

## Forecast Modelling Toolkit: Supplementary information

The following information has been provided to be used alongside the forecast modelling toolkit.

# Quality assessment of research to inform demand modelling

The following criteria has been developed to support an assessment of the quality of research studies used to inform demand modelling. Please note exclusion criteria in red.

## Criteria for consideration:

- Exclude: case studies, qualitative designs
- Study peer review
- Sample size
- Representativeness of the population under review/weighted if indicated
- Recruitment approach
- Validated MH screening measures with cut-offs or clinical interviews - exclude studies if not
- If indicated, multi-informant approach (such as CYP research)
- Baseline data collected
- Controls for other factors
- Timing of study – applicable to current time taking into account the change in mental health needs throughout the course of the pandemic
- Tracking symptoms and results over time (ideally on a participant level)
- Confidence interval range included
- Generalisability of results
  - Application to group/population studied
  - Generalisable to a UK population – exclude studies from countries that may not be generalisable (e.g. China)

Please note: the recommended research should be applied with caution in the context of Covid-19 which may have limitations when generalising across populations and time frames.

# Group: Adult general population

## Recommended research assumptions:

- 16.3% of the sample met the threshold for moderate-severe anxiety
- 22.3% met the threshold for moderate-severe depression.

The sample excluded people with pre-existing diagnosed mental health problems, data was collected during Covid-19.

## Recommended research:

[Trajectories of depression and anxiety during enforced isolation due to COVID-19: longitudinal analyses of 59,318 adults in the UK with and without diagnosed mental illness](#) (Fancourt et al, 2020)

## Why have we recommended this research?

- Data from 53,328 adults in the UCL COVID -19 Social Study (a well-stratified panel study weighted to population proportions collecting data weekly during the Covid-19 pandemic). Data analysed from 21/03/2020- 10/05/2020.
- PHQ-9 and GAD-7 measures used.

## What were the limitations of this research?

- Given the timing of the study, mental health need is likely to be different at the current time, or moving forward.
- Confidence rating in the research (in the context of Covid research): **AMBER** (given the timing of the research)

## Pre-Covid baseline data:

No baseline is applied because the study removed rates of moderate to severe anxiety and depression for people with a pre-existing mental health condition from the analysis

## Number of people in population group:

The general population minus people with pre existing mental health problems should be used, this can be obtained from the local JSNA and [NHS fingertips](#)

## Discount rate:

To make sure people are not counted twice, we have taken away the values for all the other population groups from this general population group.

## Additional research papers for consideration (not recommended):

- [The mental health effects of the first two months of lockdown and social distancing during the COVID-19 pandemic in the UK](#) (IFS, 2020)
- [Mental health during the COVID-19 pandemic in two longitudinal UK population cohorts](#) (Kwong et al, 2020)
- [Loneliness, physical activity and mental health during Covid-19: a longitudinal analysis of depression and anxiety between 2015 and 2020](#) (Creese et al, 2020)
- [UCL Covid-19 Social Study](#)
- [Anxiety, Depression, Traumatic Stress, and COVID-19 Related Anxiety in the UK General Population During the COVID-19 Pandemic](#) (Shelvin et al, 2020)

# Group: Adults with pre-existing mental health problems

## Recommended research assumptions:

- 67.4% of people with pre-existing diagnosed mental illness met the threshold for moderate or severe anxiety
- 56.3% met the threshold for moderate or severe depression

## Recommended research:

[Trajectories of depression and anxiety during enforced isolation due to COVID-19: longitudinal analyses of 59,318 adults in the UK with and without diagnosed mental illness](#) (Fancourt et al, 2020)

## Why have we recommended this research?

- Data from 53,328 adults in the UCL COVID -19 Social Study (a well-stratified panel study weighted to population proportions collecting data weekly during the Covid-19 pandemic). Data analysed from 21/03/2020- 10/05/2020.
- PHQ-9 and GAD-7 measures used.

## What were the limitations of this research?

- Given the timing of the study, mental health need may have changed, or may change moving forward.
- The study was not able to identify a baseline to compare current rates of anxiety and depression with pre-Covid levels.
- Confidence rating in the research (in the context of Covid research): **AMBER** (given the timing of the research)

## Pre-Covid baseline data:

Baseline data for this specific population group is not available and has therefore not been applied.

## Number of people in population group:

People with pre existing mental health problems should be used, this can be obtained from [NHS fingertips](#)

## Additional research papers for consideration (not recommended):

- [The potential impact of COVID-19 on psychosis: A rapid review of contemporary epidemic and pandemic research](#) (Brown et al, 2020)
- [Psychiatric Symptoms Related to the COVID-19 Pandemic](#) (Rohde et al, 2020)
- [The impact of COVID-19 on individuals living with serious mental illness](#) (Hamada et al, 2020)
- [Mental health status of people isolated due to Middle East Respiratory Syndrome](#) (Jeong et al, 2016)

# Group: Healthcare workers (Intensive care unit staff)

## Recommended research assumptions:

Intensive care unit staff who met the threshold for clinical significance of;

- Severe depression 6.3%
- Anxiety 11.3%
- PTSD 39.5%

## Recommended research:

[The mental health of staff working in intensive care during COVID-19](#) (Wright et al)

## Why have we recommended this research?

- UK population study from across six various types of English hospital during June and July 2020
- 709 participants completed the surveys comprising 291 (41%) doctors, 344 (48.5%) nurses, and 74 (10.4%) other healthcare staff
- Study uses known MH screening tools

## What were the limitations of this research?

- Participants were self-selecting so may not be a representative sample
- Confidence rating in the research (in the context of Covid research): **GREEN**

## Pre-Covid baseline data:

Baseline data for this specific population group is not available and has therefore not been applied.

## Number of people in population group:

The NHS Hospital & Community Health Service (HCHS) monthly workforce statistics should be used from [NHS digital](#)

## Previous model research papers replaced by refreshed literature review:

- [Long-term Psychological and Occupational Effects of Providing Hospital Healthcare during SARS Outbreak](#) (Maunder et al. 2006)
- [The Psychological Impact of Epidemic and Pandemic Outbreaks on Healthcare Workers: Rapid Review of the Evidence](#) (Prete et al, 2020)

## Additional research papers for consideration (not recommended):

- [Impact of viral epidemic outbreaks on mental health of healthcare workers: A rapid review of evidence](#) (Cabello et al., 2020)
- [Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis](#) (Pappa et al., 2020)

# Group: Healthcare workers (Frontline workers: Hospital, care homes, community settings)



## Recommended research assumptions:

Healthcare staff who met threshold for clinically significant levels of

- PTSD 22.5%
- Depression 46.9%
- Anxiety 47.3%

## Recommended research:

[Predictors and rates of PTSD, depression and anxiety in UK frontline health and social care workers during COVID-19](#) (Greene et al)

## Why have we recommended this research?

- UK population study
- 1194 frontline workers (UK hospitals, nursing or care homes, other community settings)
- Completed during pandemic (27 May 2020–23 July 2020)
- Study uses known MH screening tools

## What were the limitations of this research?

- The study is not yet peer reviewed
- Participants were self-selecting so may not be a representative sample
- Confidence rating in the research (in the context of Covid research): **GREEN**

## Pre-Covid baseline data:

Baseline data for this specific population group is not available and has therefore not been applied.

## Number of people in population group:

The NHS Hospital & Community Health Service (HCHS) monthly workforce statistics should be used from [NHS digital](#)

## Previous model research papers replaced by refreshed literature review:

- [Long-term Psychological and Occupational Effects of Providing Hospital Healthcare during SARS Outbreak](#) (Maunder et al. 2006)
- [The Psychological Impact of Epidemic and Pandemic Outbreaks on Healthcare Workers: Rapid Review of the Evidence](#) (Preti et al, 2020)

## Additional research papers for consideration (not recommended):

- [Impact of viral epidemic outbreaks on mental health of healthcare workers: A rapid review of evidence](#) (Cabello et al., 2020)
- [Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis](#) (Pappa et al., 2020)

# Group: Adults recovering from severe Covid-19

## Recommended research assumptions:

Adults recovering from severe Covid-19 (ICU admission) at 6 months:

- Dementia 1.74%
- Mood disorder (first) 5.82%
- Anxiety disorder (first) 9.79%
- Psychotic disorder (first) 0.70%

Adults hospitalised with Covid-19 (but not admitted to ICU) at 6 months:

- Dementia 1.46%
- Mood disorder (first) 4.49%
- Anxiety disorder (first) 6.91%
- Psychotic disorder (first) 0.89%

Adults diagnosed with Covid-19 but not admitted to hospital at 6 months;

Dementia 0.35%

- Mood disorder (first) 3.86%
- Anxiety disorder (first) 6.81%
- Psychotic disorder (first) 0.25%

Patients with encephalopathy following Covid-19 at 6 months;

- Dementia 4.72%
- Mood disorder (first) 8.07%
- Anxiety disorder (first) 9.24%
- Psychotic disorder (first) 2.12%

## Recommended research:

[6-month neurological and psychiatric outcomes in 236 379 survivors of COVID-19: a retrospective cohort study using electronic health records](#) (Taquet et al)

### Why have we recommended this research?

- Survivors of Covid following discharge hospital
- 6 month retrospective cohort study of 236 379 patients diagnosed with COVID-19
- Compares those with Covid diagnosis to control cohorts without

### What were the limitations of this research?

- US study so might not be completely comparable to UK
- Extracted data from records using ICD codes and no mention of how conditions were diagnosed
- Follow up is only at 6 months so hasn't tracked conditions over long period of time
- Confidence rating in the research (in the context of Covid research): **AMBER**

## Pre-Covid baseline data:

Baseline data for this specific population group is not available and has therefore not been applied.

### Number of people in population group:

Local SUS data should be used, to find ICU admissions with C-19 in any diagnosis position  
Acute lung patient discharged from Critical care

## Previous model research papers replaced by refreshed literature review:

- [Co-occurrence of and remission from general anxiety, depression, and posttraumatic stress disorder symptoms after acute lung injury: a 2-year longitudinal study](#) (Bienvenu et al, 2016)

### Additional research papers for consideration (not recommended):

- [Prevalence of post-traumatic stress disorder symptoms in adult critical care survivors: a systematic review and meta-analysis](#) (Righy et al, 2019)

# Group: Adult family members of people recovering from severe Covid-19



## Recommended research assumptions:

At 6 months post-ICU discharge,

- Anxiety 15% to 23%,
- Depression 6%
- Symptoms of PTSD 35%

## Recommended research:

[Family response to critical illness: Postintensive care syndrome—family](#) (Davidson et al, 2011)

## Why have we recommended this research?

- High levels of participant follow up (95% completed at least one measure)
- Longitudinal data enabling two year follow up
- Validated clinical measures used

## What were the limitations of this research?

- Not Covid-19 research – there may be additional factors in the context of Covid-19
- Confidence rating in the research (in the context of Covid research): **GREEN**

## Pre-Covid baseline data:

Baseline data for this specific population group is not available and has therefore not been applied.

## Number of people in population group:

Local SUS data should be used, to find ICU admissions with C-19 in any diagnosis position, this should then be multiplied by 1.47 which is average family size (2.47) minus 1 (person recovering from Covid-19)

## Additional research papers for consideration (not recommended):

- [Post-traumatic Stress Symptoms in Post-ICU Family Members: Review and Methodological Challenges](#) (Petrinec et al, 2014)
- [The prevalence of post-traumatic stress disorder symptoms in relatives of severe trauma patients admitted to the intensive care unit](#) (Pillai et al, 2006)



# Group: Adults bereaved by Covid-19

## Recommended research assumptions:

1. Pooled prevalence of Prolonged Grief Disorder following bereavement (PGD; ICD 11) of 9.8% (Lundorff et al, 2017)
2. Prevalence of PTSD symptoms of 14% and depressive symptoms of 18.4% measured at least six months and up to four years after the death of someone who has been in ICU (Gries et al, 2010)

## Recommended research:

[1. Prevalence of prolonged grief disorder in adult bereavement: A systematic review and meta-analysis](#) (Lundorff et al, 2017)

## Why have we recommended this research?

- Systematic review and meta- analysis

## What were the limitations of this research?

- The study was peer reviewed but the study details were limited in the publication.
- Not Covid-19 research – there may be Covid-19 factors that has not been considered.
- Confidence rating in the research (in the context of Covid research): **GREEN**

## Recommended research:

[2. Predictors of Symptoms of Posttraumatic Stress and Depression in Family Members After Patient Death in the ICU](#) (Gries et al, 2009)

## Why have we recommended this research?

- High response rate
- Validated mental health measures used

## What were the limitations of this research?

- Not Covid-19 research – there may be additional factors in the context of Covid-19
- Small sample
- Confidence rating in the research (in the context of Covid research): **AMBER**

## Pre-Covid baseline data:

Baseline data for this specific population group is not available and has therefore not been applied.

## Number of people in population group:

[ONS monthly data](#) on all deaths from 20<sup>th</sup> March 2020 - 30<sup>th</sup> July 2020 when visiting restrictions were in place should be used, then post 30<sup>th</sup> July 2020, use only deaths from Covid-19. This should then be multiplied by 1.47 which is average family size (2.47) minus 1 (person who died from Covid-19)

## Additional research papers for consideration (not recommended):

- [Health outcomes of bereavement](#) (Stroebe et al, 2007)

# Group: Carers of people with learning disabilities

## Recommended research assumptions:

- Major depression in 31% of carers of children with learning disabilities
- Anxiety in 43% of carers of children with learning disabilities
- Major depression in 18% of carers (PHQ>14) of adults with learning disabilities

## Recommended research:

[Effect of the COVID-19 pandemic on the mental health of carers of people with intellectual disabilities](#) (Willner et al)

## Why have we recommended this research?

- UK study
- April to June 2020 during first Lockdown
- Validated clinical measures used

## What were the limitations of this research?

- Small sample size (244 people)
- Confidence rating in the research (in the context of Covid research): **AMBER**

## Pre-Covid baseline data:

Baseline data for this specific population group is not available and has therefore not been applied.

## Number of people in population group:

## Additional research papers for consideration (not recommended):

# Group: Adults economically affected by Covid-19

## Recommended research assumptions:

- The rate of major depression was found to be 8.2% during economic recession, compared to the post recession rate of 3.3%.

## Recommended research:

[Major depression in the era of economic crisis: a replication of a cross-sectional study across Greece](#) (Economou et al, 2013)

## Why have we recommended this research?

- Major depression was assessed with the Structural Clinical Interview. Financial strain was assessed with the Index of Personal Economic Distress (IPEd), a scale with good psychometric properties. It is noted that a number of comparable published studies report similar results.

## What were the limitations of this research?

- Not Covid-19 research – there may be Covid-19 factors that has not been considered.
- The direction of causality between financial hardship and major depression is unclear.
- The study was based in Greece, so may not be directly comparable to a UK population.
- Confidence rating in the research (in the context of Covid research): **AMBER**

## Pre-Covid baseline data:

A baseline has not been applied - given we are in a recession pre Covid and remain in a depression.

## Number of people in population group:

[ONS Monthly Data](#) on total claimants of Universal Credit numbers should be used.

Universal credit numbers from pre Covid (March 2020) should be removed to show the 'new' unemployment figures.

## Additional research papers for consideration (not recommended):

### Research

- [Economics and mental health: the current scenario](#) (Knapp et al, 2020)
- [EPA guidance on mental health and economic crises in Europe](#) (Martin- Carrasco et al, 2016)
- [Unemployment impairs mental health: Meta-analysis](#) (Paul et al, 2009)
- [Mental health outcomes in times of economic recession: a systematic literature review](#) (Fasquillo et al, 2015)
- [Unemployment and Depression Among Emerging Adults in 12 States, Behavioral Risk Factor Surveillance System, 2010](#) (McGee et al, 2015)
- [The mental health risks of economic crisis in Spain: evidence from primary care centres, 2006 and 2010](#) (Gili et al, 2012)

### Policy

- [Mental Health Foundation - The COVID-19 pandemic, financial inequality and mental health](#)
- [Centre for Mental Health - Covid MH Covid-19 and the nation's mental health Forecasting needs and risks in the UK: May 2020](#)
- [Unemployment and Mental Health - Issue Briefing](#) (Institute for work & health 2009)

# Group: Children and young people general population

## Recommended research assumptions:

1. Experiencing non-violent trauma (4-18 years) , 4.7-22.9% develop PTSD (Alisic et al. 2014)
2. Experiencing disasters (4-18 years), 1.6-44.8% develop depression (Tang et al. 2014; Wang et al. 2013)

## Recommended research:

1. [Rates of post-traumatic stress disorder in trauma-exposed children and adolescents: meta-analysis](#) (Alisic et al, 2014)

## Why have we recommended this research?

- Meta-analysis of 72 peer-reviewed articles on 43 independent samples ( $n = 3563$ )

## What were the limitations of this research?

- Studies are based on non-violent trauma and/or a range of man-made and natural disasters - approximate but not directly equivalent to Covid-19 or pandemics
- Much lower than estimates of PTSD post-disaster, although these are based on single studies with small sample sizes
- Confidence rating in the research (in the context of Covid research): **GREEN**

## Recommended research:

2. [A meta-analysis of risk factors for depression in adults and children after natural disasters](#) (Tang et al, 2014)

## Why have we recommended this research?

- Meta-analysis of 31 full-text articles about risk factors for depression after natural disasters ( $n = 41,107$ )

## What were the limitations of this research?

- Studies are based on non-violent trauma and/or a range of man-made and natural disasters - approximate but not directly equivalent to Covid-19 or pandemics
- Confidence rating in the research (in the context of Covid research): **GREEN**

## Recommended research:

2. [Prevalence and trajectory of psychopathology among child and adolescent survivors of disasters: A systematic review of epidemiological studies across 1987-2011](#) (Wang et al, 2013)

## Why have we recommended this research?

- Systematic review of 31 studies

## What were the limitations of this research?

- Studies are based on non-violent trauma and/or a range of man-made and natural disasters - approximate but not directly equivalent to Covid-19 or pandemics
- Confidence rating in the research (in the context of Covid research): **GREEN**

## Pre-Covid baseline data:

- Depression 2.1% <https://digital.nhs.uk/data-and-information/publications/statistical/mental-health-of-children-and-young-people-in-england/2017/2017>
- PTSD 3.5% <https://doi.org/10.1017/S0954579415000838> (Fisher et al, 2015)

## Number of people in population group:

The general population aged 5-19, minus people with pre existing mental health problems should be used, this can be obtained from the local JSNA.

## Discount rate:

To make sure people are not counted twice, we have taken away the values for all the other population groups from this general population group.

## Additional research papers for consideration (not recommended):

- [Impact of COVID-19 on Young People Aged 13-24 in the UK](#) (Levita et al, 2020)

# Group: Children and young people in quarantine/social isolation

## Recommended research assumptions:

1. 11-16 year olds experiencing social isolation/loneliness are 5.8-40 times more likely to experience depression and 1.63-5.49 times more likely to experience anxiety at the time (Loades et al. 2020)
2. 30% YP in quarantine experience PTSD (Sprang et al 2013)

## Recommended research:

[1. Rapid review: The impact of social isolation and loneliness on the mental health of children and adolescents in the context of COVID-19](#) (Loades et al, 2020)

### Why have we recommended this research?

- Rapid systematic review of 83 articles (80 studies) 63 of which reported on the impact of social isolation and loneliness on the mental health of previously healthy children and adolescents (n=51,576; mean age 15.3)

### What were the limitations of this research?

- Increased prevalence rates were only based on 2 studies for depression (n = 2614 & 6250) and 1 study for anxiety, neither of which were based in the UK (n = 6250 – age 13-15 years) - loneliness/isolation in these studies was not in the context of a pandemic - prevalence rates were at the time of isolation/loneliness and although a correlation was found between isolation/loneliness and increased MH difficulties and service need in the longitudinal studies reviewed these did not provide usable figures for forecast modelling
- Only one study has an age range (11-16 year olds). It was decided to model both conditions with the same age range, so modelling does not cover primary aged CYP or those aged 16-18
- Confidence rating in the research (in the context of Covid research): **AMBER**

## Recommended research:

[2. Posttraumatic stress disorder in parents and youth after health-related disasters](#)

(Sprang et al, 2013).

### Why have we recommended this research?

- Pandemic –based study

### What were the limitations of this research?

- Single study, relatively small sample size (n = 586) and US based
- No age range is given for the CYP in the study, only the age of parents

Confidence rating in the research (in the context of Covid research): **RED**

## Pre-Covid baseline data:

Baseline data for this specific population group is not available and has therefore not been applied.

## Number of people in population group:

The general population aged 11-16 years should be used, this can be obtained from the local JSNA

## Additional research papers for consideration (not recommended):

- [Impact of COVID-19 on Young People Aged 13-24 in the UK](#) (Levita et al, 2020)

# Group: Children and young people bereaved by Covid-19

## Recommended research assumptions:

1. Following the death of a parent or sibling, 22.5% of CYP aged 11-19 years develop internalising disorders (Stikkelbroek et al, 2016)
2. Following the sudden death of a parent, 10% of CYP aged 7-17 years develop PTSD (Pham et al, 2018)

## Recommended research:

[1. Mental health of adolescents before and after the death of a parent or sibling](#)  
(Stikkelbroek et al, 2016)

### Why have we recommended this research?

- Longitudinal cohort study ( $n = 2230$ ) over 9-year period 2001-2010 – compared bereaved and non-bereaved

### What were the limitations of this research?

- Only looked at death of a parent or sibling – cannot model for impact of death of extended family or close friends - based in Netherlands
- Confidence rating in the research (in the context of Covid research): **AMBER**

## Recommended research:

[2. The burden of bereavement: Early-onset depression and impairment in youths bereaved by sudden parental death in a 7-Year prospective study](#) (Pham et al, 2018)

### Why have we recommended this research?

- 7-year prospective study – indication of long-term impact – compared bereaved and non-bereaved

## What were the limitations of this research?

- Small sample size ( $n = 388$ )
- Only examines death of parent, not other close family members, and only sudden death
- Confidence rating in the research (in the context of Covid research): **RED**

## Pre-Covid baseline data:

Baseline data for this specific population group is not available and has therefore not been applied.

## Number of people in population group:

[ONS monthly data](#) on all deaths from 20<sup>th</sup> March 2020 - 30<sup>th</sup> July 2020 in [typical age range of parents \(25-49\)](#) when visiting restrictions were in place should be used, then post-July 2020, use only deaths from Covid-19 in typical age range of parents. This should be multiplied by [average number of children per woman](#) (1.89).

## Additional research papers for consideration (not recommended):

# Group: Children and young people recovering from severe Covid-19



## Recommended research assumptions:

- Post-ICU, 5-28% develop PTSD

## Recommended research:

[Posttraumatic stress disorder in children and their parents following admission to the pediatric intensive care unit: A review.](#) (Nelson et al 2012)

## Why have we recommended this research?

- Review of 9 articles

## What were the limitations of this research?

- Does not utilise full meta-analysis or systematic review methodology
- Not directly related to Covid-related ICU treatment and recovery
- Confidence rating in the research (in the context of Covid research): **AMBER**

## Pre-Covid baseline data:

Baseline data for this specific population group is not available and has therefore not been applied.

## Number of people in population group:

Local SUS data should be used, to find ICU admissions with C-19 in any diagnosis position aged 5-19.

National data can be found here <https://le.ac.uk/news/2020/june/picanet>

## Additional research papers for consideration (not recommended):

- [A meta-analysis of risk factors for post-traumatic stress disorder in children and adolescents](#) (Trickey et al, 2012)

# Additional groups for consideration

High quality research is not available to determine the level of mental health need for the following groups:

- People from black and ethnic minority groups
- People who are LGBTQIA+
- Older people
- People that are shielding
- People with pre-existing physical health conditions
- Children and young people with pre-existing mental health problems
- People with severe mental health conditions (SMI)
- People with ASD and ADHD
- People with learning disabilities
- Young adults
- Parents
- Children and young people with interpersonal trauma
- People suffering domestic abuse
- Substance misuse
- Key workers that are not front line health workers care
- Care home workers
- People living alone
- People who have had their care or treatment affected by Covid
- Prison populations
- Exam disruption (CYP)
- CYP in the care system/care leavers
- Asylum seekers



## Additional modelling considerations

The following assumptions can be used to inform to local forecast modelling, with reference to the timing of diagnosis:

Condition	Length of time for diagnosis	Reference
Depression (adult and CYP)	To be diagnosed with major depression, at least five of the symptoms with at least one of the two significant symptoms need to be present nearly daily for at least two weeks	<a href="#">NICE Guidance Depression</a> <a href="#">NICE Guidance Depression (CYP)</a>
PTSD (adult)	If symptoms last longer than one month, a diagnosis of PTSD can be made	<a href="#">ICD-10, F43</a>
PTSD (CYP)	If symptoms last longer than one month, a diagnosis of PTSD can be made. NICE guidelines recommend treatment for CYP with acute stress disorder or clinically important symptoms of PTSD within the first month	<a href="#">NICE Guidance PTSD</a>
Prolonged grief (adult)	Prolonged or complicated grief can only be diagnosed 6 months after the death (note: ICD 10 does not distinguish between normal and prolonged grief. Prolonged grief disorder will be included in ICD11)	<a href="#">New Oxford Textbook of Psychiatry</a>
Generalised anxiety disorder (adult)	Symptoms must be consistent and ongoing, persisting at least six months, for a formal diagnosis of generalised anxiety disorder (GAD)	<a href="#">ICD-10, F41</a>
Generalised anxiety disorder (CYP)	Length of time for diagnosis is a month	<a href="#">ICD-10, F93.8</a>

The following assumptions can be used to inform to local forecast modelling, with reference to treatment access rates:

Condition	Cohort	Assumption	Reference
Depression (adult mental health)	People with pre existing conditions	61.3% of people meeting the diagnostic criteria for depression accessing treatment	<a href="#">Adult Psychiatric Morbidity Survey 2014 full report</a>
Anxiety (adult mental health)	People with pre existing conditions	49.9% of people meeting the diagnostic criteria for depression accessing treatment	<a href="#">Adult Psychiatric Morbidity Survey 2014 full report</a>
All conditions (adult)	People with and without pre existing conditions	The IAPT access rate of 25% (percentage of prevalence) is used	<a href="#">IAPT service standards</a>
All conditions (CYP)	People with and without pre existing conditions	Access target of 35% CYP with a diagnosable MH condition	<a href="#">NHS Five Year Forward View 2014</a>

# Additional modelling considerations

[Rates and predictors of uptake of formal and informal mental health support during the COVID-19 pandemic: an analysis of 26,740 adults in the UK in lockdown](#) (Bu and Fancourt et al)

	MED <sup>1</sup>	MH <sup>2</sup>	GP <sup>3</sup>	HL <sup>4</sup>	SFC <sup>5</sup>	FAM <sup>6</sup>
Age: 18-29	21.7%	17.9%	12.6%	14.6%	65.3%	69.1%
Age: 30-45	22.4%	10.3%	8.8%	10.7%	53.0%	55.5%
Age: 46-59	23.8%	6.8%	7.5%	7.3%	40.3%	41.0%
Age: 60+	13.3%	2.2%	3.2%	3.1%	22.4%	22.5%
Male	15.9%	6.1%	6.1%	6.4%	30.3%	33.1%
Female	23.7%	10.7%	8.9%	10.1%	55.4%	55.9%
White	20.4%	8.1%	7.3%	7.5%	41.7%	43.7%
BAME	16.2%	11.3%	8.7%	13.5%	52.1%	51.1%
Education: low	22.7%	5.9%	6.8%	5.8%	28.3%	32.2%
Education: medium	21.6%	9.7%	9.6%	10.6%	43.3%	46.5%
Education: high	15.3%	9.8%	6.1%	8.4%	57.0%	54.9%
Not employed	23.4%	9.4%	9.4%	9.3%	38.0%	38.6%
Employed	17.2%	7.8%	6.1%	7.6%	46.7%	49.2%
Income ≥30k	14.3%	7.5%	5.7%	6.9%	45.5%	47.0%
Income <30k	25.9%	9.6%	9.6%	9.9%	40.3%	42.1%
Urban	19.9%	8.8%	7.8%	8.7%	44.0%	46.2%
Rural	19.6%	7.4%	6.3%	6.7%	39.1%	38.8%
Living alone	24.3%	10.4%	9.0%	8.9%	41.3%	42.4%
Living with children	21.0%	8.4%	8.4%	9.5%	44.9%	50.2%
Living with others, no child	17.9%	7.9%	6.6%	7.6%	42.8%	43.0%
Close friend <3	17.2%	7.9%	6.8%	7.9%	44.9%	47.5%
Close friend ≥3	25.9%	9.8%	9.2%	9.2%	38.8%	38.2%
Loneliness <6	12.9%	4.1%	3.6%	4.0%	36.6%	38.2%
Loneliness ≥6	31.2%	15.7%	14.0%	15.4%	53.7%	55.3%
No mental health diagnosis	7.0%	3.9%	3.6%	4.4%	37.4%	38.3%
Mental health diagnosis	70.7%	26.4%	22.9%	23.6%	65.4%	69.8%
PHQ <10	11.8%	4.3%	3.3%	4.0%	38.1%	37.3%
PHQ ≥10	40.5%	19.1%	18.3%	19.4%	55.7%	63.7%
GAD <10	14.3%	4.9%	4.0%	4.8%	38.8%	38.8%
GAD ≥10	42.5%	23.2%	22.0%	22.9%	60.3%	68.6%
Coping: problem-focused (low)†	19.0%	6.9%	6.2%	6.1%	31.0%	34.6%
Coping: problem-focused (high)†	20.8%	10.4%	9.1%	10.9%	57.2%	56.5%
Coping: emotion-focused (low)†	19.5%	7.6%	7.7%	7.4%	33.6%	37.7%
Coping: emotion-focused (high)†	20.2%	9.6%	7.3%	9.5%	55.0%	53.5%
Coping: avoidant (low)†	12.4%	4.5%	3.7%	4.2%	35.1%	34.5%
Coping: avoidant (high)†	26.4%	12.0%	10.9%	11.9%	50.0%	53.6%
Coping: socially-supported (low)†	16.4%	4.1%	4.7%	4.8%	29.0%	25.6%
Coping: socially-supported (high)†	24.4%	14.2%	11.3%	12.9%	61.5%	69.7%
Personality: openness to Experience (low)†	19.0%	6.9%	6.7%	6.6%	33.9%	37.6%
Personality: openness to Experience (high)†	20.9%	10.5%	8.5%	10.6%	54.9%	53.9%
Personality: conscientiousness (low)†	21.3%	9.7%	8.0%	8.8%	42.2%	44.4%
Personality: conscientiousness (high)†	18.0%	6.9%	7.0%	7.7%	44.0%	44.9%
Personality: extraversion (low)†	23.3%	9.3%	8.0%	8.7%	42.1%	42.0%
Personality: extraversion (high)†	16.0%	7.5%	7.0%	7.9%	44.1%	47.6%
Personality: agreeableness (low)†	18.6%	8.1%	7.3%	7.3%	38.9%	39.9%
Personality: agreeableness (high)†	21.2%	8.9%	7.8%	9.4%	47.7%	50.1%
Personality: neuroticism (low)†	10.3%	3.5%	3.3%	3.5%	33.3%	33.0%
Personality: neuroticism (high)†	28.3%	12.8%	11.2%	12.5%	51.6%	55.0%

Table shows the % of people in each category that used the following methods to support their mental health during the COVID-19 pandemic

- MED= take medication
- MH= speak to MH professional
- GP = speak to GP or other health professional
- HL= use helpline or online service
- SFC= self care
- FAM= talk to friends and family

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