

SST: Maternal and Fetal Medicine (MFM)

Subspecialty training in Maternal and Fetal Medicine consists of:

- The Pregnancy Care SITM (PC CiPs 1, 2, 3 and 4)
- The Maternal Medicine SITM (MM CiPs 1 and 2)
- The Fetal Care SITM (FC CiPs 1, 2 and 3)
- The Prenatal Diagnosis SITM (PD CiPs 1, 2 and 3)
- Three subspecialty specific CiPs (SST MFM CiP 1, 2 and 3)
- One subspecialty specific research CiP (SSTR CiP)

These 16 CiPs are outlined below.

The subspecialty trainee will need to complete all 16 CiPs to achieve subspecialty accreditation. The subspecialty specific CiPs can only be completed as part of an accredited subspecialty training programme in Maternal and Fetal Medicine. A doctor who has completed part or all of the SITMs (PC CiPs 1-4, MM CiPs 1-2, FC CiPs 1-3 and PD CiPs 1-3) prior to commencing subspecialty training in MFM does not need to repeat any part of the SITM CiPs already completed.

Trainees with previous research experience, such as SIPM Clinical Research can be used as evidence for the Research (SSTR) CiP and does not need to be repeated.

MFM Sub-specialty Programme Summary

SITMs Pregnancy Care – x4 CiPs Maternal Medicine - x2 CiPs Fetal Care - x3 CiPs Prenatal Diagnosis - x3 CiPs	12
Sub-specialty training CiPs x3	3
Subspecialty specific Research CiP	1

SITM: Pregnancy Care (PC)

SECTION 1: CAPABILITIES IN PRACTICE (CiP)

PC CiP 1: The doctor demonstrates the skills needed, and can apply their knowledge, to manage antenatal care for a pregnant person with common medical problems.

Key skills

Descriptors



<p>Able to take a thorough medical history from the pregnant person</p>	<ul style="list-style-type: none">• Demonstrates the ability to take a thorough medical history and considers how pregnancy may affect the medical problem presentation and how the condition may affect the pregnancy.• Demonstrates the ability to record significant family history, drug history (including interactions and pregnancy safety), past medical history and systemic enquiry, including red flags.
<p>Risk assesses the pregnant woman with co-existing medical conditions and plans for her pregnancy, in conjunction with specialist services</p>	<ul style="list-style-type: none">• Is able to risk assess women with medical problems and stratify them into low, medium or high-risk groups: those who can be managed using local expertise (category A); those who need clinical review and ongoing advice and guidance from the Maternal Medicine Centre (category B); and those whose care in pregnancy is best led by the Maternal Medicine Centre (category C).• Knows the limits of their knowledge and can communicate effectively with other specialities locally, and with the Maternal Medicine Network, to best manage the care of a pregnant person. Working within guidance and thresholds determined by the local Maternal Medicine Network, is able to:<ul style="list-style-type: none">○ assess a woman with a pre-existing medical condition preparing for pregnancy, and work with her to put together an appropriate plan.○ evaluate and advise on drug therapy for medical conditions and tailor treatment when this would have a detrimental effect on pregnancy.○ assess conditions that will have a significant impact on the outcome of pregnancy for a mother and her baby.○ assess conditions where pregnancy may significantly deteriorate the health of a woman with a pre-existing medical condition and the surveillance required to limit risk.○ access additional information needed to best manage complex medical conditions.○ put together a delivery plan that minimises risk to a mother and her baby.○ work in partnership with the woman to plan her care and delivery.• Refers to other medical and maternal medicine specialists, in line with local guidance.
<p>Diagnoses and provides initial management for common acute medical presentations in pregnancy</p>	<ul style="list-style-type: none">• Understand what investigations are needed to explore common medical presentations, including shortness of breath, chest pain, headache, collapse, abdominal pain and fever/sepsis.• Constructs a differential diagnosis and requests appropriate investigations.• Initiate appropriate emergency management and liaise with allied specialities for an ongoing plan of care.

	<ul style="list-style-type: none"> • Understands the impact of, and interplay between, mental health conditions and maternal medicine conditions, and addresses this in management plans.
<p>Diagnoses and manages hypertensive disorders in pregnancy</p>	<ul style="list-style-type: none"> • Is able to assess and counsel women with hypertensive disorders, or at risk of a pregnancy-induced hypertensive disorders, pre-conceptually. • Understands and recognises the diverse aetiology of hypertension in pregnancy, whether pre-existing or arising in pregnancy. • Understands the risks that hypertensive disorders pose to pregnant people and can plan safe surveillance and management in the antenatal period. • Understands the risks that hypertensive disorders pose to a baby and can plan safe surveillance in the antenatal period. • Safely manages the hypertensive disorders in a woman in labour. • Understands and can create a safe management plan for a woman with severe pre-eclampsia and the complications of this condition. • Liaises with the multidisciplinary team (MDT), including the tertiary centre, where appropriate, to optimise the care of a woman with hypertensive disorders. • Works in partnership with the woman with a hypertensive disorder to plan her care and delivery. • Understands the long term implications of hypertensive disorders of pregnancy on the health and wellbeing of mother and baby. • Plans appropriate follow-up for a woman with a hypertensive disorder during pregnancy.
<p>Diagnoses and manages disorders of glucose metabolism in pregnancy</p>	<ul style="list-style-type: none"> • Assesses and agrees a plan for the woman who has pre-existing diabetes to prepare for pregnancy. Demonstrates knowledge of the risk that pre-existing diabetes has on a mother and her baby. • Works effectively in the MDT to provide the best possible care for a pregnant woman with pre-existing diabetes during pregnancy and in labour. • Refers to the tertiary centre in more complex cases to access specialist care for a pregnant person with diabetes during pregnancy • Diagnoses and can counsel a woman who develops diabetes during pregnancy. • Devises a safe plan for maternal and fetal surveillance during pregnancy.

	<ul style="list-style-type: none"> • Can recognise and manage the acute complications of diabetes in pregnancy e.g. diabetic ketoacidosis. • Plans for a woman with diabetes to safely give and is able to adapt the plan to changing circumstances. • Safely manages the delivery of a woman with diabetes. • Works in partnership with a woman to plan her care and delivery. • Understands the long term implications of disorders of glucose metabolism in pregnancy on the health and wellbeing of the mother and her baby • Plans appropriate follow-up care for a pregnant person with diabetes
Diagnoses and manages common endocrine disorders in pregnancy	<ul style="list-style-type: none"> • Assesses and agrees a plan for the woman with hypothyroidism. • Assesses and agrees a plan for the woman with hyperthyroidism. • Manages the woman with micro- and macroprolactinoma safely through pregnancy.
Supports the health and wellbeing of a morbidly obese pregnant woman	<ul style="list-style-type: none"> • Is able to risk assess and plan for pregnancy and delivery, including women who have undergone bariatric surgery. • Is able to work with the woman to manage weight gain and create a suitable plan that encourages healthy nutrition. • Discusses and negotiates the most appropriate mode of delivery, taking into account patient choice and the safest delivery option. • Advises on modifications to birth that can enhance safety and the experience of the woman with morbid obesity. • Liaises with midwifery and anaesthetic colleagues to provide the best possible care.
Supports a pregnant woman with an eating disorder	<ul style="list-style-type: none"> • Is able to risk assess the pregnant person with an eating disorder and make plans for her pregnancy. • Can safeguard the wellbeing of both the mother with an eating disorder and her baby.
Evidence to inform decision	
<ul style="list-style-type: none"> • Reflective practice • NOTSS • TO2 • CbD • Mini-CEX 	<ul style="list-style-type: none"> • RCOG Learning • Local and deanery teaching • Attendance at appropriate courses and conferences • Attendance at specialist diabetes antenatal clinics • Attendance at maternal medicine clinics • Log of cases and outcomes
Knowledge criteria	

- Awareness and understanding of local maternal medicine networks and when to make referrals and involve the MDT
- The pathophysiology, definition, diagnosis, associated acute and long-term maternal and fetal complications, and best practice for managing pre-eclampsia and its variants
- The pathogenesis and classification, prevalence and complications of pre-existing diabetes (e.g. metabolic, retinopathy, nephropathy, neuropathy and vascular disease)
- Monitoring and optimisation of glucose control during labour
- Management of hypoglycaemia and ketoacidosis in pregnancy and labour
- The pathophysiology, presentation and implications for maternal and/or fetal health of common maternal conditions present at booking or that occur during pregnancy
- The aetiology, incidence, diagnosis, management; obstetric, medical and neonatal complications, and recurrence chance of each condition
- The interpretation of electrocardiograms (ECG), chest x-rays and blood gases analysis and how they are influenced by pregnancy
- How pregnancy alters physiology and what impact this has on medical conditions that are present, and how results of investigations should be interpreted during pregnancy
- The impact of drug treatment on the health of the mother and her babe
- The incidence, associated obstetric, medical and neonatal complications of the pregnant obese woman
- The endocrinology of obesity
- Weight reduction strategies and appropriate nutrition in managing the pregnant obese woman
- The risks associated with increased body mass index (BMI) in pregnancy and postpartum, and how these may be minimised
- The steps that can be taken before pregnancy to reduce the risks of morbid obesity during pregnancy

PC CiP 2: The doctor demonstrates the skills needed, and can apply their knowledge, to manage the care of a pregnant woman whose pregnancy is complicated by infection which may affect the health of her baby.

Key skills	Descriptors
Manages the care of a pregnant woman with infections that can affect their health and that of their baby	<ul style="list-style-type: none"> • Demonstrates a knowledge of the implications for pregnancy of variety of infections: HIV, syphilis, cytomegalovirus (CMV), toxoplasmosis, hepatitis B and C, herpes simplex virus (HSV), parvovirus and chicken pox (varicella). • Is able to interpret laboratory results for each infection by working closely with virology. • Explains the potential effects of infections on the baby, newborn and long-term effects of fetal infections. • Recognises when to refer a pregnant person with an infection and understands how best to share care and monitor them. • Works with the tertiary centre and MDT.

	<ul style="list-style-type: none"> • Works with the MDT to create a plan for medications for the mother during the birth and for the baby postnatally. • Gives appropriate advice to minimise the risk of vertical transmission.
Evidence to inform decision	
<ul style="list-style-type: none"> • Reflective practice • NOTSS • TO2 • Cbd • Mini-CEX 	<ul style="list-style-type: none"> • RCOG Learning • Local and deanery teaching • Attendance at appropriate courses and conferences • Log of cases and outcomes
Knowledge criteria	
<ul style="list-style-type: none"> • The clinical features, prevention, vertical transmission risk and ultrasound features of CMV, toxoplasmosis, parvovirus and varicella. Understands the short- and longer-term implications for the baby and newborn of contracting these infections, as well as the laboratory investigation that are needed and how to manage them during pregnancy • The role of the clinical virologist and the limitations of any antenatal treatment options 	

PC CiP 3: The doctor demonstrates the skills needed, and can apply their knowledge, to manage the postnatal care of a pregnant person with common medical problems.	
Key skills	Descriptors
Manages the care of a woman with medical conditions in the postnatal period – evidence for a variety of conditions but most include diabetes	<ul style="list-style-type: none"> • Discusses plans for contraception, tailored to the woman’s needs. • Makes sure that the woman receives follow-up care in an appropriate setting. • Can discuss the long-term implications of medical conditions on the woman’s health and wellbeing. • Supports the woman to limit the effect of her medical conditions on future pregnancies.
Evidence to inform decision	
<ul style="list-style-type: none"> • Reflective practice • NOTSS • TO2 • Cbd • Mini-CEX 	<ul style="list-style-type: none"> • RCOG Learning • Local and deanery teaching • Attendance at specialist diabetes antenatal clinics • Attendance at maternal medicine clinics • Log of cases and outcomes
Knowledge criteria	
<ul style="list-style-type: none"> • Contraception in the postnatal period • Provision of long-acting contraceptives • Implications of medical conditions on the wellbeing of mother and baby, and understands the 	

impact on further pregnancies

PC CiP 4: The doctor provides holistic care to a pregnant person.

Key skills	Descriptors
Is able to apply legal and ethical principles in pregnancy care, where this is needed	<ul style="list-style-type: none"> • Is able to screen for and organise safeguarding of a woman at risk of domestic violence. • Can screen for and organise safeguarding of the neonate at risk of harm. • Is able to counsel and complete an advance directive (recording decisions on healthcare in preparation for a future event) for the woman who declines blood products.
Provides the best possible outcomes for a pregnant person who is socially vulnerable	<ul style="list-style-type: none"> • Is aware of the effect of social deprivation on pregnancy outcomes. • Understands the prevalence of domestic violence, the need to screen all women for this and agree a plan to safeguard the pregnant person and their children.
Evidence to inform decision	
<ul style="list-style-type: none"> • Reflective practice • NOTSS • TO2 • CbD • Mini-CEX 	<ul style="list-style-type: none"> • Attendance at pre-birth planning meetings with the safeguarding team
Knowledge criteria	
<ul style="list-style-type: none"> • How social disadvantage can cause medical and neonatal complications, and legal consequences of social disadvantage with respect to: domestic violence, teenage pregnancy and asylum seekers • The influence of ethnic and religious background on obstetric expectations and outcome • The law in relation to seeking asylum • When and how to use different agencies involved in processing claims for asylum seekers and meeting their practical needs • The role of different agencies (social services, police and voluntary groups) in investigating suspected domestic violence and protecting vulnerable women and children • The law in relation to physical and sexual assault, bodily harm and rape • Female genital mutilation (FGM) procedures and their consequences, including for pregnancy and birth • Child protection issues associated with FGM • Religious beliefs and customs that may affect healthcare or consent for medical interventions 	

SECTION 2: PROCEDURES

There are no procedures in this SITM.

SECTION 3: GMC GENERIC PROFESSIONAL CAPABILITIES (GPCs)

Mapping to GPCs

Domain 1: Professional values and behaviours

Domain 2: Professional skills

- Practical skills
- Communication and interpersonal skills
- Dealing with complexity and uncertainty
- Clinical skills (history taking; diagnosis and management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control; and communicable diseases)

Domain 3: Professional knowledge

- Professional requirements
- National legislative requirements
- The health service and healthcare systems in the four countries

Domain 4: Capabilities in health promotion and illness prevention

Domain 5: Capabilities in leadership and teamworking

Domain 6: Capabilities in patient safety and quality improvement

- Patient safety
- Quality improvement

Domain 7: Capabilities in safeguarding vulnerable groups

SECTION 4: MAPPING OF ASSESSMENTS TO PC CiPs

PC CIP	OSATS	Mini-CEX	CbD	NOTSS	TO1/ TO2	Reflective practice
1: The doctor demonstrates the skills needed, and can apply their knowledge, to manage antenatal care for a pregnant person with common medical problems		X	X	X	X	X

PC CIP	OSATS	Mini-CEX	CbD	NOTSS	TO1/ TO2	Reflective practice
2: The doctor demonstrates the skills needed, and can apply their knowledge, to manage the care of a pregnant person with common infections		X	X	X	X	X
3: The doctor demonstrates the skills needed, and can apply their knowledge, to manage the postnatal care of a pregnant person who has common medical problems		X	X	X	X	X
4: The doctor provides holistic care to a pregnant person		X	X	X	X	X

SITM: Maternal Medicine (MM)

SECTION 1: CAPABILITIES IN PRACTICE

MM CiP 1: The doctor is able to work with others to provide high quality care to the woman with medical conditions in pregnancy or planning a pregnancy.	
Key skills	Descriptors
Effectively communicates with the team providing care	<ul style="list-style-type: none"> Builds on the key skills of the Pregnancy Care SITM and uses them when working on the full range of medical problems which may complicate pregnancy. Works collaboratively across specialties and, where relevant, manages clinical networks through MDT meetings to construct pre-pregnancy, antepartum, intrapartum and postpartum management plans to ensure that high quality care is available locally to women with complex medical problems.

	<ul style="list-style-type: none"> Plans care for women with complex medical problems in collaboration with other specialties. Makes appropriate referral to a regional maternal medicine clinic, where relevant. (In England this will be through the Maternal Medicine Networks either through MDTs for category B medical problems or referral for ongoing care to a Maternal Medicine Centre for category C medical problems). Is aware of a possible genetic diagnosis that may not have been diagnosed to date. Refers to clinical genetics as appropriate.
<p>Provides tailored pre-pregnancy counselling</p>	<ul style="list-style-type: none"> Can advise the person with complex medical conditions of the impact of pregnancy on their condition. Is able to advise the person with complex medical conditions on the impact of the condition on their pregnancy. Is able to advise on modifications that will optimise her health before embarking on pregnancy. Is able to adjust medication to the safest regime for pregnancy. Is able to put together a plan so the person knows what to expect once they become pregnant. Is able to advise on the timing of pregnancy. Is able to advise someone against conception in circumstances where the risk of pregnancy is too great.
<p>Is able to consider the anaesthetic implications of maternal conditions, liaise with anaesthetic colleagues and plan according to someone's needs</p>	<ul style="list-style-type: none"> Is familiar with the anaesthetic considerations for the person with a variety of medical conditions. Is able to work with anaesthetic colleagues to assess pregnant persons with complicated medical conditions and put together a plan to keep the person and the baby safe during pregnancy, delivery and the postnatal period. Demonstrates familiarity with the effect of different intrapartum analgesia to make sure persons with complex medical conditions are safe in labour. Participates in obstetric anaesthesia clinics.
<p>Can perform a risk benefit analysis of investigations and treatments that could be used during pregnancy</p>	<ul style="list-style-type: none"> Knows which investigations and medications are appropriate and can discuss the safety of these for the mother and fetus. Is able to interpret tests e.g. chest x-ray, artificial blood gas (ABG) and electrocardiogram (ECG), lung function tests and echocardiogram. Demonstrates understanding of the effects of drugs used for maternal indications on the fetus. Understands and accommodates the physiological effects of pregnancy on interpreting laboratory results and the pharmacokinetics of any drugs used.
<p>Evidence to inform decision</p>	

<ul style="list-style-type: none"> • Reflective Practice • NOTSS • TO2 • Cbd • Mini-CEX 	<ul style="list-style-type: none"> • RCOG Learning • Local and deanery teaching • Attendance at obstetric anaesthesia clinics • Attendance at maternal medicine network meetings
Knowledge criteria	
<ul style="list-style-type: none"> • Local team structures, networks and guidelines for the management of medical conditions in pregnancy and outside of pregnancy. • Awareness and understanding of local Maternal Medicine Networks and regional thresholds when to make referrals and include the MDT. Knows when it is appropriate to manage locally, or to manage locally with input from the regional maternal medicine clinic/the Maternal Medicine Centre and when referral to regional clinics/centres is advised. • Criteria for referral to Maternal Medicine Centres/regional clinics. • Structure of the Maternal Medicine Networks/regional clinics. • In England categories for level of care within the Maternal Medicine Networks i.e. category A, B and C. • When to seek specialist input. • The structure and organisation of high dependency, intensive care and outreach teams. • Indications for high dependency and intensive care. • Methods of invasive monitoring for oxygenation, acid base balance, intra-arterial pressure, cardiac output, preload and contractility. • The principles and practice of palliative care. 	

MM CiP 2: The doctor has a high level of understanding of the impact that medical conditions have on pregnancy and is able to optimise care for the affected woman.	
Key skills	Descriptors
Is able to manage care for the pregnant person who has renal problems in pregnancy	<ul style="list-style-type: none"> • Can construct an appropriate plan for pregnancy, delivery and the postnatal period to minimise the risks the woman's medical condition. • Can construct a plan for pregnancy, delivery and the neonatal period to minimise the risk to the fetus/baby. • Is able to recognise the presentation of renal disorders in pregnancy, can construct a differential diagnosis and work with the MDT to put together a suitable management plan for pre-existing or new onset conditions. • Understands which tests are appropriate in pregnancy for diagnosis and monitoring, and which are not valid or have different reference ranges in a pregnant woman. • Understands when tests pose an additional risk to the mother or fetus, and is able to discuss the relative risk and benefits of this. Can support a woman who deems the risk too high.

	<ul style="list-style-type: none"> • Has a good working knowledge of medical treatments for renal conditions that are safe in pregnancy, and can modify treatments when they are not safe. Knows how to access advice on safety.
<p>Is able to manage care for someone who has haematological problems in pregnancy</p>	<ul style="list-style-type: none"> • Can construct an appropriate plan for pregnancy, delivery and the postnatal period to reduce the risks associated with the woman's medical condition. • Can construct a plan for pregnancy, delivery and the neonatal period to reduce the risk to the fetus/baby. • Is able to recognise the presentation of haematological disorders in pregnancy, can construct a differential diagnosis and work with the MDT to put together a suitable management plan for pre-existing or new onset conditions. • Understands which tests are appropriate in pregnancy for diagnosis and monitoring of haematological disorders, and which are not valid or have different reference ranges in a pregnant woman. • Understands when tests pose an additional risk to the mother or fetus, and is able to discuss the relative risk and benefits of this. Can support a woman who deems the risk too high. • Has a good working knowledge of medical treatments for haematological conditions that are safe in pregnancy, and can modify treatment when they are not safe. Knows how to access advice on safety.
<p>Is able to manage care for someone who congenital and acquired cardiac conditions in pregnancy</p>	<ul style="list-style-type: none"> • Can construct an appropriate plan for pregnancy, delivery and the postnatal period to reduce the risks associated with the woman's medical condition. • Can construct a plan for pregnancy, delivery and the neonatal period to minimise the risk to the fetus/baby. • Is able to recognise the presentation of cardiac disorders in pregnancy, can construct a differential diagnosis and work with the MDT to put together a suitable management plan for pre-existing or new onset conditions. • Understands which tests are appropriate in pregnancy for diagnosis and monitoring of cardiac disorders, and which are not valid or have different reference ranges in the pregnant woman. • Understands when tests pose an additional risk to the mother or fetus and is able to discuss the relative risk and benefits of this. Can support a woman who deems the risk too high. • Has a good working knowledge of medical treatments for cardiac conditions that are safe in pregnancy and is able to modify treatment when they are not safe and knows how to access advice on safety.

<p>Is able to care for someone who has inflammatory conditions (connective tissue disorders, inflammatory bowel disease and dermatological problems) in pregnancy</p>	<ul style="list-style-type: none"> • Can construct an appropriate plan for pregnancy, delivery and the postnatal period to reduce the risks associated with the woman's medical condition. • Can construct a plan for pregnancy, delivery and the neonatal period to minimise the risk to the fetus/baby. • Is able to recognise the presentation of inflammatory or dermatological conditions in pregnancy, can construct a differential diagnosis and work with the MDT to put together a suitable management plan for pre-existing or new onset conditions. • Understands which tests are appropriate in pregnancy for diagnosis and monitoring of inflammatory disorders, and which are not valid or have different reference ranges in a pregnant woman. • Understands when tests pose an additional risk to the mother or fetus and is able to discuss the relative risk and benefits of this. Can support a woman who deems the risk too high. • Has a good working knowledge of medical treatments for inflammatory disorders that are safe in pregnancy, including biologics. Is able to modify treatment when they are not safe and knows how to access advice on safety.
<p>Is able to manage care for someone who has epilepsy and other common neurological problems in pregnancy</p>	<ul style="list-style-type: none"> • Can construct an appropriate plan for pregnancy, delivery and the postnatal period for women with epilepsy, multiple sclerosis, idiopathic intracranial hypertension and chronic headache. • Can put together a plan for pregnancy, delivery and the neonatal period to minimise the risk to the fetus/baby. • Is able to recognise the presentation of neurological disorders in pregnancy, can construct a differential diagnosis and work with the MDT to put together a suitable management plan for pre-existing or new onset conditions. • Can counsel a woman with epilepsy and other neurological problems to safeguard her baby.
<p>Is able to care for someone who has liver disorders in pregnancy</p>	<ul style="list-style-type: none"> • Can construct an appropriate plan for pregnancy, delivery and the postnatal period to reduce the risks associated with the woman's medical condition. • Can construct a plan for pregnancy, delivery and the neonatal period to minimise the risk to the fetus/baby. • Is able to recognise the presentation of liver disorders in pregnancy, can construct a differential diagnosis and work with the MDT to put together a suitable management plan for pre-existing or new onset conditions.



	<ul style="list-style-type: none">• Understands which tests are appropriate in pregnancy for diagnosis and monitoring of liver disorders, and which are not valid or have different reference ranges in the pregnant woman.• Understands when tests pose an additional risk to the mother or fetus, and is able to discuss the relative risk and benefits of this. Can support a woman who deems the risk too high.• Has a good working knowledge of medical treatments for liver conditions that are safe in pregnancy, and is able to modify treatment when they are not safe. Knows how to access advice on safety.
Is able to manage care for someone who has HIV in pregnancy	<ul style="list-style-type: none">• Can construct an appropriate plan for pregnancy, delivery and the postnatal period to reduce the risks associated with the HIV in pregnancy.• Can construct a plan for pregnancy, delivery and the neonatal period to minimise the risk to the fetus/baby.• Understands which tests are appropriate in pregnancy for diagnosis and monitoring, and which are not valid or have different reference ranges in a pregnant woman.• Understands when tests pose an additional risk to the mother or fetus and is able to discuss the relative risk and benefits of this. Can support a woman who deems the risk too high.• Has a good working knowledge of medical treatments for HIV conditions that are safe in pregnancy and is able to modify treatment when they are not. Knows how to access advice on safety and the criteria for commencing treatment during pregnancy.
Is able to care for someone who has respiratory compromise in pregnancy	<ul style="list-style-type: none">• Can construct an appropriate plan for pregnancy, delivery and the postnatal period to reduce the risks associated with the woman's medical condition.• Can put together a plan for pregnancy, delivery and the neonatal period to reduce the risk to the fetus/baby.• Is able to recognise the presentation of respiratory disorders in pregnancy, can construct a differential diagnosis and work with the MDT to put together a suitable management plan for pre-existing or new onset conditions.• Understands which tests are appropriate in pregnancy for diagnosis and monitoring, and which are not valid or have different reference ranges in a pregnant woman.• Understands when tests pose an additional risk to the mother or fetus and is able to discuss the relative risk and benefits of this. Can support a woman who deems the risk too high.• Has a good working knowledge of medical treatments for respiratory conditions that are safe in pregnancy and is able to modify treatment when they are not safe. Knows how to access advice on safety.

<p>Is able to manage care for someone who has current or past malignancy in pregnancy</p>	<ul style="list-style-type: none"> • When malignancy is diagnosed in pregnancy, is able to support a woman through a tailored plan for treatment during pregnancy and provide them with reassurance of the suitability of this plan during. • Is able to weigh up the timing of delivery around someone's treatment needs. • When malignancy has been treated prior to pregnancy, is aware of the implications for maternal health during pregnancy and is able to mitigate against these. • Is mindful of the fetal considerations when managing malignancy in pregnancy. • Understands which tests are appropriate in pregnancy for diagnosis and monitoring of cancer, and which are not valid or have different reference ranges in a pregnant woman. • Understands when tests pose an additional risk to the mother or fetus and is able to discuss the relative risk and benefits of this. Can support a woman who deems the risk too high.
<p>Evidence to inform decision</p>	
<ul style="list-style-type: none"> • Reflective Practice • NOTSS • TO2 • CbD • Mini-CEX 	<ul style="list-style-type: none"> • RCOG Learning • Local and deanery teaching • Attendance at appropriate courses and conferences (eg BMFMS, MOMS) • Log of cases with outcomes • Attendance at non-obstetric specialist medical clinics • Attendance at maternal medicine MDTs
<p>Knowledge criteria</p>	
<ul style="list-style-type: none"> • The normal functional and anatomical changes of the different body systems during pregnancy (e.g. cardiovascular, respiratory, gastrointestinal, endocrine and haematological) • The pathological changes in the function of these body systems in pregnancy • Renal conditions - understands the risk factors, presentation, investigation, differential diagnosis, management and outcomes of renal conditions predating and arising in pregnancy, and the effect of labour and birth on these conditions: <ul style="list-style-type: none"> ○ acute renal impairment ○ hydronephrosis ○ renal disease and hypertension ○ glomerulonephritis ○ reflux nephromathy ○ renal transplant • Haematological - understands the risk factors, presentation, investigation, differential diagnosis management and outcomes of renal conditions predating and arising in pregnancy and the 	

effect of labour and birth on these conditions:

- sickle cell disease and crisis
- thalassaemia
- thromboembolic disease
- bleeding disorders
- disorders of platelets
- Cardiac - understands the risk factors, presentation, investigation, differential diagnosis management and outcomes of cardiac conditions predating and arising in pregnancy and the effect of labour and birth on these conditions:
 - congenital cardiac disease
 - ischaemic cardiac disease
 - mechanical and tissue valve replacements
 - peripartum cardiomyopathy
- Connective tissue disorders - understands the risk factors, presentation, investigation, differential diagnosis management and outcomes of connective tissue disorders predating and arising in pregnancy and the effect of labour and birth on these conditions:
 - System lupus erythematosus (SLE)
 - rheumatoid arthritis
 - autoimmune lymphoproliferative syndrome (APLS)
- Gastrointestinal - understands the risk factors, presentation, investigation, differential diagnosis, management and outcomes of gastrointestinal conditions predating and arising in pregnancy and the effect of labour and birth on these conditions:
 - acute fatty liver
 - Crohn's disease
 - ulcerative colitis
 - obstetric cholestasis
 - hyperemesis gravidarum
 - immune and infective hepatitis
 - liver transplant
- Dermatological conditions - understands the risk factors, presentation, investigation, differential diagnosis, management and outcomes of dermatological conditions predating and arising in pregnancy and the effect of labour and birth on these conditions:
 - psoriasis
 - eczema
 - pemphigoid
 - polymorphic eruption of pregnancy
 - prurigo
 - pruritic folliculitis
- Neurology - understand the risk factors, presentation, investigation, differential diagnosis, management and outcomes of neurological conditions predating and arising in pregnancy and the effect of labour and birth on these conditions:
 - multiple sclerosis
 - epilepsy
 - bell's palsy
 - migraine

- stroke
- cerebral palsy
- HIV infection - understands the risk factors, presentation, investigation, differential diagnosis, management and outcomes of HIV predated and arising in pregnancy and the effect of labour and birth on these conditions.
- Current pharmacological management of HIV, and drug side effects.
- Respiratory disease - understands the risk factors, presentation, investigation, differential diagnosis, management and outcomes of respiratory conditions predated and arising in pregnancy and the effect of labour and birth on these conditions:
 - asthma
 - cystic fibrosis
- Malignancy - understands the risk factors, presentation, investigation, differential diagnosis, management and outcomes of malignancy predated and arising in pregnancy and the effect of labour and birth on malignancy:
 - breast cancer
 - leukaemia
 - lymphoma
- Genetics and disease inheritance of medical disorders – the risk to the mother and to the fetus and screening options e.g. haemoglobinopathy
- How pregnancy can influence the findings of investigations and may alter treatment effects
- How the medical problem may deteriorate during pregnancy, how this might present, and how it would be managed.
- Paediatric network guidelines for the management of newborn problems, including frameworks around extreme prematurity and antenatal parallel care planning.
- The pharmacology of drugs used to manage these conditions.
- The pregnancy and breastfeeding safety profile of drugs, chemotherapy and radiotherapy used to manage these medical conditions .
- Recurrence risks for future pregnancies
- The best forms of contraception for women with these specific medical disorders

SECTION 2: PROCEDURES

There are no procedures in this SITM

SECTION 3: GMC GENERIC PROFESSIONAL CAPABILITIES (GPCs)

Mapping to GPCs

Domain 1: Professional values and behaviours

Domain 2: Professional skills

- Practical skills
- Communication and interpersonal skills
- Dealing with complexity and uncertainty

- Clinical skills (history taking, diagnosis and management, consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable diseases)

Domain 3: Professional knowledge

- Professional requirements
- National legislative requirements
- The health service and healthcare systems in the four countries

Domain 4: Capabilities in health promotion and illness prevention

Domain 5: Capabilities in leadership and teamworking

Domain 6: Capabilities in patient safety and quality improvement

- Patient safety
- Quality improvement

Domain 7: Capabilities in safeguarding vulnerable groups

SECTION 4: MAPPING OF ASSESSMENTS TO MM CiPs

MM CIP	OSATS	Mini-CEX	CbD	NOTSS	TO1/ TO2	Reflective practice
1: The doctor is able to work with others to provide high quality care to someone with medical conditions in pregnancy or who is planning a pregnancy		X	X	X	X	X
2: The doctor has a high level of understanding of the impact that medical conditions have on pregnancy and can provide the best care for the affected woman		X	X	X	X	X

SITM: Fetal Care (FC)

SECTION 1: CAPABILITIES IN PRACTICE

FC CiP 1: Uses ultrasound skills to recognise, monitor and manage compromise to fetal wellbeing.



Key skills	Descriptors
Uses ultrasound to screen, diagnose and manage fetal compromise	<ul style="list-style-type: none">• Understands the principles of transabdominal and transvaginal scanning, using ultrasound safely.• Able to measure fetal biometry to monitor the fetus at risk of growth restriction.• Able to recognise and manage early and late severe fetal growth restriction (FGR), referring cases of early FGR to tertiary services.• Able to recognise disorders of amniotic fluid volume and plan accordingly.
Uses Doppler studies to screen, diagnose and manage fetal compromise	<ul style="list-style-type: none">• Able to perform uterine artery Dopplers to assess the risk of placental dysfunction.• Able to perform umbilical artery Dopplers to assess fetal resilience.• Able to perform middle cerebral artery (MCA) Dopplers to evaluate fetal compromise.• Able to perform ductus venosus Dopplers to evaluate fetal compromise.
Uses ultrasound to assess placental location	<ul style="list-style-type: none">• Able to use transvaginal scanning to diagnose and manage low-lying placenta.
Discusses their findings with the pregnant woman	<ul style="list-style-type: none">• Demonstrates the ability to communicate their findings and the degree of risk effectively so that the woman can be involved in an informed decision-making process.
Assesses and plans the management and delivery of a fetus with severe growth restriction	<ul style="list-style-type: none">• Provides ongoing assessment of fetal biometry over time when severe FGR is identified.• Able to use fetal Dopplers – umbilical, MCA and ductus venosus – to assess fetal wellbeing and plan the timing of delivery.• Able to discuss gestation-related risk of delivery versus continuation of pregnancy with the pregnant woman and facilitate informed decision-making.
Provides support and counselling post birth and for future pregnancies	<ul style="list-style-type: none">• Provides follow up after the birth and accesses support services for the parents, where outcomes are complicated or poor.• Explains additional information learned after the birth e.g. placental histology.• Able to make a plan for future pregnancies, outlining recurrence risks and preventive strategies.
Evidence to inform decision	
<ul style="list-style-type: none">• NOTSS• TO2• CbD	<ul style="list-style-type: none">• Reflective practice• Attendance at appropriate courses e.g. ultrasound theory/practice

<ul style="list-style-type: none"> • Mini-CEX • OSATS 	<ul style="list-style-type: none"> • Log of cases with outcomes
Knowledge criteria	
<ul style="list-style-type: none"> • The risks associated with the different ultrasound modalities and how to limit them – mechanical index (MI) and thermal index (TI) • How to use machine controls to optimise the image, including: power, gain, focal length, magnification, sector width, frame rate, pulse repetition frequency, colour and power Doppler modes. • The difference between small for gestational age (SGA) and fetal growth restriction (FGR) • The differential diagnosis for fetal growth restriction • How Doppler assessments are used to monitor growth restriction, timing of birth and detect fetal anaemia • National guidance on monitoring for FGR, the timing of birth and signs that a referral need to be made to a subspecialist when managing FGR • How fetal anomalies may influence the Doppler waveforms (e.g. cardiac arrhythmias, fetal anaemia, hydrops and twin-to-twin transfusion syndrome (TTTS)) • Definition of low-lying placenta and how to make the diagnosis using ultrasound • Management of placenta praevia • The risk factors for abnormal placental invasion (AIP) and vasa praevia and how to diagnose them using ultrasound, and/or when to refer to a regional AIP service • Definition of oligohydramnios and polyhydramnios and the differential diagnosis, investigation and management 	

FC CiP 2: The doctor demonstrates the skills and attributes required to assess the fetus at risk of red cell alloimmunisation.	
Key skills	Descriptors
Safely manages the pregnancy where there is a risk of red cell immunisation	<ul style="list-style-type: none"> • Provides appropriate antenatal care to the woman with a pregnancy at risk. • Recognises when there is a risk of fetal anaemia. • Explains the potential fetal and maternal risks of red cell antibodies. • Liaises with blood transfusion and neonatal services. • Classifies the risks for any pregnancy complicated by red cell antibodies. • Performs and interprets the findings of a MCA Doppler. • Monitors the pregnancy at risk and understands the thresholds for referral to tertiary units with transfusion services.
Evidence to inform decision	
<ul style="list-style-type: none"> • NOTSS • TO2 • CbD • Mini-CEX 	<ul style="list-style-type: none"> • Reflective practice • Evidence of MDT working • RCOG e-learning: <ul style="list-style-type: none"> ○ observation of fetal blood transfusion

<ul style="list-style-type: none"> • OSATs 	
Knowledge criteria	
<ul style="list-style-type: none"> • Differential diagnosis for fetal anaemia • Ultrasound and cardiotocography (CTG) changes secondary to severe fetal anaemia • Which red cell antibodies may cause haemolytic disease of the fetus and newborn, and threshold antibody levels that carry significant risk • When and how surveillance for fetal anaemia should be instituted • How MCA velocities are used to monitor signs of anaemia • Triggers for referral to a tertiary level unit capable of performing intrauterine transfusion • Treatment of fetal anaemia • The role of intravenous immunoglobulin (IVIgG) in haemolytic disease of the fetus and newborn • Management of the newborn risk of kernicterus 	

FC CiP 3: The doctor demonstrates the skills and attributes required to assess complications of twin pregnancies.	
Key skills	Descriptors
Uses ultrasound to monitor twin pregnancies	<ul style="list-style-type: none"> • Able to determine the chorionicity of a twin pregnancy when scanning in first trimester. • Able to assess and monitor a twin pregnancy using biometry and Doppler scanning techniques.
Manages complicated twin pregnancies	<ul style="list-style-type: none"> • Able to diagnose and make an initial assessment of growth discordancy in twin pregnancies. • Able to discuss effectively the timing of delivery with parents and facilitate informed decision-making, considering the risk to both twins of delivery or continuing the pregnancy when there is growth discordancy. • Refers to tertiary services when early and severe growth discordancy occurs. • Able to assess and monitor the monochorionic twin pregnancy for presence and evolution of TTTS. • Refers to tertiary services when there is evidence of TTTS or selective FGR in monochorionic twins. • Assists with follow up after treatments for TTTS. • Recognises the possibility of other complications of monozygotic twinning, including selective FGR, discordant anomalies, twin reversed arterial perfusion sequence (TRAP) and single intrauterine death, and refers appropriately to fetal medicine tertiary services. • Is aware of the principles of management of higher multiples.
Evidence to inform decision	

<ul style="list-style-type: none"> • NOTSS • TO2 • Cbd • Mini-CEX • OSATS 	<ul style="list-style-type: none"> • Reflective practice • Attendance at specialist twin clinics • Log of cases with outcomes • Observation of advanced procedures in the management of complicated twin pregnancies e.g. fetal reduction and laser ablation
Knowledge criteria	
<ul style="list-style-type: none"> • Definition of significant growth discordance in twin gestations and the importance of chorionicity • Management of growth discordancy in twin pregnancies • The clinical and ultrasound features of TTTS, and referral triggers for fetal medicine subspecialty input • Short and long-term outcomes from TTTS • The management of TTTS and follow up regimes, following treatment • The ultrasound features of TRAP and conjoined twins • Ongoing management of a pregnancy complicated by co-twin death • Other complications of multiple gestations that necessitate discussion with, or referral to, a tertiary fetal medicine service, e.g. discordant anomaly 	

SECTION 2: PROCEDURES

Procedures marked with * require three summative competent OSATS.

<i>Procedures</i>	<i>Level by end of training</i>	<i>CiP 1</i>	<i>CiP 2</i>	<i>CiP 3</i>
Fetal biometry and liquor volume*	5	X		
Transvaginal placental localisation*	5	X		
Umbilical artery Doppler*	5	X		
Middle cerebral artery Doppler*	5	X	X	
Ductus venosus Doppler*	5	X		
Uterine artery Doppler*	5	X		
Multiple gestation chorionicity*	5			X
Twin pregnancy assessment*	5			X

Subspecialty trainees in Maternal and Fetal Medicine will be expected to acquire the procedural skills listed in this table as well as the subspecialty-specific procedures listed in the MFM subspecialty-specific procedure table.

SECTION 3: GMC GENERIC PROFESSIONAL CAPABILITIES (GPCs)

Mapping to GPCs
Domain 1: Professional values and behaviours Domain 2: Professional skills <ul style="list-style-type: none"> • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty

- Clinical skills (*history taking, diagnosis and management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control; and communicable diseases*)

Domain 3: Professional knowledge

- Professional requirements
- National legislative requirements
- The health service and healthcare systems in the four countries

Domain 4: Capabilities in health promotion and illness prevention

Domain 5: Capabilities in leadership and teamworking

Domain 6: Capabilities in patient safety and quality improvement

- Patient safety
- Quality improvement

Domain 7: Capabilities in safeguarding vulnerable groups

SECTION 4: MAPPING OF ASSESSMENTS TO FC CiPs

FC CiP	OSATS	Mini-CEX	CbD	NOTSS	TO1/ TO2	Reflective practice
1: Uses ultrasound skills to recognise, monitor and manage compromise to fetal wellbeing		X	X	X	X	X
2: The doctor demonstrates the skills and attributes required to assess the fetus at risk of red cell alloimmunisation	X	X	X	X	X	X
3: The doctor demonstrates the skills and attributes required to assess complications of twin pregnancies	X	X	X	X	X	X

SITM: Prenatal Diagnosis (PD)

SECTION 1: CAPABILITIES IN PRACTICE (CiP)

PD CiP 1: The doctor can use ultrasound to recognise where fetal anatomy is not normal.

Key skills	Descriptors
Demonstrates normal structural findings in all trimesters and recognises when they cannot be demonstrated	<ul style="list-style-type: none"> • Performs and records a detailed, systematic ultrasound of the fetus in line with NHS Fetal Anomaly Screening Programme (FASP) guidance. • Understands the strengths and limitations of ultrasound for each organ system within each trimester. • Explains normal anatomical views to the pregnant person. • Documents and records normal anatomical views. • Recognises when image quality is technically poor. • Can explain next steps to the pregnant person if normal views cannot be obtained.
Evidence to inform decision	
<ul style="list-style-type: none"> • Reflective practice • NOTSS • TO2 • Cbd • Mini-CEX • OSATS (see below) 	<ul style="list-style-type: none"> • RCOG Learning • FASP online training • Local and deanery teaching • Attendance at relevant courses and conferences • Log of cases and outcomes • Attendance at fetal medicine clinics • Attendance at multidisciplinary team (MDT) meetings • Attendance at specialist neonatal and paediatric clinics • Examples of anonymised birth plans
Knowledge criteria	
<ul style="list-style-type: none"> • The normal appearance on ultrasound scans, in all trimesters, of the fetal central nervous system (CNS), face and neck, thorax, cardiovascular system, abdominal wall and gastrointestinal tract, urogenital system, and the fetal skeleton and extremities • Local protocols for follow up, if any, after an incomplete anatomy scan • Normal embryology of all body systems, and the common fetal anomalies that can happen when they do not develop in the way they should, as identified by FASP. • Normal fetal behaviour and activity, and abnormalities of this • Fetal circulation, and how it adapts at birth • Diagnostic features of each condition targeted by FASP, their differential diagnosis and chance of structural, chromosomal and syndromic associations. These conditions are Trisomy 21, 18 and 13, anencephaly, spina bifida, congenital diaphragmatic hernia, gastroschisis, exomphalos, renal agenesis, facial cleft, hypoplastic right or left heart and lethal skeletal dysplasia • The thresholds for diagnosing mild, moderate and severe ventriculomegaly measurements, and the potential implications of the different severities of ventriculomegaly • The role of magnetic resonance imaging (MRI) for CNS lesions • The difference between Dandy-Walker malformation, Dandy-Walker Variant and mega cisterna magna, the implications of each and the pitfalls in prenatal diagnosis 	

- The common fetal tachycardia and bradycardia arrhythmias and the role of the paediatric cardiologist in their management
- The different types of ventricular septal defect (VSD) and their association with cardiac, extracardiac and chromosomal anomalies. Understand the role of the paediatric cardiologist in their management
- The ultrasound features of transposition of the great arteries, atresia of either outflow tract, stenosis of either outflow tract, double outlet right ventricle or a common outflow tract (truncus arteriosus)
- The association of these conditions with further cardiac, extracardiac and chromosomal anomalies
- The role of the paediatric cardiologist in the management of fetal cardiac problems
- The ultrasound features of gastrointestinal (GI) atresia, associations and surgical options following birth
- The spectrum of ultrasound findings of echogenic bowel and its association with chromosomal anomalies, cystic fibrosis, growth restriction and viral infections
- Urinary tract obstruction and multi cystic dysplastic kidney (MCDK): aetiology, spectrum of severity, postnatal investigation and the likely short- and long-term impact of these conditions
- The local pathway for postnatal referral for talipes and the Ponseti approach to treatment
- Limb reduction defects: associations and aetiology
- Findings suggestive of lethal skeletal dysplasia and the features of the more common non-lethal dysplasias, particularly certain types of osteogenesis imperfecta and achondroplasia
- A differential diagnosis for non-immune hydrops, the need for tertiary referral and the range of investigations likely to be offered

PD CiP 2: The doctor can assess and investigate a pregnancy where there are concerns about the fetus.

Key skills	Descriptors
Can provide genetic counselling in common prenatal situations	<ul style="list-style-type: none"> • Takes medical history and constructs, where appropriate, a family tree for people who are pregnant, or have a chance of, genetic conditions. • Explains common modes of Mendelian and multifactorial inheritance, and recurrence risks. • Counsels for previous trisomy and monosomy X. • Counsels for previous neural tube defect.
Provides initial counselling for common fetal structural anomalies and manages people in partnership with tertiary fetal medicine services	<ul style="list-style-type: none"> • Is experienced in carrying out ultrasound diagnosis and managing pregnancies complicated by fetal anomalies that are covered by the FASP. • Discusses other potential prenatal tests such as fetal karyotyping.. • Recognises when to refer the person who is pregnant to a tertiary centre and how best to share care and monitoring.

	<ul style="list-style-type: none"> • Liaises with the tertiary centre and the MDT to manage pregnant people with fetal anomalies. • Formulates, implements and, where appropriate, modifies management plan, in collaboration with subspecialists. • Counsels pregnant people and their partners about the fetal risks, implications for the pregnancy and the long-term outcome. • Signposts pregnant people to external sources of information and support. • Constructs a follow-up plan for the pregnancy to support the pregnant person and plan next steps. • Plans birth and appropriate neonatal support with a fetal medicine specialist.
<p>Counsels and manages pregnancies at risk of fetal infection</p>	<ul style="list-style-type: none"> • Investigates common fetal infections. • Works with virology to interpret laboratory results for each infection. • Explains the potential long-term effects of fetal infections on fetuses and newborns. • Recognises when to involve other specialists in the care of a pregnant person with a suspected or confirmed fetal infection and plans for the sharing of care and monitoring. • Liaises appropriately with the tertiary centre and the MDT to manage fetal infection.
<p>Counsels and manages severe early fetal growth restriction (FGR)</p>	<ul style="list-style-type: none"> • Is able to produce a differential diagnosis for severe early FGR. • Knows when and which further investigations should be offered for severe early FGR. • Liaises with the fetal medicine tertiary referral centre about diagnosis of severe early FGR and to manage it.
<p>Counsels pregnant person about prenatal investigations</p>	<ul style="list-style-type: none"> • Understands both the non-invasive and invasive options and is able to discuss the risks and benefits, facilitating choice. • Understands the different levels of resolution of genetic testing and can communicate the importance of this to parents. • Explains the risks and benefits of each procedure to the pregnant person and any alternatives. • Communicates the scope and limitations of these tests. • Describes how prenatal samples are processed and when, and how, the results are given. • Offers genetic counselling where appropriate.
<p>Evidence to inform decision</p>	

<ul style="list-style-type: none"> • Reflective practice • NOTSS • TO2 • CbD • Mini-CEX 	<ul style="list-style-type: none"> • RCOG Learning • Local and deanery teaching • Attendance at relevant courses and conferences • Attendance at clinical genetics clinics • Log of cases and outcomes • Attendance at fetal medicine clinics • Attendance at MDT meetings • Attendance at specialist neonatal and paediatric clinics • Examples of anonymised birth plans
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Knowledge criteria

<ul style="list-style-type: none"> • The genetic basis for trisomy 21, 18 and 13 and the ultrasound features associated with them • The range of tests available for screening and testing for the common fetal trisomies and the organisation and quality control of the screening service • Other aneuploidies: the implications of Turner syndrome (45,XO), Klinefelter syndrome (47,XXY) and Triple X syndrome (47,XXX) and appreciate the approach to managing pregnancies complicated by much rarer and unique chromosomal anomalies • The underlying genetic inheritance patterns and prenatal testing for cystic fibrosis, muscular dystrophy and Fragile X syndrome, and the need for liaison with clinical genetics • When it is appropriate to offer invasive testing, and when not to • The role of non-invasive testing • The implications for the current pregnancy and the long-term prognosis for each condition, and recurrence risks for future pregnancies • The limitations of ultrasound in detecting and diagnosing congenital anomalies (e.g. cleft palate) or predicting prognosis (e.g. diaphragmatic hernia) • Triggers and diagnoses that need to be referred to tertiary services • Diagnostic features of each condition, their differential diagnosis and the chance of associated structural, chromosomal and syndromic associations • The role of DNA analysis from maternal plasma
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PD CiP 3: The doctor demonstrates the skills and attributes required to provide ongoing support and care to people who have had a problem identified with their pregnancy.

Key skills	Descriptors
Counsels on and organises, or refers onwards for, termination of pregnancy for fetal anomaly	<ul style="list-style-type: none"> • Raises the option of termination of pregnancy for fetal anomaly appropriately and sensitively. • Counsels pregnant person about the different methods of termination, explaining when termination is offered and when feticide is legally mandated. • Organises termination of pregnancy for fetal anomaly (or refers appropriately where there is conscientious objection or the need for tertiary involvement).

	<ul style="list-style-type: none"> • Supports the parent journey from diagnosis to follow up with planning for future pregnancies. • Adjusts care around termination of pregnancy in high-risk situations. • Manages complications of termination of pregnancy. • Is aware of and can signpost to appropriate organisations that provide support.
<p>Supports a pregnant person who wants to continue with their pregnancy where the fetus will not survive to birth, or the baby is expected to die in the neonatal period</p>	<ul style="list-style-type: none"> • Supports and empowers the parent or parents in their decision. • Plans for delivery with the parent or parents and paediatric team to give them the best experience possible in the circumstances, with clarity on intervention and non-intervention in labour. • Plans an appropriate end of life pathway with the family and paediatric team.
<p>Provides follow up and counselling after a pregnancy complicated by fetal anomaly</p>	<ul style="list-style-type: none"> • Explains the role of the post-mortem and any other relevant post-birth tests (e.g. genetic testing, post-mortem MRI). • Explains the findings and implications of any additional post-birth investigations. • Refers, where appropriate, to the wider MDT, including clinical genetics. • Counsels the parent or parents about the chance of recurrence across the range of conditions targeted by FASP, and arranges genetic counselling where appropriate. • Proposes a plan to manage future pregnancies. • Recognises when tertiary service involvement is appropriate for more complex cases.
<p>Evidence to inform decision</p>	
<ul style="list-style-type: none"> • Reflective practice • NOTSS • TO2 • Cbd • Mini-CEX 	<ul style="list-style-type: none"> • RCOG Learning • Local and deanery teaching • Attendance at relevant courses and conferences • Attendance at neonatal unit ward rounds • Log of cases and outcomes • Attendance at fetal medicine clinics • Attendance at MDT meetings • Attendance at specialist neonatal and paediatric clinics • Examples of anonymised birth plans
<p>Knowledge criteria</p>	
<ul style="list-style-type: none"> • The antenatal management, intrapartum care and immediate postnatal management of each condition • The impact of the diagnosis and individual circumstances on the timing, location and mode of birth • The local prenatal, birth and post-birth pathways for care of the fetus and newborn with these conditions 	

- The legal framework under which termination of pregnancy by feticide may be offered
- Recognise which conditions are amenable to prenatal treatment (e.g. diaphragmatic hernia and spina bifida)
- The recurrence risk and management plan for future pregnancies for each condition

SECTION 2: PROCEDURES

The trainee will provide evidence through OSATS of their competency to perform fetal anomaly scans (i.e. they may choose to have an OSAT demonstrating their assessment of a single fetal system, but they should be able to demonstrate that they have knowledge of all the fetal systems to the standard of FASP). Procedures marked with * require three summative competent OSATS.

Procedures	Level by end of training	CIP 1	CIP 2	CIP 3
Fetal anomaly scan*	4	X		
Fetal echo*	4	X		
Amniocentesis	1		X	
CVS	1		X	
Therapeutic amniodrainage	1		X	
Feticide	1			X

Subspecialty trainees in Maternal and Fetal Medicine will be expected to acquire the procedural skills listed in this table as well as the subspecialty-specific procedures listed in the MFM subspecialty-specific CiPs table.

SECTION 3: GMC GENERIC PROFESSIONAL CAPABILITIES (GPCs)

Mapping to GPCs

Domain 1: Professional values and behaviours

Domain 2: Professional skills

- Practical skills
- Communication and interpersonal skills
- Dealing with complexity and uncertainty
- Clinical skills (*history taking, diagnosis and management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable diseases*)

Domain 3: Professional knowledge

- Professional requirements
- National legislative requirements
- The health service and healthcare systems in the four countries

Domain 4: Capabilities in health promotion and illness prevention

Domain 5: Capabilities in leadership and teamworking

Domain 6: Capabilities in patient safety and quality improvement

- Patient safety
- Quality improvement

Domain 7: Capabilities in safeguarding vulnerable groups

SECTION 4: MAPPING OF ASSESSMENTS TO PD CiPs

PD CIP	OSATS	Mini-CEX	CbD	NOTSS	TO1/ TO2	Reflective practice
1: The doctor can use ultrasound to recognise where fetal anatomy is not normal	X	X	X	X	X	X
2: The doctor can assess and investigate a pregnancy where there are concerns about the fetus		X	X	X	X	X
3: The doctor demonstrates the skills and attributes required to provide ongoing support and care to people who have had a problem identified with their pregnancy		X	X	X	X	X

MFM SST specific CiPs

SECTION 1: CAPABILITIES IN PRACTICE (CiP)

SST MFM CiP1: The doctor is able to lead in providing care to women with pregnancies complicated by the full range of fetal concerns.	
Key skills	Descriptors
Manages rare fetal structural anomaly	<ul style="list-style-type: none"> • Diagnoses, provides a differential diagnosis for, and manages the full range of rare fetal structural anomaly. • Demonstrates how ultrasound findings of rare fetal structural anomalies are researched and managed. • Can counsel women and their partners about fetal risks, implications for the pregnancy and long term outcomes. • Offers other prenatal test as appropriate, and involves Clinical Genetics team.

	<ul style="list-style-type: none"> • Liaises appropriately with the referring centre and the multidisciplinary team (MDT). • In collaboration with paediatric specialists, formulates, implements and, where appropriate, modifies a management plan. Specialists include paediatric cardiology, urology, neurology and members of the surgical team. • Signposts to external sources of information and support. • Constructs a follow-up plan for the pregnancy. • Plans birth and appropriate neonatal support for someone who is pregnant and has concerns about their baby. • Formulates a management plan for future pregnancies.
<p>Manages fetal hydrops</p>	<ul style="list-style-type: none"> • Constructs a differential diagnosis and uses appropriate investigations. • Treats reversible causes. • Manages pregnancies where the cause of the hydrops remains unclear. • Pursues the diagnosis post-birth and provides counselling for future pregnancies.
<p>Manages rare complications of multiple gestations</p>	<ul style="list-style-type: none"> • Diagnoses and manages twin-to-twin transfusion syndrome (TTTS) and provides follow-up care. • Manages discordant anomaly, including counselling on the selective termination of pregnancy. • Recognises and manages twin reversed arterial perfusion (TRAP) sequence. • Refers to quaternary services for high level procedures, where indicated. • Manages monoamniotic twin pregnancies. • Manages triplet and higher order multiple gestations, including providing counselling, without judgement, on multifetal pregnancy reduction. • Diagnoses and manages severe early onset selective fetal growth restriction in monochorionic and dichorionic multiple pregnancies.
<p>Manages pregnancies with a high chance of fetal alloimmune disorders</p>	<ul style="list-style-type: none"> • Explains the potential fetal and maternal risks of red cell antibodies. • Provides surveillance for pregnancies complicated by Parvovirus infections. • Liaises with blood transfusion and neonatal services.

	<ul style="list-style-type: none"> • Classifies risks for any pregnancy complicated by red cell antibodies and provides appropriate surveillance for fetal anaemia. • Prepares women and their partners for the neonatal care necessary in cases of haemolytic disease of the fetus and newborn (HDFN). • Explains the risks of maternal antiplatelet antibodies and knows when they should be tested for. • Manages a pregnancy complicated by maternal antiplatelet antibodies, including birth and neonatal care, and offers antenatal treatment, where appropriate.
Offers and provides termination of pregnancy at all gestations appropriately	<ul style="list-style-type: none"> • Raises the option of termination of pregnancy for fetal anomaly appropriately. • Can counsel a pregnant person about the different methods of termination. • Organises termination of pregnancy for fetal anomaly. • Adjusts care around termination of pregnancy in high-risk situations. • Manages complications of termination of pregnancy.
Manages high level procedural skills	<ul style="list-style-type: none"> • Can counsel on, and take consent for, high-level interventional procedures.
Is able to support non-subspecialist colleagues to manage pregnancies complicated by fetal problems	<ul style="list-style-type: none"> • Provides subspecialist advice to non-subspecialist colleagues. • Works in partnership with referring clinicians to provide joint care.
Evidence to inform decision	
<ul style="list-style-type: none"> • Reflective practice • TO2 (includes SO) • OSATS: <ul style="list-style-type: none"> ○ CVS ○ amniocentesis ○ fetal echocardiography (ECHO) • Mini-CEX (to include feticide). • Procedural log • CbD 	<ul style="list-style-type: none"> • RCOG and other learning • Attendance at regional national meetings and training courses • Observation of, and reflection on, high-level fetal procedures • Observation of neonatal surgery • Attendance at local and regional MDT meetings • Clinical attachments on tertiary level NNU and/or paediatric ITU • Attendance at paediatric follow up clinics • Relevant audit and quality improvement project
Knowledge criteria	
<ul style="list-style-type: none"> • Embryology of all key fetal anatomical systems 	

- Pathology and epidemiology of all major anomalies affecting each fetal system in addition to those covered in CiP 2 and 3, including, as a minimum:
 - encephalocele, holoprosencephaly, microcephaly and intracranial mass
 - cardiac tumours
 - renal cystic disease, duplex kidney and bladder/cloacal exstrophy
 - laryngeal/tracheal atresia, pulmonary sequestration and pleural effusion
 - meconium ileus, hepatic calcification/mass, abdominal cyst and ascites
 - cystic hygroma, micrognathia, macroglossia, anophthalmia and neck mass
 - skeletal dysplasias (early or late onset), polydactyly, sirenomelia, sacral agenesis and hemivertebra
 - fetal akinesia/hypokinesia sequence
 - sacrococcygeal teratoma
- Diagnostic features of each condition, their differential diagnosis and the chance of associated structural, chromosomal and syndromic associations in the fetus
- Outcomes, prognoses and recurrence risks associated with each of these conditions and abnormalities
- Antenatal management, intrapartum care and immediate postnatal management of each condition
- Conditions that are responsive to prenatal therapy (e.g. fetal arrhythmias, spina bifida and congenital diaphragmatic hernia) and how these treatments are administered and the complications of them.
- The additional information which might be gained by use of 3D imaging and/or fetal MRI
- The differential diagnosis for fetal hydrops, and how to address this systematically
- The differential diagnosis for fetal anaemia
- Which red cell antibodies carry the greatest chance of haemolytic disease of the fetus and newborn, what thresholds there are for commencing surveillance for fetal anaemia, when to refer for fetal blood sampling and transfusion, how this is performed, and how the newborn is managed when there is a chance of haemolytic disease
- How platelet antibody-antigen combinations commonly cause neonatal alloimmune thrombocytopenia and what the outcomes can be, and how the chance of harm can be reduced.
- The embryology of normal twinning and the incidence and pathogenesis of abnormal twinning, resulting in TTTS, selective fetal growth restriction (sFGR), TRAP sequence and conjoined twins.
- When treatment is indicated for these conditions, and the pros and cons of treatment options
- A differential diagnosis for s-FGR and the classification of s-FRG in monochorionic gestations, and the impact that chorionicity has on outcomes and interpreting surveillance
- The differential risks associated with co-twin death in monochorionic and dichorionic multifetal gestations
- The outcomes of higher-order pregnancies, and the impact on these of multifetal pregnancy reduction
- The techniques used for selective termination of pregnancy for discordant anomalies in multiple gestations, and the risks involved
- UK law on termination of pregnancy, including justifying criteria, gestational limits and when

to perform feticide, and ethical issues around late amniocentesis/late termination of pregnancy

- The significance of signs of life following a termination
- The various methods of termination of pregnancy, and the pros and cons of each method
- The indications, methods, potential benefits and complications of the following high-level fetal medicine procedures: vesicocentesis, pleural and vesical shunt placement, placental laser, radiofrequency ablation, cord occlusion and fetal blood transfusion
- The structure of the local paediatric network, including surgical services
- Paediatric network guidelines for the management of newborn problems, including frameworks around extreme prematurity, and antenatal parallel planning

SST MFM CiP 2: The doctor can independently manage, in conjunction with specialist from other disciplines complicated by the widest range and most complex of maternal medicine conditions, and contributes to the design and leadership of a Maternal Medicine Network or regional service.

Key skills	Descriptors
Manages the care of the pregnant woman presenting with any co-existing medical problem, including those with rare disorders and severe manifestations or complications of more common problems	<ul style="list-style-type: none"> • Extends further the key skills described in the Pregnancy Care and Maternal Medicine SITMs to provide pre-pregnancy counselling, antenatal, intrapartum and postnatal care to women with highly complex medical problems (e.g. category C in England). • Can lead on the care provision of a pregnant person who is receiving joint care from a non-subspecialist and tertiary level team. • Provides constructive advice to the non-subspecialist obstetrician and physician.
Lead MDT meetings	<ul style="list-style-type: none"> • Demonstrates the ability to work with other disciplines to make sure women receive the best possible care for their medical conditions, despite their pregnancy status. • Understands and advises the MDT on the risks and benefits of different methodologies used in imaging and therapeutics. • Understands, advises and signposts the MDT about prescribing in pregnancy.
Provides regional clinical leadership	<ul style="list-style-type: none"> • Leads on the coproduction of guidelines and standards which aim to best identify, refer and manage pregnant women, or those who wish to become pregnant, with co-existing medical conditions, and those who develop medical illness during their pregnancy. • Designs and contributes to the monitoring of the above standards.

	<ul style="list-style-type: none"> • Coordinates and contributes to the education and training of the multi-disciplinary team working within the Maternal Medicine Network/regional service. • Makes sure everyone receives equal access to specialised care. • Recognises the increased vulnerability of women from ethnic minorities and socially deprived groups in the design of systems.
Engages with other stakeholders	<ul style="list-style-type: none"> • Works with relevant networks e.g. maternity and perinatal mental health networks, fetal medicine services and neonatal operational delivery networks. • Works with high level management organisations and bodies such as local maternity services, integrated care systems, NHSE/I, NHS Education for Scotland (NES), Health Education and Improvement Wales (HEIW), Northern Ireland Medical and Dental Training Agency (NIMDTA) and maternity strategic clinical networks. • Liaises and works in partnership with other contributors to the care pathway e.g. ambulance trusts, GPs and health visitors.
Evidence to inform decision	
<ul style="list-style-type: none"> • CbD • Mini-CEX • Reflective practice • TO2 (includes SO) 	<ul style="list-style-type: none"> • RCOG Learning • Anonymised examples of pregnancy care plans for women with medical disorders • Attendance at specialist courses and conferences • Attendance at adult medical clinics • Attendance at obstetric anaesthetic clinics • Local and deanery teaching • Attendance and leading of Maternal Medicine MDTs
Knowledge criteria	
<ul style="list-style-type: none"> • Structure of local maternal medicine networks and regional thresholds for referral and MDT involvement • The pathology, prevalence, presentation and diagnosis of, and risks and best practice management for, women who have significant medical problems (pre-pregnancy, antenatal and postnatal) that predate or arise in pregnancy or in the puerperium. Examples of category C medical problems outlined in the National Maternal Medicine Service Specification include: <ul style="list-style-type: none"> ○ Heart: pulmonary hypertension, severe left ventricular ejection fraction <45%, complex congenital heart disease (univentricular system, including Fontan, severe aortic and mitral valve stenosis and mechanical valve), aortic dilation, ventricular arrhythmias, new ischaemic heart disease and heart transplant. 	

- Lung: sickle chest crisis, restrictive lung disease with forced vital capacity <50%, neuromuscular disorder with respiratory muscle involvement e.g. myasthenia gravis, Guillain-Barre syndrome, lung transplant and pulmonary vasculitis
- Gastrointestinal and liver: portal hypertension, complex pancreatitis, active malignancy, cirrhosis, decompensated liver disease and liver transplant
- Endocrine: primary and secondary hyperaldosteronism, pheochromocytoma, Cushing's syndrome, acromegaly, metabolic disorder (e.g. glycogen storage disorder) and hypo- and hyperparathyroidism
- Kidney: active lupus nephritis, new renal vasculitis, pre-pregnancy chronic kidney disease stage 4 and 5, renal dialysis, simultaneous renal and pancreatic transplant
- Rheumatological: large and medium vasculitis and vascular Ehlers-Danlos syndrome
- Neurological: All epilepsy without local access to a combined clinic, including specialist neurology and obstetrics, symptomatic raised intracranial pressure, unstable congenital vascular malformation (CVM)/arteriovenous malformation/AVM, recent intracerebral haemorrhage(<2 years), acute stroke, new onset Guillain-Barre syndrome, new diagnosis or recent exacerbation of myasthenia gravis, active central nervous system malignancy and myotonic dystrophy
- Haematological: complex thalassaemia, current extensive venous thromboembolism, active haematological malignancy, clotting deficiency (Factor II, X and combined deficiency), Von Willebrand disease type II and III, carriers of haemophilia with male or unknown gender of fetus (including knowledge of when to offer late amniocentesis, and intrapartum management of such cases), transfusion dependent disease, antiphospholipid syndrome with extensive arterial events, antithrombin deficiency and moderate/severe platelet function disorder or with platelet count <100
- Findings of relevant national reports including MBRRACE report and recommendations
- How pregnancy induces significant changes in all aspects of physiology in pregnancy and the postpartum period. Plus the effect that pregnancy has on additional medical conditions
- How the medical problem may deteriorate acutely during pregnancy, how this might present and how it would be managed

SST MFM CiP3: The doctor can apply their knowledge of clinical and molecular genetics to manage complex pregnancy.

Key skills	Descriptors
Manages a pregnancy at elevated chance of, or affected by, aneuploidy	<ul style="list-style-type: none"> ● Takes an appropriate history and arranges appropriate parental investigations. ● Communicates effectively with women and their partners/families about risk, screening and testing options. ● Manages the care of a woman with a personal or family history of a chromosomal anomaly, including assessment of risk, prenatal diagnostic options, and further management options after testing.

	<ul style="list-style-type: none"> • Manages an ongoing aneuploid pregnancy, including plans for birth and a multidisciplinary approach to the care of the newborn. • Recognises when advice from, and referral to, clinical genetics services is needed.
<p>Manages a pregnancy with a chance of a single gene disorder in a structurally normal fetus</p>	<ul style="list-style-type: none"> • Takes an appropriate history, constructs a family tree and arranges appropriate parental investigations. • Communicates effectively with women and their partners/families about risk, screening and testing options. • Manages the care of a woman with a personal or family history of a single gene disorder, including assessment of risk, prenatal diagnostic options, and further management options, after testing. • Manages an ongoing pregnancy affected by a single gene disorder, including communication and planning with paediatric services. • Recognises when advice from, and referral to, clinical genetics services is needed.
<p>Diagnoses and manages genetic and syndromic disorders in a fetus that has a structural anomaly</p>	<ul style="list-style-type: none"> • Can appropriately counsel and manage in families with a previous child with multiple anomalies or syndromic disorder. • Accesses online information, of the highest quality, regarding very rare syndromic and genetic problems. • Manages the care of a woman with a personal or family history of a syndromic anomaly, providing information, screening and prenatal testing options. • Uses a dysmorphology database to reach a differential diagnosis. • Recognises when referral is indicated for more specialised counselling and genetic advice. • Provides options to manage an affected pregnancy, including termination of pregnancy, without judgement. • Manages an ongoing pregnancy, including planning for birth and a multidisciplinary approach to the care of the newborn.
<p>Requests and uses a wide range of molecular, cytogenetic and biochemical tests for prenatal diagnosis</p>	<ul style="list-style-type: none"> • Is able to take non-directive informed consent for performing these tests. • Is able to interpret and communicate the results of these tests and knows when a multidisciplinary approach is required.

- Identifies the role of genomic testing in both maternal and fetal medicine, in pregnancy, or ideally in pre-conception counselling
 - Maternal Medicine – Expanding research towards genetic prediction tests of obstetric disease processes, such as pre-eclampsia, gestational diabetes, obstetric cholestasis
 - Role of genomics in preconception care for women with rare genetic disease and pregnancy care for women with rare genetic disease, especially in affected families seeking IVF, planning surrogacy, or carrier screening.
 - Role of whole genome testing vs whole exome sequencing.

Evidence to inform decision

- | | |
|---|--|
| <ul style="list-style-type: none"> • Reflective practice • Local and deanery teaching • TO2 (includes SO) • Mini-CEX • CbD | <ul style="list-style-type: none"> • NOTSS • RCOG Learning |
|---|--|

Knowledge criteria

- Normal chromosome structure and function
- Gene structure and function, including gene control, mechanisms and effects of mutation, and genetic heterogeneity
- Patterns of genetic inheritance and susceptibility, gene expression and penetrance, multifactorial and mitochondrial inheritance
- Cell division (meiosis and mitosis), and abnormalities arising from these processes
- Types of aneuploidy, including structural rearrangements, deletions and common microdeletions, trisomies, sex chromosome anomalies (including monosomy X, Klinefelter syndrome and Triple X), extra markers, mosaicism (fetal and placental), uniparental disomy and triploidy
- The underlying genetic aetiology of the single gene disorders mentioned in CiP 2 and 3, and the following conditions:
 - myotonic dystrophy
 - Huntington's disease
 - haemoglobinopathies, haemophilia and other common bleeding disorders
 - inborn errors of metabolism
- Detailed knowledge of the following syndromes and associations:
 - DiGeorge
 - Fryns
 - Beckwith-Wiedemann
 - Meckel-Gruber
 - Smith-Lemli-Opitz
 - VATER/VACTERL association

- The pre- and postnatal phenotypes of these common aneuploidies, single gene disorders and syndromes, including prognosis
- Methods of screening for aneuploidy, including ultrasound, biochemical and non-invasive DNA based techniques
- The statistical terms relevant to screening, including sensitivity, specificity, false positive rates, positive predictive rates, and how these are interdependent
- The meaning of likelihood ratios in risk calculations
- Current screening programmes, including national implementation, audit, quality control, the UK National Screening Committee and regional screening coordinators
- How recurrence risks for chromosomal and single gene disorders are derived
- Prenatal testing options, both invasive and non-invasive, including ultrasound, MRI, non-invasive prenatal testing, amniocentesis, CVS and fetal blood sampling.
- Laboratory techniques for analysing parental and fetal samples, including quantitative polymerase chain reaction, fluorescence in situ hybridization, karyotyping, microarray, mutational analysis, sequencing (exome, or whole genome), enzymatic analysis and analyte assessment.

SECTION 2: PROCEDURES

Procedures marked with * require three summative competent OSATS

<i>Procedures</i>	<i>Level by end of training</i>	<i>CiP 1</i>
CVS*	5	X
Amniocentesis*	5	X
Fetal ECHO*	5	X
Anomaly scan*	5	X
Cervical length scan*	5	X
Therapeutic amniodrainage*	5	X
Fetocide*	5	X
Twin amniocentesis	4	X
Drainage of fetal cystic structure	3	X
MPFR/selective termination in dichorionic twins or higher order pregnancy	3	X
Fetal blood transfusion	1	X
Fetal shunt	1	X
Placental laser	1	X

Subspecialty trainees in Maternal and Fetal Medicine will need to acquire the procedural skills listed in this table as well as the procedures listed in the Fetal Care and Prenatal Diagnosis SITMs procedures table.

SECTION 3: GMC GENERIC PROFESSIONAL CAPABILITIES (GPCs)

Mapping to GPCs

Domain 1: Professional values and behaviours

Domain 2: Professional skills

- Practical skills
- Communication and interpersonal skills
- Dealing with complexity and uncertainty
- Clinical skills (history taking; diagnosis and management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control; and communicable diseases)

Domain 3: Professional knowledge

- Professional requirements
- National legislative requirements
- The health service and healthcare systems in the four countries

Domain 4: Capabilities in health promotion and illness prevention

Domain 5: Capabilities in leadership and teamworking

Domain 6: Capabilities in patient safety and quality improvement

- Patient safety
- Quality improvement

Domain 7: Capabilities in safeguarding vulnerable groups

SECTION 4: MAPPING OF ASSESSMENTS TO SST MFM CiPs

SST MFM CIP	OSATS	Mini-CEX	CbD	NOTSS	TO1/ TO2	Reflective practice
1: The doctor is able to lead in providing care to women with pregnancies complicated by the full range of fetal concerns	X	X	X		X	X
2: The doctor can independently manage pregnancies complicated by the widest range, and most complex, of maternal medicine conditions, alongside specialists from other disciplines, contributing to the		X	X		X	X

SST MFM CIP	OSATS	Mini-CEX	CbD	NOTSS	TO1/ TO2	Reflective practice
design and leadership of the maternal medicine subspecialty service (in England this will be through the Maternal Medicine Networks either through MDTs for category B medical problems or referral for ongoing care to a Maternal Medicine Centre for category C medical problems).						
3: The doctor can apply their knowledge of clinical and molecular genetics to manage complex pregnancy.		X	X	X	X	X

Research - Subspecialty Training

SECTION 1: CAPABILITIES IN PRACTICE

SSTR CiP: The doctor is able to engage with research and promote innovation within their subspecialty.	
Key skills	Descriptors
Demonstrates research skills	<ul style="list-style-type: none"> Is able to demonstrate practice in healthcare research and the different methodologies within their subspecialty. Shows continued engagement in Good Clinical Practice (GCP) and Research and Development (R&D) processes. Engages in ethics and governance processes within research, demonstrating they are able to follow guidelines on ethical conduct and consent for research. Demonstrates involvement in informatics, statistical analysis and emerging research areas within their subspecialty.

	<ul style="list-style-type: none"> Shows engagement with national trials within their subspecialty, including patient recruitment, trial monitoring and adverse event reporting. Shows understanding of the role of public and patient involvement within clinical trials. Is able to discuss clinical trials with, and facilitate recruitment of, patients within their subspecialty. Has the ability to translate research into clinical practice within their subspecialty.
Demonstrates critical thinking	<ul style="list-style-type: none"> Is able to develop and critically appraise a research protocol. Is able to critically evaluate clinical trial data to establish the clinically significant outcomes and relevance for clinical practice within their subspecialty. Is able to interpret research findings, reflect on the potential impact on their clinical practice and share this with colleagues and patients. Can develop and critically appraise a patient information leaflet. Is able to interpret research findings within their subspecialty and discuss these when taking informed consent for treatment.
Innovates	<ul style="list-style-type: none"> Demonstrates how their clinical practice has developed from innovative research within their subspecialty. Is able to demonstrate engagement with the introduction of any innovations within their subspecialty, including governance and costs.
Evidence to inform decision	
<ul style="list-style-type: none"> National teaching and courses Critical appraisal of protocols/papers Subspecialty journal club presentations GCP re-certification Participation, including recruitment for national multicentre trials Preparation of research protocol/grant applications Oral, and/or poster presentations at national/international subspecialty meetings 	<ul style="list-style-type: none"> SIPM in Clinical Research Peer reviewed original research publications relevant to their subspecialty A higher degree such as a PhD or research MD

SECTION 2: PROCEDURES

There are no procedures in this SST Research CiP.

SECTION 3: GMC GENERIC PROFESSIONAL CAPABILITIES (GPCs)

Mapping to GPCs

Domain 1: Professional values and behaviours

Domain 2: Professional skills

- Practical skills
- Communication and interpersonal skills
- Dealing with complexity and uncertainty

Domain 3: Professional knowledge

- Professional requirements
- National legislative structure
- The health service and healthcare system in the four countries

Domain 5: Capabilities in leadership and team working

- Promoting a culture of learning and academic and professional critical enquiry

Domain 6: Capabilities in patient safety and quality improvement

- Quality improvement

Domain 8: Capabilities in education and training

Domain 9: Capabilities in research and scholarship