

Pre-existing mental health disorders and pregnancy

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Abstract

Mental health conditions are independent risk factors for poor obstetric and neonatal outcomes therefore obstetricians need to be able to manage them well. This review will summarize the management of pre-existing mental health disorders in pregnancy. Explanations will be given as to which women are managed in primary care for their mental health conditions and which women are managed in specialist Perinatal Mental Health Services. When women should be referred to perinatal mental health services is described. The article provides recommendations on the obstetric management of these women as well as information on psychotropic medication in pregnancy and lactation.

Keywords antidepressants; antipsychotics; depression; mental health; postpartum psychosis; psychotropic medication

Introduction

'Mental Health matters' was one of the three key messages from the 2015 MBRRACE report. The 2018 MBRRACE report stated that 71 women had died by suicide in pregnancy or up to one year postpartum with mortality rates remaining unchanged. This review will consider what may be included in the phrase 'pre-existing mental health disorders', the role of the obstetricians and midwives in these conditions, the management of pre-existing mental health conditions by secondary mental health services and primary care services, the obstetric management of these women and how pregnancy outcomes might be impacted by pre-existing mental health disorders. It needs to be remembered that pregnancy is a major life event and for those women expecting their first child it represents a complex transition from one way of life to another. Being aware of the normal emotional changes in pregnancy and postpartum provides an important reference point when considering mental health conditions during this period.

The term 'mental health' is a very broad term used in different contexts to mean different things which can range from serious mental illnesses such as schizophrenia to the idea of 'emotional health' which is not a medical concept and has its roots in some psychological theories. The term mental health disorder is more specific and refers to what used to be called 'mental illnesses', namely conditions where a person has had a significant change in how their mental state presents and is associated with a

significant deterioration in their functioning. We need to ensure when we think about mental health disorders/conditions/difficulties that we retain the vital component that functioning is impacted as well as how the person presents. In terms of diagnoses, psychiatrists in the United Kingdom (UK) use the ICD-10 classification system, however, people do not always fit neatly into boxes so at times terminology may be less clear and pragmatic management plans need to be developed.

The management of mental health disorders during pregnancy and the postnatal period differs from at other times because of the potential impact of any treatments on the woman, fetus and neonate. There are risks associated with taking psychotropic medication in pregnancy and during breastfeeding but these need to be balanced against the risks of stopping medication taken for a pre-existing mental health disorder.

Pre-existing mental health disorders can be divided in a number of different ways; in this review the women will be categorized by who will be managing their mental health disorder in pregnancy. The incidence rate of mental health conditions in pregnancy is up to 20%, some are pre-existing whilst others start during pregnancy or postpartum. Pregnancy is not protective against a mental health disorder and rates increase in the postpartum period. Between 10 and 13% of women will develop a depressive episode postpartum but these will range from mild to severe as defined by ICD-10 criteria. Mild episodes are managed in primary care with psychosocial interventions. Anxiety disorders are also common and are largely managed in primary care. Specialist perinatal mental health services would usually care for women with the most serious mental health conditions related to pregnancy and childbirth, typically 3–5% of live births although this rate varies in different areas. A few women may have pre-existing mental health conditions that are better managed by the adult mental health team that already look after that woman, particularly if either the condition will not be changed by pregnancy and/or childbirth or if the woman is not going to retain custody of the infant.

Effect of mental health disorders on pregnancy

Mental health disorders during pregnancy are independent risk factors for poor obstetric and neonatal outcomes, because of the close relationship between neurochemistry and the mechanism of placentation. Brain-derived neurotrophic factor and matrix metalloproteinases (MMPs) play a key role in adult neurogenesis and neuroprotection against excitotoxicity, and also participate in the processes of embryo implantation, trophoblast invasion, placental angiogenesis and vascular remodelling. The other substances that play a dual role in the central nervous system and the placenta are somatostatin, neurotensin, enkephalin, cortisol, insulin-like growth factor 1, vascular endothelial growth factor and the transcription factor cyclic AMP-responsive element-binding protein (CREB).

The risks of miscarriage, fetal growth restriction (FGR), pre-term birth and low birth weight infants remain high in women with depressive disorders, anxiety disorders, post-traumatic stress disorder, schizophrenia, affective psychosis such as bipolar disorder and eating disorders. Possible explanations for these adverse events in mothers with depressive disorders are the abnormally high cortisol levels and the elevated levels of plasminogen activator inhibitor (PAI)-1 which, in turn, leads to

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inadequate MMP activation. It is possible that chronic anxiety symptoms are associated with increased procoagulant activity and decreased fibrinolytic activity which could potentially increase the risk of adverse obstetric and neonatal outcomes by causing placental vessel thrombosis. Cigarette smoking, alcohol consumption and substance misuse is also higher in this group which on its own have deleterious effects on pregnancy such as placental abruption, low birth weight infants. In contrast, mothers with binge eating disorders have the higher risk of large-for-gestational-age babies and caesarean section.

In addition, mothers with schizophrenia have a 72% greater risk of thromboembolic disease than healthy pregnant women. Increased procoagulant activity is thought to be related to low tissue plasminogen activator (tPA) activity, low free-protein S levels and persistent antiphospholipid antibodies, especially lupus anticoagulant or IgM anticardiolipin antibody. It is also speculated that these thrombophilias could contribute to poor pregnancy outcomes. Rates of gestational diabetes are also higher in this cohort, as well compared to the general pregnant population and this may be related to anti-psychotic medication intake. Low folate intake increases homocysteine levels which is considered a risk factor for schizophrenia. It is not uncommon to find spina bifida, holoprosencephaly and other neural tube defects in offspring of mothers with schizophrenia.

Women with severe anxiety have an increased likelihood of delivery by planned caesarean section because of fear of birth.

Pre-existing mental health conditions managed in primary care in the perinatal period

Those women who will continue to be managed in primary care will commonly have diagnoses including previous mild depressive episodes, previous adjustment reactions, anxiety disorders of mild to moderate severity, history of superficial self-harm and/or some interpersonal difficulties and some specific developmental disorders such as ADHD, autistic spectrum disorder (also known as Asperger's). If women are taking psychotropic medication this will be probably be being prescribed for them by their GP who may not be aware that the woman is pregnant. When an obstetrician in antenatal clinic (ANC) meets a woman who, for example, is taking an SSRI prescribed by their GP and who has not seen secondary mental health services, the obstetrician should liaise with the GP and ask the GP to review this medication in light of the pregnancy. The GP will have the background information on why the medication was started, how long it has been prescribed for and therefore will be best placed to have a discussion with the woman to enable her to make an informed decision about whether or not to continue that medication.

Pregnancy can be an opportunity for women to review medications they have been taking for a while and consider whether they need to continue them or not, and antidepressants are no exception to this. The British Association for Psychopharmacology (BAP) perinatal guidance 2017 states that in general, if a medication is working for a woman and if the benefits of continuing it outweigh the risks, then it can be reasonable to continue psychotropic medication. Having said that, if a woman has been in recovery for 6 months after a single episode requiring medication or for 2 years after two or more episodes, then she can reduce and stop her antidepressant medication. However, an

obstetrician in ANC is not expected to manage this woman's mental health. The obstetrician's role is to provide some information on the risks and benefits of that medication to the fetus, to share with the GP the information given to the woman and request that the GP sees the woman to make a plan regarding the medication. For woman taking antidepressants (including SSRIs, TCAs, SNRIs), typical advice would be to reduce and stop the medication by 36 weeks' gestation, to try to reduce the effects of Neonatal Adaptation Syndrome which is particularly marked with venlafaxine. There is some evidence of slightly increased risk of a Post-Partum Haemorrhage when taking antidepressants in late pregnancy so discussing that risk would be part of an obstetrician's role.

It may be the woman has had a short psychological intervention such as 6–8 sessions of cognitive behavioural therapy (CBT) through an 'Improving Access to Psychological Therapies' (IAPT) provider or through a mental health nurse in the GP practice. This would still be considered as having been managed in primary care. If a woman has a recurrence of some symptoms of mild severity then the appropriate course of action, as recommended by NICE guidelines, is a psychological intervention or talking therapy within primary care usually delivered by an IAPT provider to which a woman can self-refer.

In the postpartum period, women with pre-existing mental health conditions being managed in Primary Care will need the same visits from midwives and health visitors as all other women and will need to be asked the same questions about their mental health. If the condition does not change significantly then it is appropriate for the woman to continue to be managed in primary care. If the condition significantly deteriorates and the woman is not able to function in day to day life, referral to specialist perinatal mental health services is appropriate.

Pre-existing mental health conditions managed by secondary mental health services

Women who have a more serious pre-existing mental health disorder that has required secondary mental health services in the past or that deteriorates in the perinatal period will need specialist perinatal mental health services in the perinatal period. Maternity services play a vital role in identifying these women and referring them to the specialist community mental health service for their area or liaising with the adult mental health service if they are to continue with the same mental health team. Written communication as well as verbal communication needs to occur between obstetricians, midwives, GPs, health visitors and psychiatrists. Poor communication between maternity services, mental health services and GPs has been repeatedly shown to have been a significant factor in maternal deaths in Confidential Inquiries dating back to 1992.

The obstetrician should identify the class of medication the woman is taking, confirm the dose and determine who has recommended taking it in pregnancy. The dose of medication is usually very helpful in working out why a medication may be being prescribed (see Table 1). It is helpful to be aware that some medications (such as quetiapine) are used 'off licence' at lower doses for other difficulties so just because a woman is taking an antipsychotic does not necessarily mean she has previously been psychotic. It is vital to know who started this

Some Psychotropic Medications more commonly prescribed in pregnancy

Psychotropic Medications	Class	Usual indication	Treatment dosing range
Sertraline	SSRI	Depression or anxiety disorder	50 mg-200 mg daily
Fluoxetine	SSRI	Depression or anxiety disorder	20 mg -60 mg daily
Citalopram	SSRI	Depression or anxiety disorder	10 mg–40 mg daily
Escitalopram	SSRI	Depression or anxiety disorder	5 mg–20 mg daily
Imipramine	TCA	Depression or anxiety disorder	75 mg–150 mg daily
Venlafaxine	SNRI	Depression or anxiety disorder	75 mg–225 mg daily
Duloxetine	SNRI	Depression or anxiety disorder	60 mg–120 mg daily
Mirtazapine	Anti-depressant	Depression or anxiety disorder	15 mg–45 mg nocte
Haloperidol	FGA	Psychosis or mood stabiliser	5–10 mg daily
Quetiapine	SGA	Psychosis or mood stabiliser or adjunct in depression	300 mg–750 mg daily
Olanzapine	SGA	Psychosis or mood stabiliser	5 mg–20 mg daily
Aripiprazole	SGA	Psychosis or mood stabiliser	10 mg–30 mg daily
Clozapine	Antipsychotic	Treatment Resistant Schizophrenia	Blood monitoring to determine dose

SSRI = Selective Serotonin Reuptake Inhibitor.

TCA = Tricyclic Antidepressant.

FGA = First Generation Antipsychotic.

SGA = Second Generation Antipsychotic.

Table 1

medication and why it was started, before it is possible to be able to weigh up the risks and benefits of the medication. This can only effectively be done by a psychiatrist or GP who has access to the woman's medical records to establish why the medication is being prescribed. It is not an obstetrician's role to give advice as to whether medication is indicated; instead, the obstetrician's role is to encourage the woman to discuss this with her psychiatrist or GP and to counsel against any changes until the discussion has taken place. The exception to this guidance is when the woman is taking valproate, in which case urgent action is required.

In terms of estimating the risk of relapse postpartum and therefore the need for medication in pregnancy and/or immediately after childbirth, the psychiatric diagnosis is vital. Obstetricians need to be aware that some women report bipolar disorders when this is not the case. Any woman who reports that she has a bipolar disorder should be referred to the Community Perinatal Mental Health service for that area; if, after assessment, the specialist service advise that the woman does not have bipolar disorder, this needs to be documented in maternity records and the correct diagnosis managed.

Women with specific pre-existing mental health disorders that require secondary mental health services can be further subdivided into those who are currently well from a mental health perspective in pregnancy and not taking medication, those who are well and taking medication, those who are mentally ill and taking medication in pregnancy and also those who are mentally ill and not taking medication in pregnancy. The aim of treatment is to optimise the outcomes of the pregnancy, the baby, the woman's physical health and her mental health. This will mean involvement of mental health clinicians as well as obstetricians and midwives. Some trusts have specialist midwives for maternal mental health that will get involved in caring for these women, in addition to the usual maternity team.

Pregnant women with pre-existing mental health conditions who are in recovery

For those women with pre-existing mental health conditions who are currently in recovery and not taking medication, the obstetrician's role is to advise the woman to engage with perinatal mental health services. As stated above, women who have a diagnosis of bipolar disorder or major depressive disorder are at increased risk of relapse postpartum even if they have been in recovery for several years. These women may see their previous episode(s) as in the past and irrelevant to their pregnancy, so the midwife and obstetrician's role is to persuade them to see mental health services without unduly alarming them.

For those women with pre-existing mental health conditions who are in recovery and are taking psychotropic medications to maintain the recovery, the BAP perinatal guidance recommends continuing with the medication that works for that woman except where the medication causes an increased risk of fetal anomalies when there are other suitable alternatives. These women may be under the care of an adult mental health team or may have been referred to perinatal mental health services by their midwife, obstetrician or GP. If not already done, they will need to be referred to perinatal mental health services by maternity services.

Pre-existing mental health disorders with a relapse in pregnancy

For those women with pre-existing mental health conditions who are experiencing a relapse of their condition and are taking psychotropic medications, the obstetrician's role is to identify the symptoms of a relapse, and instigate referral to the perinatal mental health team who will determine if she is already being seen by another mental health team. The core maternal medicine curriculum for the RCOG states that all trainees in obstetrics need

to develop clinical competencies in taking an appropriate history for women with a psychiatric illness including past psychiatric history, drug history and risk factors. Obstetricians are expected to be able to document a woman's mental state, but this does not need to include all the correct psychiatric terminology. It is more important to record an accurate description than to use terminology. The referral should also include information on what medication the woman reports she is taking and details of the pregnancy. If there is evidence that the mental health disorder is impacting on the development of the fetus, for example, if the woman falsely believes that her food and drink is being poisoned (delusional belief) and consequently avoids consuming anything, if she is dehydrated, or if fetal growth has slowed, then the referral needs undertaken urgently (including a telephone conversation with the perinatal mental health clinician). Other important factors to consider in the referral are whether the woman is attending her antenatal appointments, whether she is engaging in recommended investigations (e.g. blood tests), whether she has deteriorated during the pregnancy and whether social services are involved. If she becomes severely mentally ill

and there are risks to herself, the baby or others, she may need admission to a psychiatric hospital. From approximately 32 weeks gestation to up to 1 year postpartum this would usually be to a mother and baby unit. This admission would be determined and organized by the perinatal mental health team.

Psychiatric services should have priority care pathways for pregnant and postpartum women; these will include a rapid response time for women in the last 6 weeks of pregnancy and the first 6 weeks following delivery. Alterations in mental states during that time need to be treated urgently by all clinicians involved. [Table 2](#) summarises the women who warrant a referral to specialist psychiatric service to receive a mental health assessment.

Obstetric management of women with pre-existing mental health conditions

Women with mental health disorders are considered 'high risk' during pregnancy and postpartum period and should be managed in a multidisciplinary setting to achieve a favourable maternal and fetal outcomes. The group of healthcare professionals who need to be involved in their care will depend on whether the

Reason/Presentation	Timeframe for referral to be made
Pregnant woman with an history of moderate to severe depression requiring Secondary Mental Health Services, currently well	Routine
 Pregnant woman with an history of Postpartum Psychosis currently well	Routine
Pregnant woman with an history of Bipolar Disorder currently well	Routine
 Pregnant woman with an history of Schizoaffective Disorder currently well	Routine
 Pregnant woman with an history of Schizophrenia currently well	Routine
 Pregnant woman with an history of Psychosis currently well	Routine
Pregnant woman with current symptoms of moderate to severe depression	Urgent
Pregnant woman with current symptoms of a psychotic illness	Urgent
Pregnant woman with current symptoms of severe anxiety disorder impacting on daily functioning	Routine
 Pregnant woman with personal history of depression managed by GP and first degree relative with an history of Bipolar Disorder or Postpartum Psychosis	Routine
Pregnant woman with significant deterioration of mental health in last 6 weeks of pregnancy	Urgent
 Early postpartum with recent significant change in mental state or emergence of new symptoms	Emergency
 Early postpartum with new thoughts or acts of violent self-harm	Emergency
 Early postpartum with new or persistent expressions of incompetency as a mother or estrangement from the infant	Emergency
Early postpartum possible psychotic symptoms when all physical causes have been excluded by examination and investigation	Emergency
 = Red Flag signs from MBRRACE 2015.	
 = some amber flags from MBRRACE 2018.	

Table 2

mental health condition is being managed in primary or secondary care outside pregnancy.

At the booking appointment, it is important to elicit questions about past psychiatric history, (including past diagnosis, whether the management was in primary or secondary care, any admissions to psychiatric hospital, whether the woman is currently open to mental health services and any medication taken at any point during pregnancy). This will help to identify women who need referral to perinatal mental health service and those being managed by the GP, with whom the obstetrician will need to liaise. It is a good practice to review pregnant women with moderate to severe mental health illness regularly in antenatal clinics (ANC) as this will provide multiple opportunities to assess mental health and will also facilitate development of rapport between the woman and her healthcare professionals. Women taking antipsychotics should be offered a glucose tolerance test between 24 and 28 weeks' gestation and serial fetal growth scans in third trimester, to exclude gestational diabetes and FGR respectively. In addition to identifying risk to self and risk to others, risk to the baby needs to be considered and referral to social care/safeguarding team may be warranted.

It is important that a late pregnancy and early postnatal care plan is completed, jointly with the specialist psychiatric service and the woman, usually at 28–32 weeks of pregnancy. Where the plan includes decisions about medication, it should be completed, or overseen, by a psychiatrist. Depending on the type of medication(s) the woman is taking, the newborn may be affected and require appropriate management so a 'neonatal alert' may be useful. The psychiatric plan around the time of birth should also include details on breastfeeding whilst on particular psychotropic medications and the follow up arrangements.

Obstetric indications will guide the timing and mode of delivery in majority of women with pre-existing mental health disorders. However, planned delivery prior to the due date may be indicated if mental health is unstable and/or optimisation of medication is required. Vaginal delivery is usually considered safe, however, planned caesarean section may be considered in certain circumstances.

In the immediate postpartum period, community midwives and health visitors should ask all women with pre-existing mental health disorders about their mental state. A significant deterioration in mental health will warrant urgent liaison with specialist mental health team. Maternity and mental health services also have a duty to ensure that if a baby is likely to require inpatient neonatal care and the mother requires inpatient psychiatric care, neonatal services are informed of the mother's admission and visits to the baby are appropriately facilitated. In such cases, mental health and maternity services have a duty to ensure that links are maintained with the local maternity service and GP, and that both are involved in discharge planning.

All women who have an episode of postpartum psychosis or significant worsening of their mental health during the perinatal period should discuss their risks of relapse in any future pregnancy with their mental health team when they are in recovery. The need for re-referral to perinatal mental health services if they become pregnant should be discussed. Consideration of the most appropriate form of contraception is an important part of the woman's care.

Medication for mental health conditions in pregnancy and lactation

The BAP guidance 2017 recommends that after a risk: benefits discussion with the woman, if medication is required to continue during pregnancy, the medication which has been most effective should usually be continued in pregnancy. Obvious exceptions to this include sodium valproate or semi-sodium valproate which should be avoided in women of child bearing potential.

Tricyclic antidepressants such as Imipramine are used in pregnancy. The evidence base for SSRIs has grown recently, particularly those more commonly prescribed, including Sertraline, Fluoxetine and Citalopra; these are prescribed in pregnancy as a statistically significant increased rate of fetal anomalies has not been demonstrated and previous concerns about persistent pulmonary hypertension in the newborn appear to have been significantly over-estimated (the absolute risk is small). One article demonstrated a small increased risk of preterm birth when antidepressants are taken in the first trimester. Neonatal Adaptation Syndrome can occur and there is a small increased risk of the newborn being admitted to NICU when mothers take antidepressants in late pregnancy. There is possibly an increased risk of postpartum haemorrhage when SSRIs are taken through delivery. Consequently, some perinatal psychiatrists advise decreasing and stopping antidepressants by 36 weeks gestation, although others do not. The long term implications the offspring are currently unclear.

Tricyclic antidepressants and Sertraline are used during lactation as the levels of these agents in breast milk are very low. Of the SSRIs, Fluoxetine is found at the highest levels in breast milk, so should be avoided in breast feeding, particularly in the neonatal period.

Antipsychotics, when prescribed for a psychotic illness, generally need to be continued through pregnancy and delivery, to reduce the risks of relapse. However, obstetricians need to be aware that antipsychotics can be prescribed for other reasons (e.g. personality difficulties) so women on antipsychotics in pregnancy need to be reviewed by a mental health team and a plan agreed. There does not appear to be an increased rate of fetal anomalies when antipsychotics are taken in pregnancy, although there is some evidence to suggest that Risperidone and Paliperidone are associated with a small increased rate of fetal anomalies. Clozapine is a third line medication used for treatment of resistant schizophrenia which is associated with a two-fold increase in the rate of gestational diabetes, close blood level monitoring through pregnancy is required and the medication can result in newborns who are lacking in tone, bradycardic, with increased rate of seizures and a theoretical risk of agranulocytosis. Joint obstetric and psychiatric management of these women is vital and formula feeding is recommended. Antipsychotics are also used for their mood stabilizing properties in bipolar disorders in pregnancy. First generation antipsychotics (e.g. Haloperidol) and some second generation antipsychotics, including Quetiapine and Olanzapine, are used in breast feeding.

Lithium is associated with an increased risk of cardiac defects in the fetus, however, in some cases remaining on lithium maintains recovery from bipolar disorder. Lithium therapy necessitates blood monitoring throughout pregnancy, every 4 weeks and then weekly from 36 weeks gestation. The dose of

lithium will need to be adjusted by the psychiatrist to keep levels within the therapeutic range. The woman must have obstetrician led care. When she goes into labour, lithium should be stopped; it is important to check lithium levels and maintain a strict fluid balance as dehydration increases the risk of lithium toxicity. Lithium level needs to be rechecked after delivery due to the change in fluid volume at delivery. Women should not breast feed if taking lithium.

Lamotrigine can be used as a mood stabiliser for bipolar disorder type 2 or in schizoaffective disorder or as an adjunct in recurrent depression. There are no clinical guidelines currently on therapeutic levels of lamotrigine when used for a mental health condition so most women will not have had a pre-pregnancy level, and monitoring of levels in pregnancy may not assist management of the mental health condition. Dosing tends to be based on clinical assessment.

Conclusion

The obstetrician's role in caring for women with pre-existing mental health conditions is to manage the pregnancy and to remain informed about commonly prescribed psychotropic medication in pregnancy in order that appropriate information is provided. The mental health condition should be managed by the Mental Health Team; for more serious mental illnesses (3–5% of live births) this will include a Consultant Psychiatrist, whereas for less severe conditions management will be by the GP. Communication between all professionals involved in the woman's care and with the woman herself is vital. Written communication needs to be shared between all professionals involved (having gained consent to do so). All women should be treated equally with dignity and respect regardless of whether or not they have a pre-existing mental health condition. Pregnancy and childbirth is an emotional time, so obstetricians need to recognise normal emotional changes during this time. All staff should work within their competencies, first doing no harm and seeking supervision from those more experienced, to ensure that women get the very best possible care, with the objective of reducing the morbidity and mortality associated with pre-existing mental health conditions - for both woman and infant. ◆

FURTHER READING

[Antenatal and postnatal mental health: clinical management and service guidance. NICE CG, 192 published December 2014. last updated April 2018.](#)

[Cantwell R, Youd E and Knight M on behalf of the MBRRACE-UK mental health chapter-writing group: messages for mental health. In: Knight M, Bunch K, Tuffnell D, et al., eds. On behalf of MBRRACE-UK. Saving lives, Improving mothers' care - lessons learned to inform maternity care from the UK and Ireland confidential enquiries into maternal deaths and morbidity 2014-16. Oxford: National Perinatal Epidemiology Unit, University of Oxford, 2018; p42–57.](#)

[Cantwell R, Knight M, Oates M, Shakespeare J. On behalf of the MBRRACE-UK mental health chapter writing group. Lessons on maternal mental health. In: Knight M, Tuffnell D, Kenyon S, Shakespeare J, Gray R, Kurinczuk JJ, eds. On behalf of MBRRACE-UK. Saving lives, improving mothers' care - surveillance of maternal deaths in the UK 2011-13 and lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into maternal deaths and morbidity 2009-13. Oxford: National Perinatal Epidemiology Unit, University of Oxford, 2015; p22–41.](#)

[Hoirisch-Clapauch S, Brenner B, Nardi AE. Adverse obstetric and neonatal outcomes in women with mental disorders. *Thromb Res* 2015 Feb; **135**\(suppl 1\): S60–3.](#)

[Pregnancy and Complex Social Factors: a model for service provision for pregnant women with complex social factors. NICE CG110, September 2010. published.](#)

Practice Points

- Women with mental health disorders are considered 'high risk' during pregnancy and postpartum period and should be managed in a multidisciplinary setting involving obstetricians, midwives, GPs, and when open to secondary mental health services psychiatrists and specialist nurses as well to achieve a favourable maternal and fetal outcomes.
- All obstetricians and midwives including trainees should remain up to date on knowledge about commonly prescribed psychotropic medication in pregnancy to be able to provide information to women.
- All obstetricians and midwives including trainees should be able to identify red flags as an urgent liaison with specialist perinatal mental health team is necessary.
- All women should be treated equally with dignity and respect regardless of whether they have a pre-existing mental health condition or not.