity/substitute products entering the market – as a result benzodiazepine are increasing in use and were responsible for most reported drug-related harms in April²⁰⁶.

Data from the national drug treatment service suggests that around 266,576 people were using substance misuse services between April 2019 – March 2020. Of these services users - opiate users 139,444, non-opiate only 24,622, non-opiate and alcohol 29,556 and alcohol only 72,954²⁰⁷. Opiate users formed 139,444 of this total; non-opiate only 24,622, non-opiate and alcohol 29,556 and alcohol only 72,954²⁰⁸. It is unclear whether these figures are likely to go up or down during COVID-19 – a significant proportion of substance misusers do not seek treatment.

22. Sleep

22.1 Impact during adulthood

Insomnia and short sleep duration are associated with increased risk of depression, anxiety disorders, bipolar disorder and suicide.²⁰⁹ In addition, wellbeing (positive affect and eudemonic) were both inversely associated with sleep problems after adjustment for age, gender, household income, and self-rated health. At the same time, financial strain, social isolation, low emotional support, negative social interactions, and psychological distress were related to reported sleep problems suggesting a bi-directional relationship (disturbed sleep causing lower positive affect and reduced psychological well-being, and positive psychological states promoting better sleep).²¹⁰ Insomnia is common in older adults with depression. Recent evidence suggests that this is a bi-directional association and that insomnia and poor sleep quality may also lead to incident depressive symptoms over time.²¹¹

22.2 Impact during childhood and adolescence

Suboptimal adolescent sleep patterns were associated with increased risk of mental disorder, suicidal thoughts, smoking and substance use in adults.²¹² Prospective studies indicated that sleep disturbance in adolescents predicted risk of suicidal thoughts but not suicide attempts.²¹³ Longer sleep duration was concurrently associated with better subjective psychological wellbeing during adolescence.²¹⁴

22.3 Screen time and sleep problems

Computer use at night or prolonged use of computers is associated with sleep disturbance and worse mental health outcomes.²¹⁵ However, a causal link is yet to be established and there is debate regarding this relationship.²¹⁶ Increased time on the internet at home is experienced by many adults and children and young people during COVID-19.²¹⁷

22.4 Impact of COVID-19 on sleep

Changes in sleep along with other lifestyle behaviours are likely to take place during COVID-19 influence population mental health and stress response.²¹⁸ Disruption and changes in daily life, anxiety and worry, depressive symptoms, isolation, greater family and work stress and excess screen time are likely all have detrimental impact on sleep. Early evidence suggests that over a third of health care workers are likely to be experiencing insomnia during this pandemic.²¹⁹ For those in isolation in China during COVID-19, sleep disturbance was quite common in the first two weeks but then subsided.²²⁰

In the UK the National Sleep Survey carried out by The Sleep Charity and Sleepstation²²¹ (sampled 2,700 people) reports that 43% of respondents are now finding it harder to fall asleep, with unease around the current situation affecting sleep for three quarters of people (75%), for 77% of respondents a lack of sleep is interfering with their ability to function in the day (daytime fatigue, concentration, mood).

23. Ethnicity

Experiences of racism, exclusion and alienation by ethnic minorities are known to increase risk for a range of mental disorders²²². Evidence from the most recent systematic review of non-affective and affective psychoses by ethnicity in the UK²²³

shows these conditions are particularly elevated for Black ethnic groups but are higher for all ethnic minority groups including those previously not assessed through meta-analyses (White Other, Mixed Ethnicity). This is thought to be related to broader disadvantages affecting ethnic minority people as well as linguistic distance²²⁴. Findings on the influence of ethnicity on common mental disorder are complex and do not always follow the predicted pattern that disadvantaged minority ethnic groups are more vulnerable. In England, findings from the Adult Psychiatric Morbidity survey (2014) were not statistically significant for analyses of the differential experiences of minority ethnic groups due to the smaller size of the minority ethnic sample. Nonetheless results did show that being from a Black ethnic background might be associated with a higher risk of common mental disorder compared with all other ethnic groups in England, more so for Black women than Black men.²²⁵

It is thought that the relationship between ethnicity and mental health is mediated by socio-economic status but also migration status. A cross-sectional study in South East London found that when ethnicity, migration status and socio-economic status were taken into account, both the migrant economically inactive and the White British economically inactive classes had a similarly high prevalence of common mental disorder²²⁶. Refugees and asylum seekers are more likely to experience mental health problems than the general population, including higher rates of depression, PTSD and other anxiety disorders²²⁷. Evidence of stigma,²²⁸ unequal access to treatment both for serious mental illness²²⁹ and recovery exists.

The differential effect that COVID-19 has had on death rates (increased death rate of people from Black backgrounds, Pakistani and Bangladeshi backgrounds²³⁰) and increased critical care admissions²³¹ for people from minority ethnic backgrounds, and higher BAME death rates among the NHS workforce (67% of all NHS worker deaths) may contribute to higher levels of stress and anxiety among BAME people resulting in negative mental health outcomes.

Higher death rates for BAME communities might result in higher levels of complicated grief due to traumatic bereavement and disruption of traditional burial customs/limited opportunities to observe cultural rituals. Data from an unpublished social work research study,²³² also highlighted cultural factors as highly significant within death, dying and bereavement, where western models still largely dominate. Many research participants in this study described struggling to support bereaved people from different ethnicities. The increased risk of mental ill health might also manifest through PTSD for those discharged from critical care or greater anxiety due to greater exposure to the virus (through housing, transport, health and social care work; exposures through social networks).

24. Age (life course)

Baseline Prevalence of mental disorders in England by age group (pre-COVID-19)

Children and Young People²

- 5.5% of children aged 2 to 4 years were diagnosed with any mental disorder – this equates to around 114,000 children
- 12.8% of CYP aged 5 to 19 years were diagnosed with any mental disorder – this equates to around 1,266,000 CYP

Adults aged 16 and over³ (working age – 16-64, older adult – 65+)

Common Mental Disorders (CMD)

- One in six (17%) people aged 16 and over identified as having a common mental disorder in the past week – this equates to around 7,689,000 people. The prevalence by age varies with highest prevalence for ages 35-44 (19.3%) and is then decreasing with age (8.8% for 75+)
- Working age adults - prevalence varies between 18% and 19.3% and this equates to around 6,617,000
- Older adults - prevalence varies between 8.8% and 11.5% and this equates to around 1,046,000

Post-Traumatic Stress Disorder (PTSD)

- 4.4% of people aged 16 and over screened positive for PTSD - this equates to around 1,992,000 people. The prevalence varies by age with highest prevalence for ages 16-24 (8.0%) and is then decreasing with age (0.6% for 75+)
- Working age adults - prevalence varies between 8.0% and 3.7% and this equates to around 1,815,000
- Older adults - prevalence varies between 0.6% and 1.6% and this equates to around 118,000

Psychotic disorders

- 0.7% of people aged 16 and over identified as having a psychotic disorder in the past year - this equates to around 328,000 people. The prevalence varies by age with highest prevalence for ages 35-44 (1.1%) and is then decreasing with age (0.2% for 75+).
- Working age adults - prevalence varies between 0.5% and 1.1% and this equates to around 295,000
- Older adults - prevalence varies between 0.2% and 0.3% and this equates to around 24,000

Bipolar disorder

² NHS Digital (2018). Mental Health of Children and Young People in England, 2017. <https://digital.nhs.uk/data-and-information/publications/statistical/mental-health-of-children-and-young-people-in-england/2017/2017>

³ NHS Digital (2016). Adult Psychiatric Morbidity Survey: Survey of Mental Health and Wellbeing, England, 2014 <https://digital.nhs.uk/data-and-information/publications/statistical/adult-psychiatric-morbidity-survey/adult-psychiatric-morbidity-survey-survey-of-mental-health-and-wellbeing-england-2014>

- Nearly 2% of people aged 16 and over screened positive for bipolar disorder – this equates to around 887,000 people. The prevalence varies by age with highest prevalence for ages 16-24 (3.4%) and is then decreasing with age (0.4% for 65-75).
- Working age adults - prevalence varies between 1.5% and 3.4% and this equates to around 836,000
- Older adults - prevalence is 0.4% (65-74 and no cases for 75+) this equates to around 22,000

Attention-deficit/hyperactivity disorder (ADHD)

- 9.7% of people aged 16 and over screened positive for ADHD with 2.3% reporting to be professionally diagnosed ADHD – this equates to around 4,406,000 people with positive screen of which 1,031,000 had confirmed diagnosis. The prevalence varies by age with highest prevalence for ages 16-24 (14.6%) and is then decreasing with age (3.4% for 75+).
- Working age adults - prevalence varies between 9.0% and 14.6% and this equates to around 3,969,000
- Older adults - prevalence varies between 3.4% (75 and over) and 4.2% (65 to 74) and this equates to around 390,000

Eating disorder (Based on Health Survey for England 2014)²³³

- 1.2% of people aged 16 and over reported a diagnosis of eating disorders – this equates to around 558,000 people. The prevalence varies by age with highest prevalence for ages 16-24 and 35-44 (2.1%) and is then decreasing with age (0.5% for 75-84)
- Working age adults - prevalence varies between 0.8% and 2.1% and this equates to around 495,000
- Older adults - prevalence is 0.5% and 0.7% (no cases for 85+) this equates to around 47,000

Personality Disorder²³⁴:

- 13.7% of people aged 16 and over screened positive for any PD, with similar rates in men and women.
- Prevalence of self-diagnosis (aged 16+) is 0.3% and professional diagnosis is 0.5%; indicating most people with personality disorder likely do not have a formal diagnosis.
- Screening positive on all three measures of PD (ASPD, BPD, and any PD) was more common among younger people, and in those living alone, not in employment, or in receipt of benefits.
- Adults age 16-54 screen positive varies between 12.8 and 22.4%, reducing with age; ages 55-74 screen positive prevalence is 9.4% and 75+ is 8%.

Baseline Incidence (new cases) by age groups in England (pre-COVID-19)²³⁵

Using Global Burden of Disease data, the annual incidence of all mental disorders (including anxiety disorders, attention-deficit/hyperactivity disorder, autism spectrum

disorders, bipolar disorder, bulimia nervosa, conduct disorder, depressive disorders, dysthymia, eating disorders, idiopathic developmental intellectual disability, major depressive disorder, other mental disorders, schizophrenia) is estimated as:

- Infancy and early year (1 to 4 years) - incidence is estimated at 4 per 1,000 population and this equates to around 12,000 children
- Childhood and adolescences (5 to 24 years) - incidence is estimated at 50 per 1,000 population and this equates to around 672,000 CYP
- Working age adults - incidence is estimated at 75 per 1,000 population and this equates to around 2,117,000 adults
- Older adults - incidence is estimated at 48 per 1,000 population and this equates to around 484,000

Baseline of Self-Reported Mental Wellbeing²³⁶

- 19.7% people 16 and over report a high anxiety score (feeling highly anxious), with significantly higher proportions for people 20-24, 45-49 and 50-54 (22.1%, 21.1% and 21.4%). Older people showed significantly lower levels of feeling highly anxious (17%)
- 7.8% people 16 and over report a low happiness score, with significantly higher proportions for people 20-24 (8.3%) and ages 45-64 (9.0% or higher). Older people showed significantly lower levels of low happiness (6.7%)

25. Sex

Baseline prevalence of CYP with any mental disorder, by sex, in England²³⁷

- 4.2% of girls aged 2 to 4 years (around 42,000 girls); 6.8% of boys aged 2 to 4 years (around 72,000 boys)
- 12.9% of girls aged 5 to 19 years (around 624,000 girls); 12.6% of boys aged 5 to 19 years (around 642,000 boys)
 - 6.6% of girls aged 5 to 10 years (around 135,000 girls); 12.2% of boys aged 5 to 10 years (around 264,000 boys)
 - 14.4% of girls aged 11 to 16 years (around 265,000 girls); 14.3% of boys aged 11 to 16 years (around 278,000 boys) and
 - 23.9% of girls aged 17 to 19 years (around 221,000 girls); 10.3% of boys aged 17 to 19 years (around 101,000 boys)

Baseline prevalence of Adults 16 and over with mental disorders, by age, in England²³⁸

Common Mental Disorders (CMD) - 20.7% of women and 13.2% of men aged 16 and over were identified as having CMD – this equates to around 4,775,000 women and 2,925,000 men respectively

Post-Traumatic Stress Disorder (PTSD) - 5.1% of women and 3.7% of men aged 16 and over screened positive for PTSD – this equates to around 1,172,000 women and 820,000 men respectively

Psychotic disorder - 0.8% of women and 0.7% of men aged 16 and over were identified as having a psychotic disorder in the past year - this equates to around 179,000 women and 149,000 men respectively

Bipolar disorder - 1.8% of women and 2.1% of men aged 16 and over were screened positive[a] for bipolar disorder - this equates to around 416,000 women and 471,000 men respectively

Attention-deficit/hyperactivity disorder (ADHD) - 9.5% of women and 10.0% of men aged 16 and over were screened positive[a] for ADHD - this equates to around 2,222,000 women and 2,185,000 men respectively

Eating disorder²³⁹ - 2.0% of women and 0.5% of men aged 16 and over reported a diagnosis of eating disorders – this equates to around 452,000 women and 106,000 men respectively

Baseline Incidence of any mental disorder

Using Global Burden of Disease data, the incidence of mental disorders (including anxiety disorders, attention-deficit/hyperactivity disorder, autism spectrum disorders, bipolar disorder, bulimia nervosa, conduct disorder, depressive disorders, dysthymia, eating disorders, idiopathic developmental intellectual disability, major depressive disorder, other mental disorders, schizophrenia) is estimated as:

- persons (all ages) - incidence is estimated at 52 per 1,000 and this equates to around 2,925,000 people
- female (all ages) - incidence is estimated at 60 per 1,000 and this equates to around 1,690,000 people
- male (all ages) - incidence is estimated at 45 per 1,000 and this equates to around 1,235,000 people

Baseline of Self-Reported Mental Wellbeing (16 and over)²⁴⁰

- A significantly higher proportion of women (22.1%) than men (17.3%) report a high anxiety score (feeling highly anxious).
- A significantly higher proportion of women (8.3%) than men (7.3%) report a low happiness score

26. Pregnancy

26.1 Risk of mental health problems during the perinatal period

The impact of poor mental health can be greater during the perinatal period, particularly if left untreated, leading to long lasting effects on women and their families.²⁴¹ Perinatal mental health problems include common mental health problems, including anxiety disorders (13%) and depression (12%)²⁴² or postpartum psychosis (which affects between 1 and 2 in 1000 women who have recently given birth²⁴³). The impact of poor mental health can be greater during this period, particularly if left untreated. This includes women with a pre-existing psychiatric diagnosis. The

Confidential Enquiry into Maternal Deaths shows that suicide remains one of the leading causes of maternal mortality in the UK. Specific traumas including stillbirth, infant complications and other forms of traumatic childbirth experiences are associated with mental health problems, particularly PTSD.²⁴⁴

Many factors can increase the risk of perinatal mental health problems, such as domestic violence, interpersonal conflict, low social support, alcohol or drug abuse, extreme stress, emergency situations (including public health emergency such as pandemics) and trauma.²⁴⁵ Bereavement by miscarriage, stillbirth or neonatal death are also more likely to lead to mental health problems in both parents.

26.2 Impact of COVID-19 on perinatal mental health

COVID-19 might lead to increase stress in women and high stress during pregnancy have been linked to poor mental health in children and childhood adversities.²⁴⁶ Lack of social support, history of abuse or domestic violence and adverse life events are risk factors for antenatal depression that are likely to increase during COVID-19. Antenatal services are disrupted and have adapted to become more virtual, potentially making it more difficult to identify mental health problems. The impact of bereavement may also be exacerbated by increased restrictions due to COVID-19 (see Bereavement section) putting women at higher risk of mental health problems.²⁴⁷ Reduced income, changes in shopping habits and difficulties with access to food might lead some women to food insecurity which is associated with increased risk of common mental disorder in women during pregnancy.²⁴⁸ A recent rapid review (pre-publication) of the impacts of infectious disease outbreaks on pregnant women highlighted that pregnant women are likely to experience negative emotional states associated with living with uncertainty; concerns about infection; disrupted expectations and ability to access birth, prenatal care and postnatal care; disrupted routines; social support; demands from others and financial and occupational concerns.²⁴⁹

Potential impacts of COVID-19 on population mental health in England

PRELIMINARY EVIDENCE MAPPING

REPORT 2: Vulnerable Groups

Introduction

Department of Health and Social Care mental health policy team commissioned Public Health England to provide preliminary evidence mapping on the mental health impacts of COVID-19.

Evidence was requested on mental health impacts for the following vulnerable groups:

- People with existing mental health problems
- People with learning disabilities and autism
- People with physical health problems
- People with direct experience of COVID-19
- People who have been bereaved
- Health and social care staff

Aims

To provide a rapid assessment of the evidence: synthesizing academic literature; emerging intelligence and grey literature and expert knowledge to inform the policy response to the mental health and psychosocial support needs of key vulnerable groups during the COVID-19 pandemic in England.

Methodology

A rapid process was developed to produce this document. Evidence was gathered that had been published up to mid-June 2020 using the following methodology:

- A small team was recruited from within the PHE public mental health team and other PHE staff from the PHE COVID-19 Mental Health and Psychosocial Support (MHPSS) reference cell to plan and undertake the work. All members collected data, undertook evidence assessment and authored sections using an approach specific to this work.
- No formal search strategy was undertaken to gather relevant evidence. The PHE team used their expert knowledge to agree a list of existing summaries of evidence of public mental health. These sources were scrutinised for evidence by the team to include in this report that relate to the vulnerable groups. We also identified a list of publicly-available COVID-19 evidence collections to scrutinise for emerging mental health-related evidence from the current pandemic. We also drew from evidence from ongoing population surveys in the UK set up since the start of the pandemic. Evidence was gathered from the following sources:

Public Mental Health Documents:

- Royal Society for Public Health²⁵⁰,
- Centre for Mental Health²⁵¹,
- Faculty of Public Health²⁵²,
- University of Bristol Rapid Review²⁵³
- VicHealth²⁵⁴
- COVID-19 internal summary documents shared with the team from the National Health Service (NHS), DHSC, Department for Education and Northern Ireland Health and Social Care.

COVID-19 Academic and Grey Literature Collections:

- PHE COVID-19 Literature Digest²⁵⁵
- Evidence for Policy and Practice Information (EPPI) Centre living map of COVID-19 evidence²⁵⁶,
- Norwegian Institute of Public Health map²⁵⁷
- COVID Minds²⁵⁸
- Cochrane COVID-19 special collection²⁵⁹
- Mental Health and Psychosocial Support Network COVID-19 Toolkit (1.0)²⁶⁰

COVID-19 surveys:

Data from COVID-19 survey results were identified through work PHE has been undertaking on real time mental health surveillance. Studies consist of a mix of longitudinal and cross-sectional studies with varied convenience and representative sampling. Data has also been drawn from other national surveys from sources such as the Office for National Statistics (ONS) and YouGov, and from PHE Fingertips tools.

These sources of data are discussed and presented in further detail in the [PHE COVID-19 Mental Health and Wellbeing surveillance report](#).

- **Strength of evidence**

The quality of evidence can vary depending on the research methodology and the execution of that methodology in different studies. We categorised evidence using a crude approach combining these two aspects of study quality. The first aspect used broad categories of study design within a hierarchy (with preference given to meta-analysis and systematic reviews). The second aspect assessed the extent to which the researchers maintained fidelity to the stated methodology. This crude assessment has been applied to the summary statements in the table and should be interpreted with caution.

Strength of Evidence	Quality	Fidelity
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A) One or more systematic review or meta-analysis, including review of reviews, with good quality methodology	Good quality methodology	Systematic review/ randomised controlled trial/cohort study/ cross sectional survey with representative sample (if descriptive)/ qualitative study with appropriate methodology/ case control with appropriate adjustment of confounding factors; should be peer reviewed; no known methodological flaws
B) Several good quality methodology studies in appropriately translatable context		
C) Several studies of moderate to high quality methodology or one high quality methodology study in appropriately translatable context	Moderate quality methodology	Any of the above with known methodological flaws e.g. unadjusted case control or cohort study; or non-peer reviewed
D) One or more study of low to moderate quality methodology or any study with moderate to high quality methodology in a different context where it is unclear that findings will be applicable		
E) Expert opinion/narrative/ editorial/ media reports	Low quality methodology	Cross sectional survey with non-representative sample (which is not adjusted for); pre-post without control group; other study with poor/inappropriate or unknown design; not peer reviewed

Notes on interpretation and use

The methodology has been designed to provide a rapid response to the DHSC commission to map the evidence on determinants of mental health during the COVID-19 pandemic. It suggests the key determinants and likely impacts to consider in planning system leadership to mitigate worsening population mental health due to COVID-19.

The document contains a tabular summary of evidence with assessment of strength of evidence, followed by further narrative explanation on each group.

Key limitations

This evidence mapping is not a systematic review of the evidence and should not be regarded as exhaustive. The sources of evidence have been identified through expert knowledge and known sources: decisions on what evidence to include may be prone to author bias. Therefore, there will be gaps where authors have failed to identify relevant sources of evidence.

The rapid nature of the pandemic means that some evidence we have included using COVID-19 data will be less robust (such as smaller surveys, media coverage and non-peer reviewed research papers). Caution should be taken in drawing conclusions from this evidence.

Quality assessment of the evidence has been carried out using a bespoke rapid methodology rather than validated tools; and has not included in-depth critical appraisal. The assessment of quality should therefore be interpreted with caution. We would expect further systematic and/or technical appraisal before evidence in this document is used to inform policy and interventions.

Literature from all settings was considered but priority given to inclusion of UK/European data. Relevance of context has been taken into account in the narrative and in the strength of evidence assessment process.

This document does not contain evidence published after mid-June 2020.

Authors and acknowledgements

The following individuals at PHE have contributed to the development of these documents:

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Summary of key factors influencing mental health for vulnerable groups in the COVID-19 pandemic

	Vulnerable Group	Summary of Current Evidence <i>See notes section below for further detail and references</i>	Current data on scale of potential need and mental health impacts for this group
a)	People with chronic physical conditions	<p>People with long-term physical health conditions report experiencing delays in care and operations, higher levels of anxiety and fear about attending hospital appointments and may find themselves having to manage their health without access to their usual support network (D).</p> <p>This group is more likely to experience severe COVID-19 disease if infected, with a higher mortality rate (B). There is likely to be higher levels of fear of infection and COVID-19 related stress in this group.(D)</p> <p>This group is also more likely to have pre-existing mental health problems (B) with rates of depression estimated to be 2 or 3 times higher than the general population.(C)</p>	<p>Over 15 million people in England are currently living with one or more long-term/chronic physical health conditions Kings Fund and Centre for Mental health, 2012</p> <p>A survey commissioned by the Health Foundation found access to health services for people with pre-existing conditions was reportedly 20% lower during COVID-19. (https://www.health.org.uk/news-and-comment/blogs/early-insight-into-the-impacts-of-COVID-19-on-care-for-people-with-long-term)</p>
b)	People who have been shielding	<p>Those who were shielding have experienced the most intense form of social distancing during the pandemic: quarantine is associated with reduced mental health.(B) Risk factors for worse mental health that have particularly changed due to shielding include lack of exercise, less access to the natural environment, loneliness/reduced social interactions and fear of infection (See Evidence pack 1). Those who are shielding are also more likely to have pre-existing mental health problems: chronic physical conditions and cancer are associated increased prevalence of mental health problems.(B)</p>	<p>ONS Shielding survey –reported on 15 June that, of the 2.2 million clinically extremely vulnerable (CEV) people advised to shield, an estimated 785,000 (35%) report a worsening in their mental health since receiving shielding guidance. Younger people and women were more likely to report worsening of mental health.</p>
c)	People with pre-existing mental health conditions	<p>There are overlapping risk factors for severe COVID-19 disease and common mental disorders (CMD), such as deprivation (B), chronic physical conditions (B) and being of a minority ethnic background (B/C), so communities with higher rates of CMD are also experiencing more COVID-19 disease and deaths.</p>	<p>17% of people in England met the criteria for a CMD APMS, 2014</p> <p>0.9% of people meet the criteria for severe mental illness. https://www.gov.uk/government/publications/severe-mental-</p>

	Vulnerable Group	Summary of Current Evidence <i>See notes section below for further detail and references</i>	Current data on scale of potential need and mental health impacts for this group
		<p>Prevalence of CMD is associated with low socioeconomic status (B), unemployment (B) and migrant status (C).</p> <p>Those with CMD may be less resilient if exposed to insecure work (C), unemployment (C) and financial stress during the pandemic due to pre-existing psychological and social vulnerability as well as exposure to stressors. There already exists a substantial treatment gap for those with CMD, with only 4 out of 10 accessing treatment (B) and many relying on community and family social supports (C). Emerging evidence suggests those with mental health problems are experiencing loneliness, social isolation and of lack of access to normal social support, services and resources. A small minority report benefit from reduction of stressors and increase in social support during the pandemic (D).</p> <p>People with pre-existing severe mental illness (SMI) are likely to have concurrent physical conditions that increase their susceptibility of COVID infection and contribute to a 15-20 year premature mortality gap (B). They also may have lifestyle determinants, and experience complex social, care and clinical needs that make adherence to infection prevention and control measures difficult; and care and support received may also be adversely impacted by social distancing measures.(D) SMI prevalence is higher for some demographic and socio-economic groups (for example Black, Asian and Minority Ethnic (BAME)) that are also at a higher risk of poor COVID-19 outcomes.(A)</p>	<p>illness-smi-physical-health-inequalities/severe-mental-illness-and-physical-health-inequalities-briefing</p> <p>UCL study has found significantly higher rates of anxiety and depression in those reporting pre-existing mental health conditions, although it is unclear if this is different to pre-COVID background rates UCL COVID-19 Social Study</p> <p>A survey by Rethink Mental Illness found that 78.7% of respondents said that coronavirus and the response to it had made their mental health 'worse' or 'much worse'. The top three factors for worsening mental health are an inability to do normal activities, to see family or friends, and fears for the health of family and friends. 42% of those who responded said their mental health had got worse during the pandemic because they were getting less support from services</p> <p>YoungMinds survey of 2,111 young people with a history of mental health needs: 83% report the pandemic had made their mental health worse compared to 7% who said it had made their mental health better. Top concerns were isolation, food supplies and managing mental health problems. Reported reasons for improvement included the absence of school pressures and bullying; having a shared focus for anxiety and social support received.</p> <p><i>Latest Mental Health Service Dataset reports are available via this link.</i></p>
d)	People with learning disabilities	This population has a higher prevalence of long- term conditions and mental health problems. There is also evidence that people with autism are at increased risk of anxiety, phobia, obsessive-compulsive disorder and social anxiety disorders. (A)	Insights from self-advocacy groups in the UK report that people with learning disabilities are feeling anxious and confused about the changes stemming from COVID-19, including specific concerns such as communication

	Vulnerable Group	Summary of Current Evidence <i>See notes section below for further detail and references</i>	Current data on scale of potential need and mental health impacts for this group
	and autism	<p>Due to COVID-19, increased anxiety symptoms, distress and challenging behaviour are likely because of changes in routines and daily activities, less understanding of rules, communication challenges and reduced social interaction/loss of support networks.(D) There is a risk of diagnostic overshadowing, which means that mental health issues associated with or exacerbated by COVID-19 may not be picked up. In other countries, individuals with autism spectrum disorder are being identified as part of a group at higher risk for complications.(E)</p> <p>Note: there is limited UK and international data/evidence on the impacts of COVID-19 for this group. We suggest this is an under-researched group in the context of the pandemic.</p>	<p>challenges, loss of social support, isolation and the impact of potential bereavement All Wales First, 2020</p> <p>A recent online survey set up to investigate the effects of COVID-19 on autistic adults by Ghent University in Belgium found they reported a greater increase in depression and anxiety symptoms in response to the pandemic compared to neurotypical adults.</p>
e)	People with direct experience of COVID-19 infection	<p>In previous coronavirus epidemics, those who have been infected have experienced post-illness mental health problems such as PTSD (32%), anxiety (15%) and depression (15%) although majority do not remain long term .(A)</p> <p>There are also potential direct neuropsychiatric effects of coronavirus infection; which have been identified in previous coronavirus epidemics. Emerging evidence suggests a possible increased risk of stroke and encephalopathy in COVID-19 survivors.(D)</p> <p>In previous epidemics, those who have been infected have experienced stigma and discrimination that can impact on mental health; as well as other mental health problems such as depression following the illness.(E)</p> <p>There is risk of an increased risk of post-traumatic stress disorder (PTSD) post ITU admission and emerging evidence of increased risk of PTSD post isolation / quarantine.(A)</p>	<p>As of 4pm on 19 June, 301,815 people have tested positive. As of 4pm on 19 June, of those tested positive for coronavirus in the UK, across all settings, 42, 461 have died. There are therefore currently approximately quarter of a million confirmed survivors of COVID-19, however estimates are imprecise as not all cases will have been tested and not all deaths will have been accurately captured.</p> <p>https://coronavirus.data.gov.uk/?_ga=2.88127580.635488787.1591369912-1027971847.1578493827</p> <p>As of 13 May 20, 3,721 patients with COVID-19 were discharged from intensive care units across England, Wales and Northern Ireland. https://www.icnarc.org/Our-Audit/Audits/Cmp/Reports</p> <p><i>*Latest Intensive Care National Audit Research Centre (ICNARC) publication from 31 July 2020 reports 10,624 patients admitted to ICU with COVID-19</i></p>

	Vulnerable Group	Summary of Current Evidence <i>See notes section below for further detail and references</i>	Current data on scale of potential need and mental health impacts for this group
f)	People who have been bereaved	<p>The number of people bereaved has increased due to the pandemic.</p> <p>10-20% of those bereaved will usually experience complicated grief.(A) It is likely that these rates will increase during the COVID-19 pandemic as risk factors for complex grief include not being able to say goodbye; death whilst intubated and bereaved living alone(C), and thus restrictions on visits to care homes/hospitals and social distancing measures funerals heighten risk for grief complications.</p> <p>Groups at higher risk of requiring additional bereavement support during the pandemic include:</p> <ul style="list-style-type: none"> • those with higher risk of mortality from COVID-19 e.g. BAME communities, the elderly, those living in deprived areas (B) • those disproportionately affected by the lockdown e.g. those living alone, those in vulnerable groups and those shielding • those who already face risks in bereavement or barriers to accessing support e.g. those with learning disabilities and dementia 	<p>From 28 March – 1 May (18 weeks) there were 247,261 deaths in England and Wales. This was 46,494 more deaths than the previous five-year average ONS Weekly deaths register</p>
f)	Health and Social Care staff	<p>Health and care workers have been identified as key vulnerable groups in previous infectious disease outbreaks. They may have anxieties around fear of getting the illness, being adequately protected infecting family members, or be exposed to stressful situations including risk of moral injury (E).</p> <p>Research has shown that 1 in 5 healthcare workers are showing signs of common mental health disorders during COVID-19, with nurses and women more affected. (A)</p>	<p>NHS employs 1.2million staff NHS Digital</p> <p>The number of people working in adult social care was estimated at 1.49 million in 2019 Skills for care</p> <p>There were 30,700 full-time equivalent (FTE) children and family social workers in 2019 ONS</p> <p>One in two healthcare workers across the UK felt that their mental health had declined in the previous eight weeks IPPR and YouGov, April 2020</p>

Notes

a) People with chronic physical conditions

Over 15 million people in England are currently living with one or more long-term/chronic physical health conditions, and more than 4 million of these people will also have a mental health problem²⁶¹. People with long-term physical conditions are more likely to have lower wellbeing scores than those without and evidence suggests that those with specific long-term conditions such as cancer, diabetes, asthma and high blood pressure are more likely to experience a range of mental health problems including depression, anxiety and PTSD²⁶². Some examples of increased prevalence amongst key long-term conditions include –

- **Cardiovascular disease:** depression is two to three times more common in a range of cardiovascular diseases including cardiac disease, coronary artery disease, stroke, angina, congestive heart failure, or following a heart attack. Anxiety issues are also more common amongst this group²⁶³.
- **Diabetes:** People with diabetes are two to three times more likely to have depression than the general population²⁶⁴.
- **Chronic Obstructive Pulmonary Disease (COPD):** Mental health problems are approximately three times more prevalent among people with COPD. Anxiety disorders are also particularly common – for example, panic disorder is up to 10 times more prevalent than in the general population²⁶⁵.
- **Musculoskeletal disorders:** depression is common in people with chronic musculoskeletal disorders. Up to 33% of women and more than 20% of men with all types of arthritis may have co-morbid depression²⁶⁶.

People with some long-term physical health conditions (e.g. COPD, diabetes etc.) have been identified as more clinically vulnerable to the coronavirus - either as a direct result of their condition or associated immunosuppression, meaning they are more likely to need intensive care and suffer higher mortality²⁶⁷. As a result, they may be part of the “At high risk” who have been advised to shield or the “At-Risk” group who have been told to practice strict social distancing – putting them at higher risk of mental health impacts due to isolation and restricted social contact.

Early UK surveillance suggests greater psychological morbidity amongst those with a physical health conditions. ONS data suggests that the proportion of respondents reporting that their well-being was negatively affected remained higher for those with an underlying health condition (51% compared with 48%)²⁶⁸, and UCL social study²⁶⁹ data indicates that those with physical health conditions report higher levels of stress and anxiety than the overall population.

Beyond the direct impacts of shielding, there is likely to be a more lasting mental health impact on those with long-term physical health conditions who may be experiencing delays and/or disruption to care and treatment, higher levels of anxiety and fear about attending hospital appointments and are having to manage their health without access to their usual support network²⁷⁰. A recent survey suggests people with ongoing health needs are not using services as much as they need to during the pandemic, with access to health services for people with pre-existing conditions found to be 20% lower during the COVID-19 peak²⁷¹. Early qualitative research findings suggest that this partly stems from anxiety about attending healthcare settings and risk of exposure²⁷².

b) People who have been shielding

From the end of March 2020, the shielded were described²⁷³ as “At high risk” (a group circa 1.5 million, defined by the CMO who should practice complete “shielding”). There is also an “At Risk” group – a larger group (circa 19 million) normally at risk from influenza who were told to practice strict social distancing. The shielded group includes those on immune suppression therapy (including some organ transplant recipients), some cancers, severe respiratory conditions, some rare diseases and pregnant women with significant congenital heart disease. They should have received a letter²⁷⁴ by their GP or hospital clinician advising them strongly to stay at home until 30th June and minimise contact with people within their household. As of 15th May, 2020²⁷⁵ there were 2,213,950 living patients on the NHS Shielded Patient List resident in England, with nearly a million of these being over 69 years old. From the 1st June the guidance changed enabling them to spend time outdoors and have more interactions.

These individuals are likely to have experienced the most intense form of social distancing (quarantine) during the pandemic and be at most risk of resultant mental health problems. A recent rapid review²⁷⁶ of quarantine measures that were put into place during past outbreaks indicates the impact on mental health outcomes, including higher levels of depression, anxiety, post-traumatic stress symptoms, anger, and fear.

Those being shielded are at heightened risk from; a longer duration of quarantine, fears of infection, confinement, isolation, inadequate supplies and inadequate information. In addition, access to the natural environment will have been limited for those being shielded, limiting the associated mental health benefits. This is linked to the likely reduction in physical activity for those that are shielded. Loneliness is also likely to increase for this group. Shielded patients are also more likely to have pre-existing mental health problems that may be exacerbated by the experience, associated with their underlying physical condition: increased prevalence of

depression and/or anxiety has been associated with cancer patients²⁷⁷, transplant recipients²⁷⁸ and those with autoimmune diseases²⁷⁹.

There will be disparities in the mental health outcomes related to those who are shielding due to the complex interplay of determinants of mental health. The mental health of those in lower socioeconomic groups (including higher proportion of BAME) who are shielding is more likely to be adversely affected as -

- they are more likely to have the health conditions on the list,
- where homes are of poor condition, more time spent within these environments could worsen mental health,
- there are fewer GP's per head of population in deprived communities to provide support,
- there is less volunteering capacity in deprived areas,
- they are more likely to be victims of crime as crime rates may be higher in deprived communities

In order to mitigate some of these psychological effects of those shielding, the current pandemic has seen an increase in volunteering and practical support being offered to those shielding. However, this is unequally distributed across the country with deprived areas less resourced by volunteer provision (See Evidence Pack 1: determinants).

COVID-19 evidence of MH impact on those shielding

Blood Cancer UK (representing over 100,000 people, many of whom are shielding) surveyed 1,077 people²⁸⁰ with blood cancer such as leukaemia, lymphoma and myeloma. Over half of people in the survey who are shielding from coronavirus are struggling with their mental health and nearly one in 10 say the impact is severe. In addition, three out of four (75%) of the 605 friends and family members who took part in the survey said that supporting a person with blood cancer during the pandemic had increased their stress.

The ONS undertook a 'Shielding behavioural Survey of individuals who are Clinically Extremely Vulnerable (CEV) to coronavirus' collected between 28 May and 3 June 2020.²⁸¹ The majority (61%, an estimated 1,369,000) of CEV people report no difference in their mental health and well-being since receiving shielding guidance. However, 35% of CEV individuals report their mental health

and well-being as worsening during the COVID-19 pandemic; 29% of CEV people report it becoming slightly worse and 6% report their mental health becoming much worse. Of CEV people aged under 50 years and aged between 50 and 59 years, almost half report worsening mental health (46% and 45% respectively) compared with 26% and 23% of those aged between 70 and 74 years and aged over 75 years respectively. More females reported a worsening of mental health (40%) compared with males (28%).

20% of CEV people report being unable to access certain types of care (for example, tests, scans) and 10% report being unable to access any care since receiving shielding advice; which may cause anxiety.

Financial strain and unemployment are risk factors for poor mental health (see Evidence Pack 1). An estimated 627,000 (28%) CEV people previously worked before being advised to shield. Of those who normally worked, 36% are now working from home and 5% are continuing to work outside the home (an estimated 32,000). Of those who continue to work outside the home, an estimated 19,000 would be unable to meet their financial obligations if they stopped working. The remaining CEV people (who normally worked) who are not working at the moment, have either:

- been furloughed and cannot work from home (31%)
- been furloughed but could work from home (5%)
- stopped working (17%)
- received self-employment income support scheme as cannot work from home (6%)

c) People with pre-existing mental health conditions

I. Common mental disorders (CMD)

The Adult Psychiatric Morbidity Study in 2014²⁸² found that 17% of people in England met the criteria for a CMD. CMDs are often under-diagnosed in older age²⁸³. CMDs are associated with those living alone, chronic physical health problems, not being employed and belonging to certain ethnic and migrant²⁸⁴ groups, non-heterosexual populations²⁸⁵, lower socioeconomic status^{286 287} and higher levels of neighbourhood disorder (violence etc)²⁸⁸, debt²⁸⁹ and discrimination²⁹⁰ among others.

There is a substantial treatment gap, with national data from 2014 suggesting only 39% of those with anxiety and depression were accessing treatment²⁹¹. The South East London Community Health Study²⁹² found that only 40% of those who met the criteria for CMD had engaged in formal help seeking and approximately 34% had only sought informal help from friends, family and religious leaders; highlighting the importance of community supports for this population.

Impact of COVID-19

People with pre-existing mental disorders have been highlighted as a vulnerable group.^{293 294} However at this time, there appear to be no current studies of the effect of COVID-19 or other pandemics on people with common mental disorder. Early (pre-publication) findings from South London and the Maudsley NHS Trust²⁹⁵ suggest number of deaths for the two months between 16th March and 15th May were 2.4-fold higher in 2020 than 2019, with 958 excess deaths. There are several possible impacts highlighted in the literature: increased fear/anxiety, isolation, disruption to treatment and long-term economic impacts. Several determinants of common mental disorder are features of the pandemic itself e.g.: increased prevalence of domestic violence, home stressors such as caring and social isolation, financial problems, unemployment. Thus, the pandemic might be anticipated to further increase stress for people with existing common mental health problems; which is corroborated by early surveillance data.²⁹⁶

An Asian review of existing research on pandemics found that studies of COVID-19, the Severe Acute Respiratory Syndrome (SARS) epidemic or the influenza epidemic in 2009 identified anxiety, panic, depression to be the predominant manifestation²⁹⁷. The authors suggest likely negative impacts on people with obsessive compulsive disorder (OCD) and those with other anxiety disorders such as checking, hoarding and washing compulsions as advice on improving personal hygiene measures might increase the contamination obsessions and washing compulsions as well as panic buying and excessive hoarding of essential items.²⁹⁸ The same expert commentary suggested that for patients with recurrent and chronic depression, lockdown is a major stress jeopardizing normal daily routine and social interactions which might result in an exacerbation of depressive symptoms. Absence of other supports in a pandemic context could lead to self-medication through drugs or alcohol misuse²⁹⁹ however there is little robust data on this available at present.

A recent survey by Rethink Mental Illness³⁰⁰ with 1434 responses of people who self-reported mental health problems or caring for someone with mental health problems, (50.2% having directly accessed mental health services in the past 12 months), found that 78.74% of respondents said that coronavirus and the response to it had made their mental health 'worse' or 'much worse'. The top three factors for worsening mental health are an inability to do normal activities, to see family or friends, and fears for the health of family and friends. 53.7% of respondents feel out of control of their life, and 41.5% said their mental health was worse as a result of

getting less support from mental health services. Lifestyle behaviours that may adversely impact mental health were also reported to have increased: 54.2% reports doing less physical exercise, 51.3 eating less healthily; 22.7% drinking less alcohol and 16.3% smoking more than usual. A quarter to a fifth of respondents (between 26% and 20%) said that various economic impacts of the pandemic (on their employment or finances) were worsening their mental health. 10% said that the additional pressure of caring for children who would normally be at school or nursery was worsening their mental health.

Early findings (prepublication) from the UK based Repeated Assessment of Mental health in Pandemics (RAMP) Study suggest 69% of respondents who report substantial symptoms of OCD have experienced worsening of their symptoms in the course of the pandemic.³⁰¹ The study also indicates that out of those with pre-existing depression (N=6776) 71% had worsening symptoms and 7% better out of those with pre-existing anxiety (N=6782) 69% had worsening and 7% better in the context of the pandemic.

It is estimated that 14.7% people experience mental health problems whilst in employment³⁰². A recession might increase job insecurity which may also lead to stress and mental health deterioration even among those with CMD who continue to work³⁰³ or for those who become unemployed³⁰⁴ or experience financial stress³⁰⁵.

A previous review has suggested people with mental or physical health conditions were more likely to be made redundant, however job loss due to wholesale firm closures is less likely to have a differential impact on those with existing health conditions³⁰⁶. A survey by the Money and Policy institute³⁰⁷ of 2096 people, weighted to be nationally representative, suggested that those with experience of mental illness were likely to be more vulnerable to financial strain: 29% of people with experience of mental health problems reported they couldn't make ends meet for longer than a month compared to 14% who have never experienced a mental health problems. Qualitative findings suggested reduced problem-solving skills and increased anxiety may make dealing with these issues more difficult for those with mental health problems. They found that 38% have experienced a mental health problem reported that their household monthly income had reduced as a result of the crisis; 31% reported having spent less on essentials like food or heating 10% reported having missed a debt repayment. It is not clear whether these rates are different to those without experience of mental health problems.

II. People with SMI and complex mental health needs

People with severe and complex mental health problems are likely to have lifestyle determinants, and experience complex social, care and clinical needs that increase their susceptibility for COVID-19 infection³⁰⁸ and other mental and social impacts of pandemics.³⁰⁹ This group has a higher prevalence of smoking and co-morbidities such as hypertension, diabetes, pulmonary and

cardiovascular illness that are all associated with higher morbidity, poorer prognosis and higher mortality from COVID-19.^{310,311} Compared to the general population people with SMI aged 15 to 34 are 5 times more likely to have 3 or more physical health conditions and this health inequality reduces with age. Smoking prevalence in people with SMI registered with a GP is 40.5% almost 3 times that of the general population.³¹²

Evidence suggests that there is pre-existing disparity in prevalence and incidence of SMI is affected by the following factors which may be exacerbated in the context of the pandemic³¹³³¹⁴ (also refer to Evidence Pack 1):

- ethnicity - psychotic disorders are higher in men from Black ethnic backgrounds compared to other ethnic backgrounds
- socio-economic deprivation - SMI prevalence increases with an increase in deprivation (the contribution of factors related to socioeconomic deprivation – such as social stress and poverty – is well documented as both the cause and consequence of SMI)
- gender - although the evidence on gender is inconclusive at times, some studies report higher rates of SMI in males
- urban/ rural areas - higher prevalence has been reported in urban areas
- tobacco/smoking - higher rates associated with psychotic illnesses
- cannabis use – associated with higher rates of schizophrenia

Impact of COVID-19

A small case-control study³¹⁵ of 205 patients with SMI in Italy assessing psychological distress in patients with SMI during the COVID-19 outbreak reported that SMI patients had significantly higher unadjusted mean scores than non-psychiatric participants on the Perceived Stress Scale (PSS), the Generalized Anxiety Disorder Scale (GAD-7), the Patient Health Questionnaire (PHQ-9), and the Specific Psychotic Experience Questionnaire (SPEQ), Paranoia subscale.

The results indicate that patients with SMI are likely to higher to experience levels of COVID-19 related perceived stress, anxiety, and depressive symptoms compared to non-psychiatric participants. Patients were four times more likely to perceive high COVID-19

pandemic-related stress and had 2–3 times higher risk of severe anxiety and depressive symptoms. The SMI group were more deprived than the control group and had higher rates of physical comorbidities. The anxiety scores were not significant after adjusting of economic status; and other scales were impacted by adjusting for physical comorbidities and economic status, suggesting anxiety and worries in the context of the pandemic are linked to economic concerns and physical health.

Psychological reactions to pandemics include maladaptive behaviours, emotional distress and defensive responses and people who are prone to psychological problems such as people with SMI are especially vulnerable.³¹⁶ People living in inpatient and community based setting, may find it difficult to follow guidance to prevent the spread of infection.³¹⁷ Social distancing limits opportunities to obtain support from friends and families when needed³¹⁸ and together with reduced professional face-to-face contact can pose adverse outcomes in this group.³¹⁹

III. Access to treatment and services for those with pre-existing mental health conditions

Changes in service availability and delivery

The capacity and availability of mental health and other services usually accessed by people with mental illness is likely to be affected during the pandemic. Services' adherence to guidance on social distancing and self-isolation means reduced face to face contact.³²⁰ Other service impacts include staff sickness,³²¹ reduction in delivery of psychological therapies and staff redeployment.³²² There may be local pressures that make continuing services remotely difficult.³²³ Changes to inpatient service may include stopping visits to the inpatient unit, along with non-essential leave for service users, staggering ward visits, reducing the number of clinicians involved with inpatient care, and virtual multidisciplinary ward rounds.³²⁴ Early (pre-publication) findings from South London and the Maudsley NHS Trust³²⁵ suggest number of deaths for the two months between 16th March and 15th May were 2.4-fold higher in 2020 than 2019. Service changes, where CMHT sector showed relatively stable caseloads and total contact numbers, but a substantial shift from face-to-face to virtual contacts, while HTTs showed the same changeover but reductions in caseloads and total contacts, were noted in this period. It is not currently clear if these were a cause of the increased mortality.

Medication is the most commonly reported treatment for people with each type of CMD (15.4% to 51.4% across different diagnoses). Overall 11.8% of people with CMD reported being in receipt of psychological therapy (5.6% to 25.4% across different diagnoses, more common in those with phobias). There are known disruptions to the mode of delivery of psychological therapies and other face to face health and care services for people with CMD due to social distancing measures. For those receiving face-to-face treatments,

the shift to online or tele-health may result in poorer quality treatment or barriers to treatment, resulting in increase in risk of relapse³²⁶. Concerns have been raised that other support such as housing and community-based activities will be impacted by changing service delivery and reduced capacity³²⁷, although there is currently little evidence available on this.

Publication of data from the Mental Health Service Dataset on service uptake and relevant outcomes is awaited. **Latest data available [here](#).*

In the first week of the lockdown a survey of young people with a history of mental health problems found that a quarter reported no longer being able to access mental health support.³²⁸ Emerging research (prepublication, not peer reviewed) indicates that UK mental health staff had specific concerns about many groups of service users, including people whose conditions are exacerbated by pandemic anxieties and social disruptions; people experiencing loneliness, domestic abuse and family conflict; those unable to understand and follow social distancing requirements; and those who cannot engage with remote care.³²⁹ Another international rapid mixed methods synthesis (prepublication) found many reports of deteriorations in symptoms, and of impacts of loneliness and social isolation and of lack of access to services and resources, but sometimes also of resilience, effective self-management and peer support for mental health service users during COVID-19.³³⁰ Immediate service challenges related to controlling infection, especially in inpatient and residential settings, and establishing remote working, especially in the community.

Acute care hospitalisation and intensive care unit (ICU) stays for SMI individuals infected with COVID-19 can destabilise their condition, increase the need for more intensive mental health care following discharge and delay recovery.³³¹ Drug interactions and increase can often be a cause for concern and increased levels of anxiety in this group, whereas concurrent drug administration can cause increased toxicity of the compounds putting this group at higher risk of complications.³³²

There are pre-existing disparities in those who receive treatment, with people who were white British, female or in mid-life (especially aged 35 to 54) more likely to receive treatment than others, and younger and more deprived people more likely to have unmet treatment requests. Delays in help-seeking; which may be exacerbated by social distancing messages and changes to service provision, can increase severity in presentation, poorer recovery and greater burden of disease³³³ and may exacerbate pre-existing inequalities. Reduced use of emergency departments may negatively affect services for survivors of suicide attempts and people with self-harm.³³⁴

d) People with learning disabilities and autism

People with learning difficulties and those with neurodevelopmental disorders were highlighted by mental health experts as potentially negatively affected by changes and disruption to support and routines, isolation, and loneliness.³³⁵

People with autism

Evidence emerging from a number of countries dealing with COVID-19 shows that individuals with autism spectrum disorder (ASD) are being identified as part of a group at higher risk for complications from COVID-19³³⁶.

There is established evidence that people with ASD are at increased risk of anxiety, OCD – this might be triggered or worsened by fear of infection from COVID-19. A meta-analysis of anxiety disorders in children and adolescents found that 39.6% of young people with ASD had at least one comorbid anxiety disorder, the most frequent being specific phobia (29.8%) followed by OCD (17.4%) and social anxiety disorder (16.6%)³³⁷. News media/guidelines on avoiding infection and washing hands are thought to exacerbate these conditions³³⁸. Further, decreased social interaction due to COVID-19 may contribute to loneliness (although use of social media may be a protective factor). Loneliness is associated with increasing depression and anxiety in people with ASD³³⁹ and this group are also at greater risk of clinical depression - which can be influenced by life events as well as age, gender and other factors.³⁴⁰

A recent online survey set up to investigate the effects of COVID-19 on autistic adults by Ghent University³⁴¹ found that autistic adults reported a greater increase in depression and anxiety symptoms in response to the pandemic compared to neurotypical adults. This was concerning due to their increased baseline risk for these conditions. Particular stressors were problems with pandemic rule following, restrictions around shopping and isolation from friends and family. Conversely there were benefits to mental health due to less social contact.

A common feature of ASD in children and young people is an obsession with routine, and disruptions in routine linked to COVID-19 – especially school closures, may result in major emotional and behavioural upheaval³⁴². This is likely to manifest in frustration and an increase in the frequency and severity of challenging behaviour.

People with learning disabilities

A systematic review in 2018 found that people with learning disability (LD) have higher morbidity (due to long term conditions) and earlier mortality than the general population which puts them at higher risk from COVID-19. They also continue to face many barriers and inequalities in accessing health care.^{343,344} National Institute for Health and Care Excellence (NICE) guidelines developed to govern critical care during the epidemic, originally used the clinical frailty scale to determine whether patients would benefit from

critical care during COVID-19. This was changed early in April 2020 so that people with LD would not be excluded on this basis³⁴⁵. People with learning disability also live in a variety of care environments in close proximity to others and may have less control over their physical environments and social contacts.

New analysis from Care Quality Commission (CQC) and ONS, published on 2 June, found that between 10 April and 15 May this year, 386 people with a learning disability, some of whom may also be autistic, died who were receiving care from services which provide support for people with a learning disability and/or autism – up from 165 deaths in the same period last year³⁴⁶. While there are some caveats regarding the data (low numbers, representativeness of the LD population, quality of records etc.) this represents a 134% increase in the number of death notifications compared to last year. Of the 386 people who have died this year, 206 were as a result of suspected and/or confirmed COVID-19 as notified by the provider and 180 were not suspected to be due to COVID-19. 184 people of those who died were receiving care from community-based adult social care services and 195 from residential social care settings in England.

There is a scarcity of evidence on the mental health impacts of COVID-19 on people with learning disabilities. However, people with learning disabilities are likely to be more vulnerable to the mental health impacts of COVID-19 and to experience specific challenges around diagnostic overshadowing (i.e. that existing and emerging mental health issues are not picked up)³⁴⁷. The way an individual is able to express their needs, either by themselves or with help from others, influences diagnosis³⁴⁸. A person with a mild learning disability may be able to express the symptoms of mental health problems such as low mood in some detail. However, a person with a more severe learning disability may have very limited language abilities, and the only clue to the presence of mental health problems may be changes in behaviour such as poor sleep, decreased appetite or challenging behaviours³⁴⁹. Both adults³⁵⁰ and children and adolescents with learning disability have a higher prevalence of psychiatric disorder and symptoms³⁵¹ and mental health problems³⁵². Risk factors are: physical ill health, psychological stress, poor social relationships lack of employment, poverty.

Third sector organisations and self-advocacy groups in the UK report that people with learning disabilities are feeling anxious and confused about the changes stemming from COVID-19³⁵³ – pointing to specific concerns including:

- **Communication** - many people with learning disabilities may not be able to communicate their needs, including explaining how they are feeling during the pandemic, as well as understanding what is happening and why – causing higher levels of anxiety and distress.

- **Shielding & social distancing** – these measures will result in a marked change in routine for people with learning disabilities, which may result in an increase in distress and challenging behaviour. They may experience isolation from partners and the loss of their usual social and community support networks.
- **Bereavement** - people with learning disabilities may lose friends, partners, family members, carers, and other people who are important in their lives. They may not be able to say goodbye in a manner that helps promote grieving and there is a risk that grief will be pathologized.

Swansea University are also undertaking a new study tracking the effect of the COVID-19 pandemic and associated control measures on family carers of people with learning disabilities³⁵⁴. Researchers will also seek to relate mental health outcomes to the social support available to them and their coping strategies.

e) People with direct experience of COVID-19 infection

People impacted by infectious disease outbreaks may experience mental health problems as a result of anxiety and distress associated with getting the infection, experiences of isolation or intensive care admission. People infected during previous coronavirus outbreaks have reported high levels of mental health problems years after they were infected. A recent systematic review³⁵⁵ of SARS and Middle Eastern Respiratory Syndrome (MERS) epidemics revealed that during the acute illness, common psychiatric symptoms among patients admitted to hospital included confusion (36 of 129 patients [27.9%; 95% CI 20.5–36.0]), depressed mood (42 of 129 [32.6%; 24.7–40.9] of 129), anxiety (46 [35.7%; 27.6–44.2]), impaired memory (44 of 129 [34.1%; 26.2–42.5]), and insomnia (54 of 129 [41.9%; 22.5–50.5]). The meta-analysis indicated that in the post-illness stage the point prevalence of post-traumatic stress disorder was 32.2% (95% CI 23.7–42.0; 121 of 402 cases from four studies), depression was 14.9% (12.1–18.2; 77 of 517 cases from five studies), and anxiety disorders was 14.8% (11.1–19.4; 42 of 284 cases from three studies). The review authors conclude that if infection with SARS-CoV-2 follows a similar course to that with SARS-CoV or MERS-CoV, most patients should recover without experiencing mental illness.

Two studies³⁵⁶ investigating COVID-19 patients found a high level of post-traumatic stress symptoms (PTSS) (96.2%) and significantly higher level of depressive symptoms. Patients with pre-existing psychiatric disorders reported worsening of psychiatric

symptoms. Whilst these studies are from China and therefore a different context to the UK, this does suggest possible increase in trauma symptoms following hospitalisation in this country.

Neuropsychiatric effects

A systematic review and meta-analysis of research on SARS and MERS coronavirus infections indicates possibility of neural invasion by coronaviruses; alongside possible long terms impacts of depression, anxiety, fatigue and rarer neuropsychiatric syndromes in survivors of coronavirus infection.³⁵⁷ Emerging clinical data suggests delirium, stroke, encephalopathies and other potential neuropsychiatric effects in COVID-19 survivors; although this is as yet limited.^{358, 359}

Intensive care and ICU admissions

At least 20% of those in critical care will suffer significant symptoms of post – traumatic stress disorder (PTSD) during the 12 months after discharge,^{360,361} and risks are increased for those with pre-existing anxiety or depression.³⁶² Evidence suggests that experiencing delirium during an ITU stay is not independently associated with adverse emotional outcomes³⁶³. Evidence from the UK, indicates that 44% of patients remained significantly anxious or depressed a year after ICU discharge.³⁶⁴ As of 13th May, 3,721 ICU patients with COVID-19 were discharged from units across England, Wales and Northern Ireland.³⁶⁵ Extrapolating from the estimates within these reviews, approximately 750 could experience significant symptoms of PTSD and 1,600 may be anxious or depressed in the next 12 months.

Children

Children are less likely to have severe COVID-19 infection³⁶⁶ but there are some concerns around atypical presentations such as Kawasaki disease³⁶⁷ that may impact recovery and add to possible neuropsychiatric sequelae³⁶⁸. Children who have had the disease may also experience stigma from their peers and negative mental health impacts due to experiences of isolation and disruption of parental caregiving due to parental stress or illness³⁶⁹ (these are discussed in more detail in the determinants section of the evidence pack.)

Disparities

There are disparities in both risks of being infected by COVID-19 and in outcome which will impact differentially on the mental health impacts for different population groups going forward.³⁷⁰ Analysis by PHE highlights disparities by the following categories:

- *Age*: Among people already diagnosed with COVID-19, people who were 80 or older were seventy times more likely to die than those under 40.
- *Geography*: Local authorities with the highest diagnoses and death rates are mostly urban. Death rates in London from COVID-19 were more than three times higher than in the region with the lowest rates, the South West.
- *Deprivation*: People who live in deprived areas have higher diagnosis rates and death rates than those living in less deprived areas. The mortality rates from COVID-19 in the most deprived areas were more than double the least deprived areas, for both males and females. This is greater than the inequality seen in mortality rates in previous years, indicating greater inequality in death rates from COVID-19. High diagnosis rates may be due to geographic proximity to infections or a high proportion of workers in occupations that are more likely to be exposed.
- *Ethnicity*: People from Black ethnic groups were most likely to be diagnosed. Death rates from COVID-19 were highest among people of Black and Asian ethnic groups. After accounting for the effect of sex, age, deprivation and region, people of Bangladeshi ethnicity had around twice the risk of death than people of White British ethnicity. People of Chinese, Indian, Pakistani, Other Asian, Caribbean and Other Black ethnicity had between 10 and 50% higher risk of death when compared to White British. This may be partially accounted for by occupation, comorbidities or obesity which were not adjusted for in the analysis.
- *Occupation*: ONS analysis indicates COVID-19 related death rates are threefold higher in men in manual roles compared to managers, directors and senior officials (21.4 per 100,000 versus 8.4 per 100,000.) Men working as security guards, taxi drivers and chauffeurs, bus and coach drivers, chefs, sales and retail assistants, lower skilled workers in construction and processing plants, and men and women working in social care had significantly high rates of death from COVID-19. A total of 10,841 COVID-19 cases were identified in nurses, midwives and nursing associates registered with the Nursing and Midwifery Council.
- *Inclusion health groups*: When compared to previous years, there has been a larger increase in deaths among people born outside the UK and Ireland. The biggest relative increase was for people born in Central and Western Africa, the Caribbean, South East Asia, the Middle East and South and Eastern Africa. There were 54 men and 13 women diagnosed with COVID-19 with no fixed abode, likely to be rough sleepers. We estimate that this represents 2% and 1.5% of the known population of women and men who experienced rough sleeping in 2019.

- *People in care homes*: Data from the Office for National Statistics (ONS) shows that deaths in care homes accounted for 27% of deaths from COVID-19 up to 8 May 2020. There have been 2.3 times the number of deaths in care homes than expected between 20 March and 7 May when compared to previous years, which equates to around 20,457 excess deaths.

Previous pandemics have also been associated with stigma towards those infected³⁷¹, and there were reports of discrimination towards Chinese in the early stages of the pandemic³⁷², which is a determinant of poor mental health.

Results from a registered systematic review on mental health impacts on COVID-19 patients due in June 2020,^{373, 374} July 2020,³⁷⁵ and December 2020³⁷⁶

f) People who have been bereaved

Evidence of impact

According to provisional data from the ONS, from 28 March – 1 May 2020 there were 247,261 deaths in England and Wales. This was 46,494 more deaths than the previous five-year average.³⁷⁷ This indicates an increase in the numbers who are bereaved and who may therefore, experience mental health complications as a result.

Bereavement is not a mental illness but is associated with an increased risk of developing mental health problems. While many people are resilient and regain their equilibrium after a death, a minority experience persistent high levels of distress and chronic grief symptoms that impact on their physical and mental health and on their functioning for a substantial period^{378,379}. This can include mental health disorders such as depression, anxiety, and post-traumatic stress disorder. In normal times, it is estimated that 10-20% of those bereaved reach clinical thresholds for depression,³⁸⁰ with around 10% of bereaved adults experiencing prolonged grief disorder.³⁸¹

Although no studies have been identified that specifically explore the grief experiences related to deaths in previous epidemics,³⁸² particular complications that are likely to impact grief have been identified in this context: the multiplicity of loss experienced; uncertainty over the illness and its prognosis; and the disruption to social connections and cultural practices. There is more evidence regarding bereavement within disasters. There are similarities between other types of disaster and the COVID-19 pandemic, such as massive traumatic events, putting others' and one's own life in danger, and the occurrence of multiple kinds of losses at the same

time, including losses in human lives, income, and social support systems.³⁸³ Complicated grief is often more common as a result of deaths in the context of disasters.^{384, 385} Prevalence estimates of complicated grief among bereaved survivors evaluated up to 18 months after disasters such as earthquakes, hurricanes and large scale terrorist attacks range from 9% to 80%, with the loss of a child or a spouse both being associated with complicated grief symptoms. Therefore, given the context of substantial social changes during the current COVID-19 pandemic, it is likely that elevated incidence of complicated grief could be the experience in the UK at this time.

Increased risk of mental health issues following a bereavement are associated with factors including the bereaved person's history, health and sociodemographic variables; the situation and circumstances of the death; the meaning of the relationship with the person who died; the perceived quality of social support and concurrent stressors such as caring for others and housing or financial problems.³⁸⁶

Deaths during the COVID-19 pandemic are associated with several risk factors which can lead to prolonged grief disorder, post-traumatic stress and other poor bereavement outcomes among loved ones, as well as moral injury and distress in frontline staff.³⁸⁷ These include restrictions placed on visits to hospitals, care homes and even in the community and then further restrictions placed on funerals. These restrictions apply not just to those bereaved directly due to deaths from COVID-19, but those who are bereaved for other reasons during the pandemic, who are therefore also at risk. It should be noted that to date, deaths from other causes have been greater than from COVID-19 (see figure above).

Even as lockdown is gradually easing, social restrictions impacting bereavement are likely to continue for some time to come.

Groups at higher risk of requiring additional bereavement support during the pandemic:

- those with higher risk of mortality from COVID-19 e.g. BAME communities, the elderly, those living in deprived areas³⁸⁸
- those disproportionately affected by the lockdown e.g. those living alone, those in vulnerable groups and those shielding
- those who already face risks in bereavement or barriers to accessing support e.g. those with learning disabilities and dementia

g) Health and Social Care staff

Risk factors specific to the COVID-19 outbreak leading to adverse mental health outcomes in frontline staff are long working hours, risk of infection, shortages of protective equipment, loneliness, physical fatigue and separation from families.³⁸⁹ Stigma associated with and care staff has been found in some studies of previous infectious disease outbreaks³⁹⁰. It is argued that addressing the

mental health needs of health and care staff is thus important for the better prevention and control of the COVID-19 pandemic³⁹¹, whereby the health and wellbeing of frontline workers is supported in the initial and recovery phases of the response.

A cross-sectional survey of 1257 health care workers in early 2020 in China reported symptoms of depression (50.4%), anxiety (44.6%), insomnia (34%) and distress (71.5%) during their COVID outbreak. This was more severe in nurses, women, those working in Wuhan and those directly working with COVID-19 patients (although sample was hospitals with COVID wards).³⁹² Similar measures were used in an Italian study (with less robust sampling). At the near-peak of COVID the study reported substantial mental health issues amongst staff, particularly among young women and those directly working with COVID patients.³⁹³

A pre-proof systematic review of 13 studies on the mental health of healthcare workers during the pandemic (including the above Lai study³⁹²) found a pooled prevalence of anxiety of 23.2%, depression 22.8% and insomnia 38.9%. Females and nurses had higher rates than males and medics.³⁹⁴

In England, experts have suggested increased risk of moral injury and mental health problems is likely amongst health and social care staff working under extreme pressure during COVID³⁹⁵. Further, a poll held by the IPPR and YouGov in April found that One in two healthcare workers across the UK felt that their mental health had declined in the previous eight weeks³⁹⁶. A rapid review also found evidence of higher levels of moderate and severe anxiety, depression, insomnia and distress than the general population.³⁹⁷ Lastly, a pre-publication survey of 1406 people, of which 412 were key workers and 994 were non-key workers, found that overall, key worker respondents were more likely to report above the threshold levels of depression, anxiety, mixed anxiety and depression and PTSD than non-key workers. Differences were statistically significant in both April and May waves of the survey.³⁹⁸

Registered rapid reviews on COVID-19 related mental health impacts for health and social care staff are due to be completed in June 2020³⁹⁹, ⁴⁰⁰ July 2020,⁴⁰¹ December 2020.⁴⁰²

Potential impacts of COVID-19 on population mental health in England

PRELIMINARY EVIDENCE MAPPING

APPENDIX: Supplementary Resources

This section provides resources from other countries and other relevant resources on mental health impacts that may be useful for planning response to the mental health and psychosocial impacts of the pandemic.

Setting /Source	Description	Resource Link
International agencies		
Inter Agency Standing Committee (United Nations Reference Group)	IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings	https://interagencystandingcommittee.org/iasc-reference-group-on-mental-health-and-psychosocial-support-in-emergency-settings
Other national government publications		
Scotland	<p>Rapid evidence review on COVID -19 and Mental Health</p> <ul style="list-style-type: none"> ▪ Rapid review focussed on both mental health outcomes and identifying risk and protective factors are associated with mental health outcomes during the COVID-19 pandemic 	www.publichealthscotland.scot/covid19mentalthhealth

Scotland	<p>Rapid Evidence Briefings on COVID-19 and Mental health</p> <ul style="list-style-type: none"> ▪ Provide a snapshot of important studies and key findings; rather than a systematic assessment of the evidence quality and findings 	<p>https://www.gov.scot/groups/coronavirus-covid-19-mental-health-research-advisory-group/ - evidence briefings attached within meeting minutes.</p>
New Zealand	<p>COVID-19 Psychosocial and mental wellbeing recovery plan</p> <ul style="list-style-type: none"> ▪ Outlines national plan and priorities for addressing mental health impacts of pandemic. 	<p>https://www.health.govt.nz/publication/covid-19-psychosocial-and-mental-wellbeing-recovery-plan</p>
Australia	<p>COVID-19 National Health Plan</p> <ul style="list-style-type: none"> ▪ Fact sheet on national package of measures for supporting the mental health of Australians through the Coronavirus pandemic 	<p>https://www.health.gov.au/resources/publications/covid-19-national-health-plan-supporting-the-mental-health-of-australians-through-the-coronavirus-pandemic</p>
Northern Ireland (conducted by Mental Health Foundation)	<p>International Policy Guidance and Responses to COVID-19 Mental Health Recovery: A Rapid Review</p> <ul style="list-style-type: none"> ▪ Collation of evidence on international policy responses to COVID-19. Highlights key priorities internationally and in UK for response planning and case studies of good practice. 	<p>https://www.health-ni.gov.uk/publications/international-policy-guidance-and-responses-covid-19-mental-health-recovery-rapid-review</p>
Northern Ireland	<p>Mental Health Impact of the COVID-19 Pandemic in Northern Ireland: Rapid review</p> <ul style="list-style-type: none"> ▪ Evidence on impact from previous disasters and infectious disease outbreaks: both direct trauma and indirect from secondary events. Recommendations made for research going forward. 	<p>https://www.health-ni.gov.uk/topics/mental-health-and-learning-disabilities/mental-health-research-publications</p>

Academic and policy analysis		
Bond Mental Health and Psychosocial Disability Group	<p>Covid-19 and mental health: immediate and long-term impacts</p> <ul style="list-style-type: none"> Provides a summary of emerging international evidence on two topics: the impact of COVID-19 on peoples' mental health and wellbeing; and, conversely, the projected impact of mental health on the efficacy of COVID-19 prevention, treatment and control measures 	https://www.bond.org.uk/resources/covid-19-and-mental-health-immediate-and-long-term-impacts
Institute for Fiscal Studies	<p>The mental health effects of the first two months of lockdown and social distancing during the COVID-19 pandemic in the UK</p> <ul style="list-style-type: none"> Analysis using longitudinal microdata for the UK over the period 2009-2020. Controls for pre-existing previous trends in mental health in order to isolate and quantify the effects of the COVID-19 pandemic 	https://www.ifs.org.uk/publications/14874
Centre For Mental Health	<p>COVID-19 and the Nation's mental health: forecasting needs and risks</p> <ul style="list-style-type: none"> Evidence on likely impacts on mental health needs going forward directly through pandemic and indirectly due to economic factors. 	https://www.centreformentalhealth.org.uk/publications/covid-19-and-nations-mental-health-july-2020
Centre For Mental Health	<p>Understanding Inequalities in Mental Health During a Pandemic</p> <ul style="list-style-type: none"> Outlines evidence, priorities and provides recommendations for addressing mental health inequalities in the context of the pandemic. 	https://www.centreformentalhealth.org.uk/publications/covid-19-understanding-inequalities-mental-health-during-pandemic

Academic commentary	<p>Bambra, Clare, et al. "The COVID-19 pandemic and health inequalities." J Epidemiol Community Health (2020).</p> <ul style="list-style-type: none"> ▪ Evidence from previous pandemics and widening health inequalities 	
Academic Commentary	<p>Campion, J., Javed, A., Sartorius, N., & Marmot, M. (2020). Addressing the public mental health challenge of COVID-19. The Lancet. Psychiatry.</p> <ul style="list-style-type: none"> ▪ Outlines Key principles for mental illness prevention and mental health promotion in relation to the pandemic 	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7282758/
Public Health Institute at Liverpool John Moores University (LJMU),	<p>Direct and indirect impacts of COVID-19 on health and wellbeing: a rapid review</p> <ul style="list-style-type: none"> ▪ Looks at a broad range of determinants and their direct and indirect impacts on health and wellbeing during COVID-19 using COVID-19 specific evidence collections. Maps against likelihood of impact given strength of evidence assessed. 	https://www.ljmu.ac.uk/~media/phi-reports/2020-07-direct-and-indirect-impacts-of-covid19-on-health-and-wellbeing.pdf
NIHR Applied Research Collaboration West	<p>Nobles, J., Martin, F., Dawson, S., Moran, P. and Savovic, J. The potential impact of COVID-19 on mental health outcomes and the implications for service solutions. 15 April 2020.</p> <ul style="list-style-type: none"> ▪ Review of evidence on the impact of outbreaks on the prevalence of mental health conditions within the general population and across healthcare workers; and community and population-level approaches prevent and address increased demand. 	https://arc-w.nihr.ac.uk/covid-response/rapid-reports/potential-impact-of-covid-19-on-mental-health-outcomes-and-the-implications-for-service-solutions/

University of Cambridge, Public Health England and NHS England	<p>Dr Molly Thomas-Meyer, Sophie Allan, Dr Carina Tyrrell, Rebecca Bealey, Molly Cross, Chloe Gathercole, Victoria Wells, Dr Sarah Gentry, Dr Tim Clarke, Professor Peter Fonagy, Professor Prathiba Chitsabesan, Dr Anees Pari.</p> <p>Summary; A rapid review of mental health impacts of infectious disease epidemics and major incidents on children and young people: prevalence, risk factors and interventions. 20th July 2020</p> <ul style="list-style-type: none">• This is a summary of key findings following a rapid review of literature that describes the mental health of children and young people (CYP) who have experienced major traumatic events or disasters, the factors that increase and decrease the harm, and interventions which have been employed to mitigate that harm.	<p>https://adph.org.uk/networks/eastofengland/covid-19-reviews-syntheses/</p>
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