

National Maternity and Perinatal Audit

Evaluating Hospital and Crisis Care for Perinatal Mental Health

Based on women and birthing people who gave birth between 1 April 2018 and 31 March 2019 in England

Data Sources, Methods and Definitions

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Introduction

In the [Evaluating Hospital and Crisis Care for Perinatal Mental Health](#) report, we describe the results of a feasibility study using linked existing electronic national datasets to evaluate perinatal mental health services in England. The report used maternity care episode records for all women and birthing people who gave birth in NHS acute hospitals in England between 1 April 2018 and 31 March 2019 available in the Hospital Episode Statistics Admitted Patient Care (HES APC) database. The maternity records were linked to records available in the Mental Health Services Data Set (MHSDS), and its precursor datasets, which include information about inpatient admissions and other secondary care episodes that took place within NHS mental health care providers between 1 April 2006 and 31 March 2019.

The analyses using the linked dataset consisted of four parts:

- We describe the characteristics of women and birthing people according to whether they had contact with secondary mental health services prior to pregnancy.
- We describe secondary mental health services use during pregnancy and in the six months following childbirth for women and birthing people, according to whether they had contact with secondary mental health services prior to pregnancy.
- Groupings of mental health diagnoses are used to describe mental health conditions for women and birthing people with respect to their prognosis and treatment. We describe the main diagnostic groupings for women and birthing people with mental health conditions prior to and during the perinatal period.
- As an illustration of the clinical relevance of linking maternity and mental health datasets, we describe key pregnancy outcomes for all women and birthing people, and their babies, according to whether they had contact with secondary mental health services prior to pregnancy.

This document provides details of the data sources, methods and definitions used for the [Evaluating Hospital and Crisis Care for Perinatal Mental Health](#) report.

Data on maternity services

Women and birthing people who gave birth and their babies were identified using Hospital Episode Statistics Admitted Patient Care (HES APC), an administrative database of all care episodes in general NHS hospitals. In HES, diagnostic information is coded using the International Classification of Diseases, Tenth revision (ICD-10).¹ Operative procedures are described using the United Kingdom Office for Population Censuses and Surveys Classification of Surgical Operations and Procedures, fourth revision (OPCS-4).² Further details about labour and birth (e.g., fetus outcome, gestational age, birthweight) are recorded in supplementary fields known as the HES ‘maternity tail’.

A maternity episode in HES was identified as any record that contained valid information about mode of birth in either the procedure fields (OPCS-4 codes: R17.1 to R25.9) or the HES maternity tail. A neonatal episode was defined as any record that contained a newborn, defined as being less than 1 day of age at episode onset.

Maternity and neonatal HES episodes were linked using encrypted versions of the mother’s and baby’s NHS number (a unique national identifier for each individual NHS user, assigned at birth) available in the Personal Demographics Service (PDS) Birth Notifications data.³ PDS Birth Notifications data also provided other key details about the birth, including baby’s birthweight, gestational age and whether the baby was born alive. The mother-baby dataset was then linked to Office for National Statistics (ONS) Death Registration data to ascertain maternal or neonatal deaths.⁴ The resulting HES-PDS-ONS-linked dataset allowed for the final birth cohort selection and the identification of maternal characteristics and maternal and neonatal outcomes.

Maternal characteristics derived from the linked dataset include maternal age, ethnicity, socioeconomic deprivation, multiplicity and obstetric history (parity and previous caesarean section). Maternal age was grouped into five categories (under 25, 25-29, 30-34, 35-39, above 40 years). Maternal ethnicity was collapsed into 5 groups: White, South Asian, Black, Mixed, and Other stated.⁵ Parity and previous caesarean section were derived from the HES maternity tail and if not available there, determined by “looking back” at HES APC records of previous hospital care episodes.⁶ Socioeconomic deprivation was derived from quintiles of the national ranking of the Index of Multiple Deprivation 2019 (IMD) of the women’s area of residence.⁷

Definitions for maternal and neonatal outcomes are listed in Table 1. Two composite measures of maternal adverse outcomes and neonatal adverse outcomes were used to assess maternal morbidity, and neonatal mortality and morbidity, the English Maternal Morbidity Outcome Indicator (EMMOI) and the English Neonatal Adverse Outcome Indicator (ENAOI).^{8,9} Information on pre-existing and current comorbidities and the components of the composite indicators were derived from diagnosis or procedure codes in the HES maternity record, with women and birthing people or their babies assumed not to have the condition if the code was not present. For multiple births, adverse perinatal outcome is reported if any of the babies have that outcome.

Table 1: Maternal and neonatal outcomes data specification

	Definitions / coding
Mode of birth	
Unassisted vaginal birth	OPCS codes: R23 and R24
Assisted (instrumental) birth	OPCS codes: R21 and R22
Elective caesarean birth	OPCS code: R17
Emergency caesarean birth	OPCS codes: R18 and R25.1
Comorbidities	
Gestational diabetes	ICD-10 codes: O24.4
Pre-existing diabetes	ICD-10 codes: E10, E11, E13, E14, O24.0, O24.1, O24.2, O24.3
Pre-eclampsia/eclampsia	ICD-10 codes: O14 and O15
Pre-existing hypertension	ICD-10 codes: I10-I15, O10, O11
Other maternal outcomes	
Composite maternal adverse outcome: English Maternal Morbidity Outcome Indicator (EMMOI)	EMMOI is defined as births with any of the following morbid events: acute abdomen, acute renal failure, cardiac arrest/failure or infarction, cerebral oedema or coma, disseminated intravascular coagulopathy, cerebrovascular accident, major complications of anaesthesia, obstetric embolism (including amniotic fluid embolism), shock, sickle cell anaemia with crisis, status asthmaticus, status epilepticus, uterine rupture, eclampsia, sepsis, cerebral venous thrombosis, assisted ventilation including tracheostomy, curettage in combination with a general anaesthetic, dialysis, evacuation of hematoma, hysterectomy, procedures to reduce blood flow to uterus, re-closure of disrupted caesarean section wound, repair of bladder or cystostomy and repair of intestine. Coding of these diagnoses and procedures can be found in Nair <i>et al</i> 2016. ⁸
Maternal length of stay	Defined as the number of days between date of giving birth and date of discharge.
Maternal readmission	Defined as unplanned, overnight readmission to hospital within 42 days of giving birth, excluding those accompanying an unwell baby. Mothers readmitted with the following admission method codes: 21, 22, 23, 24, 28, 2A, 2B, 2D, 31, 32, 82, 83
Third- or fourth-degree perineal tears	<i>Defined for vaginal births only</i> ICD10 codes: O70.2 or O70.3 OPCS codes: R32.2 or R32.5
Neonatal outcomes	
Preterm birth	Defined using gestational age fields in HES maternity tail or PDS birth notifications dataset- (gestational age<37).
Small for gestational age	Defined as less than the tenth birthweight centile using the UK-WHO charts. Birthweight centiles are calculated using birthweight, gestational age, sex of baby fields in HES maternity tail or birth notifications dataset.
Composite neonatal adverse outcome: English Neonatal Adverse Outcome Indicator (ENAOI)	<i>Defined for liveborn births only</i> ENAOI is defined as births with any of the following diagnoses/procedures: birthweight <1500 g, gestational age under 32 completed weeks, 28-day neonatal mortality, respiratory distress syndrome, seizure, intraventricular haemorrhage (grade 3/4), cerebral infarction, periventricular leukomalacia, birth trauma, hypoxic ischemic encephalopathy, necrotizing enterocolitis, sepsis / septicaemia, pneumonia, respiratory disease, bacterial meningitis, resuscitation, mechanical ventilation / CPAP / high flow nasal oxygen, central venous or arterial catheter, pneumothorax requiring intercostal catheter, any intravenous fluids, any body cavity surgical procedure, therapeutic hypothermia. Coding of these diagnoses/procedures can be found in Knight <i>et al</i> 2019. ⁹
Perinatal mortality (stillbirth and death in first week of life)	<i>Stillbirth:</i> Defined using ICD-10 code (Z37.1) or birth status field in maternity tail for providers with high data completeness. In the UK, stillbirth is defined as birth without signs of life occurring at or after 24+0 completed gestational weeks, based on estimated due date calculated using universally offered ultrasound scan at 11–13 weeks' gestation. <i>7-day neonatal mortality:</i> Derived from Office for National Statistics (ONS) Mortality Data linked to HES and PDS birth notifications records for the baby.

Data on mental health services

The Mental Health Services Data Set (MHSDS) is a national dataset of secondary mental health care provided by NHS England.¹⁰ The dataset has evolved considerably over time (see Box 1) and detailed description of its content as well as of its precursor datasets, Mental Health and Learning Disabilities Data Set (MHLDS) and Mental Health Minimum Data Set (MHMDS), can be found elsewhere.¹¹

Mental health data in England are recorded by a range of secondary mental health service providers as a part of routine patient care for people receiving specialist mental health care, including care provided in hospitals, outpatient clinics and in the community as well as services for patients detained under the Mental Health Act. These secondary care contacts typically need a referral from a general practitioner or are part of urgent or emergency care.

Format 1: 1 April 2006 to 31 March 2011

The Mental Health Minimum Data Set (MHMDS) collected information about episodes of care for adults in contact with providers of NHS funded mental health services in England, comprised of one datafile for each financial year. The number of days were recorded for each care episode of hospital inpatient admission and mental health services care contact. The data specification for this source can be found in the NHS archives.¹²

Format 2: 1 April 2011 and 30 November 2015

Restructuring of the MHMDS led to more detailed data, including the start and end dates of each care episode.¹¹

The dataset comprised three files:

- episodes of care delivered over extended periods of time,
- events and other elements of care delivered at specific moments in time,
- key 'background' information.

Format 3: 1 December 2015 to 31 March 2016

The Mental Health and Learning Disabilities Data Set (MHLDDS) was not available for analysis for this report. The data specification for this source can be found in the NHS archives.¹¹

Format 4: 1 April 2016 to present

The MHSDS, is made up of more than 50 relational tables including patient index, diagnosis, care contacts and hospital/ward admission. Dataset specifications are available for the MHSDS on the [NHS England website](#). A unique pseudonymised ID was used to link records for each woman or birthing person across care episodes across all years. This version also includes data for children, young people and adults who are in contact with services for mental health and wellbeing, learning disability, autism or other neurodevelopmental conditions.^{10,11}

Box 1: Details of the Mental Health Services Data Set (MHSDS) changes over time.

Women and birthing people were considered to have had a pre-existing mental health illness if there was a record of a secondary care contact in the mental health datasets before the beginning of the current pregnancy. Secondary mental health care contacts both prior to pregnancy and in the perinatal period were categorised into three groups according to level of care: an inpatient admission (including to a general psychiatric ward, mother and baby unit (MBU), or secure ward), involvement of a specialist mental health crisis resolution team (CRT), and other care contacts with secondary mental health care, including day care and outpatient or community-based care. If different levels of mental health care were received in a given period, the highest level of care was selected. Definitions for the three levels of care in the mental health services dataset and the mental health minimum dataset can be found in Box 2. The timing of the most recent pre-pregnancy mental health care contact was categorised as more than 5 years, 1–5 years, or less than 1 year before the onset of pregnancy.

Hospital inpatient admission	
MHMDS (format 1)	Mental health hospital inpatient spells were identified if at least one day was recorded in a care episode that was labelled “hospital provider spell”.
MHMDS (format 2)	Mental health hospital inpatient spells with a start and end date were identified from the “episode type” field which included inpatient consultant or nursing episode, hospital provider spell or ward stay.
MHSDS (format 4)	Mental health hospital inpatient spells with a start and end date were identified from table “MHS501 Hospital Provider Spell” and table “MHS502 Ward Stay”.
Care contacts and crisis resolution home team treatment (CRT)	
MHMDS (format 1)	Care contacts were identified if at least one day was recorded in a care episode that was labelled outpatient attendance consultation, bed day NHS community care, or care attendance (NHS and non-NHS). CRTs were identified if at least one day was recorded in a care episode that was labelled “acute home based”.
MHMDS (format 2)	Care contacts were identified from the “episode type” field in the episodes data file and from the “health care professional contact” field from the events data file. Eligible “episode types” were consultant outpatient episode, mental health NHS community care episode, outpatient attendance consultant (mental health) and community episode (of community psychiatric nursing). Eligible “health care professional contacts” were community psychiatric nurse contacts, consultant outpatient attendances, professional staff group contacts and care-coordinator contacts (including those that take place at day-care facilities). CRT contacts were identified by the episode type “acute home-based care episode”.
MHSDS (format 4)	Care contacts were identified from table “MHS201 Care Contact”, which also included information on cancelled or non-attended appointments as well as the consultation medium (e.g., face-to-face, telephone, text message). The care contacts were linked to table “MHS006 Mental Health Care Coordinator” which provided information as to whether the consultation was with a “Crisis Resolution Team/Home Treatment Service” (CRT).

Box 2: Definitions of levels of secondary mental health services in the mental health datasets

Data on diagnostic groups

The nature and severity of the mental health diagnosis was described using the diagnoses recorded in the MHMDS & MHSDS using ICD-10 (International Classification of Diseases 10th Revision) codes as described in Chapter V ('Mental and behaviour disorders').¹

For all women and birthing people with a hospital inpatient admission or any secondary mental health services contact recorded prior to the current pregnancy or in the perinatal period, all diagnostic codes, dates of diagnosis, and the type of diagnosis (primary, secondary level) were extracted into a longitudinal dataset. This longitudinal dataset was used to describe the mental health diagnoses for all women and birthing people with pre-pregnancy secondary mental health services contact and for those with a contact during the perinatal period.

The advisory group for this report revised previously published groupings used to identify factors associated with mental health hospital admissions around the time of birth into eight diagnostic groups.^{13,14} These groupings were defined by creating diagnostic groups of mental health conditions which are similar with respect to prognosis and treatment, while limiting the number of groups as much as possible. A full breakdown of each group, the included diagnostic codes and changes can be found in Table 2.

For each woman or birthing person with at least one diagnosis, the most recent primary level mental health diagnosis recorded prior to pregnancy was selected. However, in some cases, there are multiple different diagnoses recorded for one person over time. A problem with reporting the most recent diagnosis is that it may not reflect the primary disorder. This is particularly relevant if psychoactive substance use (Group 4) is the most recent code as it may not reflect the underlying condition. To try and resolve this issue, the most recent code for each woman or birthing person was selected first if it was from either Group 1-3 or Groups 5-7 and if there were none of those codes, then we reported the most recent code of Group 4 or Other.

Table 2: Diagnostic groups for categorising mental health prior to pregnancy (*differences in groups with the Scottish perinatal mental health sprint audit report*)

Group	Conditions included in each group
Group 1 non-affective psychosis: schizophrenia	F20 Schizophrenia
	F20.0 Paranoid schizophrenia
	F20.1 Hebephrenic schizophrenia
	F20.2 Catatonic schizophrenia
	F20.3 Undifferentiated schizophrenia
	F20.4 Post-schizophrenic depression
	F20.5 Residual schizophrenia
	F20.6 Simple schizophrenia
	F20.8 Other schizophrenia
	F20.9 Schizophrenia, unspecified
	F21 Schizotypal disorder
	F22 Persistent delusional disorders
	F22.0 Delusional disorder
	F22.8 Other persistent delusional disorders
	F22.9 Persistent delusional disorder, unspecified
	F23 Acute and transient psychotic disorders (ATPD), is included, except non-specific disorders
	F23.1 Acute polymorphic psychotic disorder with symptoms of schizophrenia
	F23.2 Acute schizophrenia-like psychotic disorder
	F23.3 Other acute predominantly delusional psychotic disorders
	F24 Induced delusional disorder
	F25 Schizoaffective disorders include
	F25.0 Schizoaffective disorder, manic type (<i>*in group 2</i>)
	F25.1 Schizoaffective disorder, depressive type
	F25.2 Schizoaffective disorder, mixed type(<i>*in group 2</i>)
	F25.8 Other schizoaffective disorders
	F25.9 Schizoaffective disorder, unspecified
	F28 Other nonorganic psychotic disorders
	F29 Unspecified nonorganic psychosis
	Group 2: Acute non schizophrenia like and affective psychoses including postpartum psychosis
F30.0 Hypomania	
F30.1 Mania without psychotic symptoms	
F30.2 Mania with psychotic symptoms	
F30.8 Other manic episodes	
F30.9 Manic episode, unspecified	
F31 Bipolar affective disorder	
F31.0 Bipolar affective disorder, current episode hypomanic (<i>*in group 8</i>)	
F31.1 Bipolar affective disorder, current episode manic without psychotic symptoms	
F31.2 Bipolar affective disorder, current episode manic with psychotic symptoms	
F31.3 Bipolar affective disorder, current episode mild or moderate depression (<i>*in group 3</i>)	
F31.4 Bipolar affective disorder, current episode severe depression without psychotic symptoms (<i>*in group 3</i>)	
F31.5 Bipolar affective disorder, current episode severe depression with psychotic symptoms	
F31.6 Bipolar affective disorder, current episode mixed	
F31.7 Bipolar affective disorder, currently in remission	

	F31.8 Other bipolar affective disorders (<i>*in group 8</i>)
	F31.9 Bipolar affective disorder, unspecified (<i>*in group 8</i>)
	Depressive episodes with psychotic symptoms
	F32.3 Severe depressive episode with psychotic symptoms
	F33.3 Recurrent depressive disorder, current episode severe with psychotic symptoms
	F23 Acute and transient psychotic disorders (ATPD) *F23.0, F23.8 F23.9, (<i>*in group 1 include in group 2 rather than group 1 because they specify "without Schizophrenia" or are unspecified psychotic disorders (not schizophrenia)</i>)
	F23.0 Acute polymorphic psychotic disorder without symptoms of schizophrenia,
	F23.8 Other acute and transient psychotic disorders, and
	F23.9 Acute and transient psychotic disorders unspecified
Group 3 Major depressive disorder	Group 3 depression (Includes non psychotic depression, Depressive episodes, Recurrent depressive disorder, Postpartum depression) and excludes those with psychotic symptoms (group 2)
	F32 Depressive episode
	F32.0 Mild depressive episode
	F32.1 Moderate depressive episode
	F32.2 Severe depressive episode without psychotic symptoms
	F32.8 Other depressive episodes
	F32.9 Depressive episode, unspecified
	F33 Recurrent depressive disorder
	F33.0 Recurrent depressive disorder, current episode mild
	F33.1 Recurrent depressive disorder, current episode moderate
	F33.2 Recurrent depressive disorder, current episode severe without psychotic symptoms
	F33.4 Recurrent depressive disorder, currently in remission
	F33.8 Other recurrent depressive disorders
	F33.9 Recurrent depressive disorder, unspecified
	F34 Persistent mood [affective] disorders
	F34.0 Cyclothymia (<i>*in group 7</i>)
	F34.1 Dysthymia (<i>*in group 7</i>)
	F34.8 Other persistent mood [affective] disorders (<i>*in group 8</i>)
	F34.9 Persistent mood [affective] disorder, unspecified (<i>*in group 8</i>)
	F38 Other mood [affective] disorders (<i>*in group 8</i>)
	F38.0 Other single mood [affective] disorders (<i>*in group 8</i>)
	F38.1 Other recurrent mood [affective] disorders (<i>*in group 8</i>)
	F38.8 Other specified mood [affective] disorders (<i>*in group 8</i>)
	F39 Unspecified mood [affective] disorder (<i>*in group 8</i>)
	F53.0 Postpartum depression: Mild mental and behavioural disorders associated with the puerperium, not elsewhere classified (<i>*in group 8</i>)
Group 4 psychoactive substance use	F10-F19 Mental and behavioural disorders due to psychoactive substance use pathological drug intoxication
	F10.-Mental and behavioural disorders due to use of alcohol
	F11.-Mental and behavioural disorders due to use of opioids
	F12.-Mental and behavioural disorders due to use of cannabinoids
	F13.-Mental and behavioural disorders due to use of sedatives or hypnotics
	F14.-Mental and behavioural disorders due to use of cocaine

	F15.-Mental and behavioural disorders due to use of other stimulants, including caffeine
	F16.-Mental and behavioural disorders due to use of hallucinogens
	F17.-Mental and behavioural disorders due to use of tobacco
	F18.-Mental and behavioural disorders due to use of volatile solvents
	F19.-Mental and behavioural disorders due to multiple drug use and use of other psychoactive substances
	F55 Abuse of non-dependence-producing substances (<i>*in group 8</i>)
Group 5 Anxiety disorders and post-traumatic stress disorder (PTSD)	<i>Anxiety disorders, Obsessive-compulsive disorder (OCD), Post-traumatic stress disorder (PTSD)</i>
	F40 Phobic anxiety disorders (<i>*in group 8</i>)
	F41 Other anxiety disorders
	F41.0 Panic disorder [episodic paroxysmal anxiety]
	F41.1 Generalized anxiety disorder
	F41.2 Mixed anxiety and depressive disorder
	F41.3 Other mixed anxiety disorders
	F41.8 Other specified anxiety disorders
	F41.9 Anxiety disorder, unspecified
	F42 Obsessive – compulsive disorder
	F42.0 Predominantly obsessional thoughts or ruminations
	F42.1 Predominantly compulsive acts [obsessional rituals]
	F42.2 Mixed obsessional thoughts and acts
	F42.8 Other obsessive – compulsive disorders
	F42.9 Obsessive – compulsive disorder, unspecified
	F43 Reaction to severe stress, and adjustment disorders
	F43.0 Acute stress reaction
	F43.1 Post-traumatic stress disorder
	F43.2 Adjustment disorders
	F43.8 Other reactions to severe stress
	F43.9 Reaction to severe stress, unspecified
	F44 Dissociative [conversion] disorders (<i>*in group 8</i>)
	F44.0 Dissociative amnesia
	F44.1 Dissociative fugue
	F44.2 Dissociative stupor
	F44.3 Trance and possession disorders
	F44.4 Dissociative motor disorders
	F44.5 Dissociative convulsions
	F44.6 Dissociative anaesthesia and sensory loss
	F44.7 Mixed dissociative [conversion] disorders
	F44.8 Other dissociative [conversion] disorders
	F44.9 Dissociative [conversion] disorder, unspecified
	F45 Somatoform disorders (<i>*in group 8</i>)
	F45.0 Somatization disorder
	F45.1 Undifferentiated somatoform disorder
	F45.2 Hypochondriacal disorders
	F45.3 Somatoform autonomic dysfunction
	F45.4 Persistent somatoform pain disorder
	F45.8 Other somatoform disorders
	F45.9 Somatoform disorder, unspecified
	F48 Other neurotic disorders
	F48.0 Neurasthenia
	F48.1 Depersonalization-derealization syndrome
	F48.8 Other specified neurotic disorders

	F48.9 Neurotic disorder, unspecified
	F63 Habit and impulse disorders (<i>*in group 8</i>)
Group 6 Eating disorders	<i>This group includes only F50 Eating disorders</i>
	F50 Eating disorders
	F50.0 Anorexia nervosa
	F50.1 Atypical anorexia nervosa
	F50.2 Bulimia nervosa
	F50.3 Atypical bulimia nervosa
	F50.4 Overeating associated with other psychological disturbances
	F50.5 Vomiting associated with other psychological disturbances
	F50.8 Other eating disorders
	F50.9 Eating disorder, unspecified
Group 7 Complex trauma and conditions named 'personality disorders'	F60 Specific personality disorders [#]
	F60.0 Paranoid personality disorder
	F60.1 Schizoid personality disorder
	F60.2 Dissocial personality disorder
	F60.3 Emotionally unstable personality disorder
	F60.4 Histrionic personality disorder
	F60.5 Anankastic personality disorder
	F60.6 Anxious [avoidant] personality disorder
	F60.7 Dependent personality disorder
	F60.8 Other specific personality disorders
	F60.9 Personality disorder, unspecified
	F61 Mixed and other personality disorders
	F61.0 Mixed personality disorders
	F61.1 Troublesome personality changes
Group 8 Other ICD-10 Chapter V (F00-F99) conditions not included elsewhere	<i>All other conditions not thought to have an increased risk during the perinatal period are reported in this group</i>
	F50-F59 Behavioural syndromes associated with physiological disturbances and physical factors
	F51 Nonorganic sleep disorders
	F52 Sexual dysfunction, not caused by organic disorder or disease
	F54 Psychological and behavioural factors associated with disorders or diseases classified elsewhere
	F59 Unspecified behavioural syndromes associated with physiological disturbances and physical factors
	F53.1 Severe mental and behavioural disorders associated with the puerperium, not elsewhere classified) (<i>*in group 2</i>)
	F53.9 Puerperal mental disorder, unspecified
	F62 Enduring personality changes, not attributable to brain damage and disease
	F64 Gender identity disorders
	F65 Disorders of sexual preference
	F66 Psychological and behavioural disorders associated with sexual development and orientation
	F68 Other disorders of adult personality and behaviour
	F69 Unspecified disorder of adult personality and behaviour
	F70-F79 Mental retardation
	F80-F89 Disorders of psychological development

	F90-F98 Behavioural and emotional disorders with onset usually occurring in childhood and adolescence
Group 9 Other ICD-10 codes not included in Chapter V	(Z00-Z13) Persons encountering health services for examination and investigation Z63.0 Problems in relationship with spouse or partner (X60-X84) Intentional self-harm
Group 10 not included	F00-F09 Organic, including symptomatic, mental disorders

() the text in blue shows which category the codes were in for the previous Scottish report that have been modified for this report.*

We use the same terminology that have been used in the ICD-10 categories. However, we acknowledge that such terms may be unacceptable to some people, and that the understanding of these conditions is currently shifting and much debated. For example, 'personality disorder' (ICD-10 F60) used to describe a group of conditions that may be better referred to as 'complex post-traumatic stress disorder'.

Data limitations

This report has various limitations due to the availability and completeness of the mental health datasets.

Secondary mental health care contacts are identified by the presence or absence of records in mental health datasets. Limitations in data recording or completeness mean that women and birthing people with rejected referrals, or missing consultation dates would have been coded as having 'no secondary mental health services contact'. The types of secondary mental health care contact are presented as binary results and therefore, do not reflect the number of episodes. A small proportion of women and birthing people may have required multiple hospital admissions for mental health treatment.

Use of specialist perinatal mental health services in the perinatal period is defined as any secondary mental health services contact recorded in the MHSDS during the current pregnancy and the immediate postnatal period. For the analysis of mental health services contact and diagnosis in the perinatal period, due to availability of MHSDS until the end of 31 March 2019, we restricted the cohort to women and birthing people with at least six months of postnatal follow-up in the mental health data (those giving birth in the first half of the study period between 1 April 2018 and 30 September 2018). We report on the perinatal mental services use during pregnancy and up to six months following childbirth.

Poor data completeness for some key variables in mental health datasets impacted reporting of diagnostic groups as well as number of MBU admissions. Recording of diagnostic codes in MHSDS is not mandatory and as such are poorly recorded. The number of MBU admissions is identified from a field that specifies "hospital bed type" for all inpatient hospital admissions. However, the "hospital bed type" which provides further information on whether this is an MBU or general acute psychiatric ward was missing in approximately 60% of all inpatient admission records.

Historic mental health data between 1 April 2015 and 31 March 2016 were not available from NHS England. Child and Adolescent Mental Health Services (CAMHS) data are only captured by MHSDS from 2016 onwards.

Finally, MHSDS data is limited to secondary mental health services. Mental health conditions diagnosed and managed solely in primary care are not recorded in these datasets.

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