Thames Valley Networked Maternal Medicine Service Guideline

Improving care for women with medical problems in pregnancy

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Table of Contents

Background

The formation of a maternal medicine network, as recommended in Safer Maternity Care (November 2017), aims to deliver coordinated and specialist care for women in the region with complex medical conditions. This will support the government's ambition of reducing maternal mortality by 50% between 2010 and 2025. NHS England's Maternal Medicine Service Specification, published in October 2021 covers the provision, definitions and dependencies of maternal medicine networks. It is used as reference for this guideline which is tailored to local expertise, needs and geography.

Maternal morbidity and mortality are increased by diseases that pre-date pregnancy, and by complications that arise during pregnancy. Pregnancy induces significant changes in all aspects of physiology. Optimal outcomes are achieved where care for pregnant women is guided by consultants with specific pregnancy expertise, with input from relevant physicians, rather than the other way round. As many of these conditions are uncommon, advice and for some women, care should be provided in a small number of designated specialist Maternal Medicine Centres (MMC). The aim is to concentrate expertise and improve outcomes.

Medical disease relevant to a maternal medicine centre includes but is not limited to:

- Cardiac disease
- Respiratory disease
- Renal disease
- Haematology
- Rheumatological disease
- Endocrine disease
- Gastrointestinal and liver disease
- Neurological disease
- Skin disease
- Cancer

It also includes acute illness where the underlying condition is not clear, such as:

- Headache
- Breathlessness
- Chest pain
- Abdominal pain
- Fever/sepsis

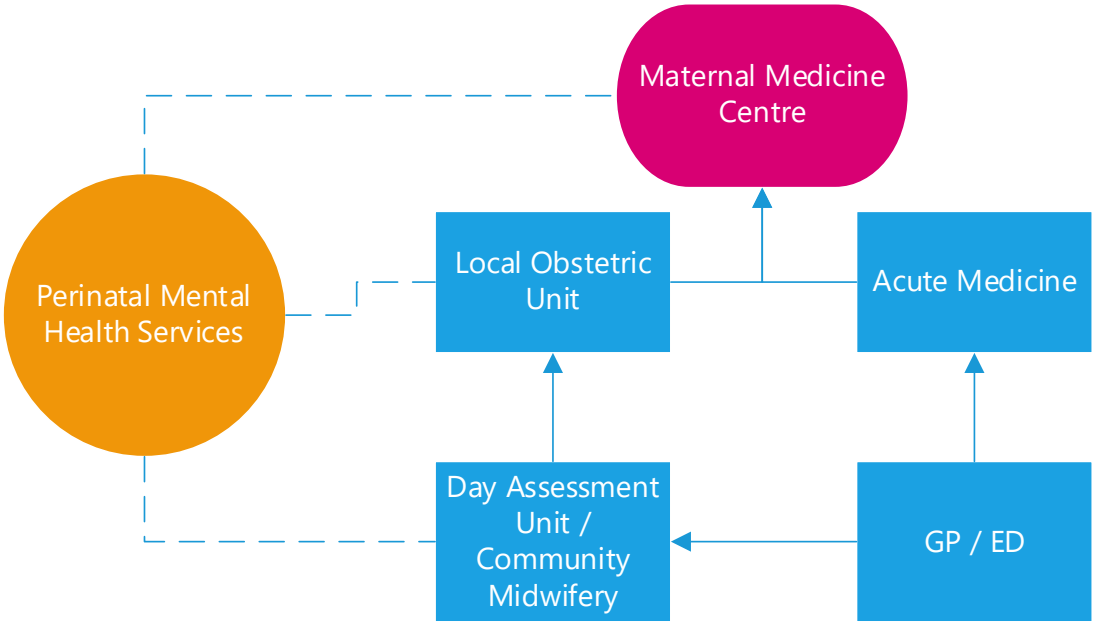


Figure 1: Maternal Medicine Centre networking with other services

All the services identified above will contribute to a Networked Maternal Medicine Service. However, the Networked Maternal Medicine Service (NMMS) will also need to engage with all those who might provide part of the care pathway, e.g., health visitors, social work, ambulance trusts, mental health, and the voluntary sector.

Thames Valley Networked Maternal Medicine Service

The Thames Valley Networked Maternal Medicine Service (TVNMMS) is formed of, and serves, seven secondary care maternity services covering approximately 40,000 births a year. Organisations that are non-exclusively included in the TVNMMS are:

- Royal Berkshire NHS Foundation Trust
- Buckinghamshire Healthcare NHS Trust
- Frimley Health NHS Foundation Trust (including Wexham Park Hospital)
- Milton Keynes University Hospital NHS Foundation Trust
- Northampton General NHS Trust
- Great Western Hospitals NHS Foundation Trust
- Oxford University Hospitals NHS Foundation Trust

Oxford University Hospitals NHS Foundation Trust (OUHFT) acts as the Thames Valley Networked Maternal Medicine Network Centre (TVNMMC).

Women who have significant medical conditions that pre-date or arise in pregnancy/the puerperium can be referred to the TVNMMS. This includes pre-pregnancy, antenatal and postnatal care. The TVNMMS is responsible for ensuring that all women with significant medical conditions in the TVNMMS region receive timely specialist care and advice before, during, and after pregnancy. All providers within the network are responsible for reviewing, agreeing, and upholding shared protocols, guidelines, and referral pathways. This enables agreed investigations and management to be carried out by an experienced multidisciplinary team (MDT). This team must include an appropriately trained obstetrician e.g., with sub-specialty training in maternal fetal medicine or equivalent, an obstetric physician or equivalent physician with appropriate training, and an appropriately trained midwife or team of midwives.

The TVNMMC team comprises consultant obstetric physicians, consultant obstetricians subspecialty trained in maternal and fetal medicine, maternal medicine obstetricians, obstetric anaesthetists, a senior maternal medicine network midwife, administration support, and specialty physicians as required.

Many women with complications during pregnancy will continue to be managed by their local maternity services. The proportion of a woman's care undertaken by the TVNMMC will vary according to the individual need. For some women, a single visit to, or communication with the TVNMMC team will suffice. For the most complex and highest risk women, it may be appropriate for all care to be undertaken at TVNMMC.

The suggested list of the complex co-morbidities requiring specialist maternal medicine services is described in Appendix 1:

- Category A conditions will usually be managed by local maternity teams
- Category B conditions may require referral to the TVNMMC team for an opinion
- Category C conditions are likely to need all care and birth at TVNMMC.

Pre-conceptual counselling

Pre-conceptual counselling for women with medical problems is advocated by several professional bodies, national guidelines, confidential enquiries, and audits including Royal College of Obstetricians and Gynaecologists, NICE and MBRRACE(UK). The purpose of pre-conceptual counselling is to:

- Inform women of the potential risks of pregnancy
- Ensure understanding of the need for increased monitoring during pregnancy
- Optimise health and medications prior to pregnancy.

This counselling can be delivered in primary, community or secondary care by an appropriately trained clinician. Where there is a particularly high risk of pregnancy complications or where medications may be particularly harmful to the fetus, referral for tertiary level counselling is appropriate. A pre-conceptual counselling service is available at several trusts in the TVNMMS (Appendix 2).

Examples of conditions where women should receive pre-pregnancy counselling include (but are not limited to):

- Women with heart disease
- Women on long term anticoagulation
- Women with Type 1 or Type 2 diabetes mellitus and HbA1c >7.5%
- Women with epilepsy on anti-epileptic drugs
- Women on known teratogenic medication e.g., methotrexate, sodium valproate, warfarin
- Women with Chronic Kidney Disease stage 4 or 5.

Antenatal and Intrapartum

During the antenatal and intrapartum period women may:

- Declare a history of medical problems at midwifery booking
- Be referred to a local consultant obstetrician or TVNMMC by GP, midwife, or specialist physician.

The complexity of the woman's medical condition, and level of expertise within the local maternity unit will determine whether she is reviewed locally or at the TVNMMC. When a woman is seen in the TVNMMC, several options are available:

- Offer advice regarding pregnancy care and birth, and refer back to local unit
- Share care with local unit and TVNMMC (may recommend birth in local unit or TVNMMC)
- TVNMMC to take over obstetric care (birth recommended at TVNMMC)

A plan of care including place of birth, will be co-produced wherever possible with the mother and team supporting her.

Postnatal

When a woman has birthed at the TVNMMC, she will be discharged with one of the following discharge plans:

- EITHER - follow up by local hospital physician or GP as appropriate
- OR - follow up at TVNMMC. This will only be for very complex medical conditions, or if intercurrent problems have developed.

Acute medical problem diagnosed in pregnancy and puerperium

The local maternal medicine service is to be informed at the earliest opportunity when women present with an acute medical condition via primary care, emergency department, acute medicine, community midwifery, gynaecology, or obstetric services. The decision to refer onto the TVNMMC will be made by the local maternal medicine team in consultation with local physicians, anaesthetics, and midwives as appropriate.

Referral Pathways

The threshold for referral should depend on local obstetric and anaesthetic expertise as well as the availability of anaesthetic and intensive care services. Appendix 1 lists the conditions where early pregnancy referral to the TVNMMC for an opinion/ transfer should be considered by the local trust. Appendix 3 illustrates the care pathway. Appendices 4 and 5 illustrate how to refer a patient to the TVNMMS from non-obstetric and obstetric settings respectively.

When women meet the criteria for referral to the TVNMMC they must be referred via the Online Acute Referral System (OARS) system www.oars.ouh.nhs.uk. Activity on the OARS system alerts automatically to an email account. All trusts in the TVNMMS must use an email account that is reviewed every 48 hours to ensure that current information is available to clinicians at the right time and uploaded to the local electronic health record.

For urgent advice a maternal medicine advice line is available 24/7 and staffed by members of the TVNMMC. This line should be used for consultant-to-consultant interaction only. **Urgent telephone advice telephone number: 01865 416839**.

For clinicians outside of the TVNMMS trusts, with no access to OARS (e.g., from primary care), maternal medicine non-urgent advice can be sought by emailing maternalmedicineadvice@ouh.nhs.uk. This email is reviewed daily, and emails are responded to within 48 hours.

There should be a clear agreement by the responsible local obstetrician, the relevant physician, anaesthetic services, and local neonatology services where women who meet the criteria for referral are **not** referred.

A twice monthly regional Multidisciplinary Team (MDT) meeting conducted via MS Teams occurs on the first Tuesday and third Thursday of the month 0800-0900. All new Category B and C referrals and any other cases that the MDT wish to review are discussed. These MDT meetings

are for members of the clinical team from each trust within the TVNMMS. They are arranged and hosted by the TVNMMC.

MDT outcome proformas are completed for all women discussed at the monthly regional MDT (Appendix 6).

Education and Training

The TVNMMS is responsible for providing education and training to the region:

- A minimum of four training sessions a year for multiple and different members of the MDT
- Signposting of educational opportunities through the TVNMMS Steering Committee for cascading
- Facilitating doctors in training from around the region in obstetrics and/or physicians to participate in meetings, guideline development/review and training opportunities
- Delivering an obstetric medicine training programme to complete a diploma in Obstetric Medicine for pre and post CCT fellows.

Governance

The TVNMMS is overseen by the Thames Valley Networked Maternal Medicine Steering Group. The Terms of Reference of this group can be found on the network website https://thamesvalley.maternalmedicinenetworks.org.uk/tv-network/.

The Steering committee meet quarterly, and activities include:

- Development, review, and ratification of regional guidelines
- Review and drive national KPIs
- Review of continuous audit of referral activity in the network
- Review and agreement on educational activity
- Knowledge sharing, and review of national documents
- Closed clinical session to review all outcomes from category C women, SIRIs and maternal deaths.

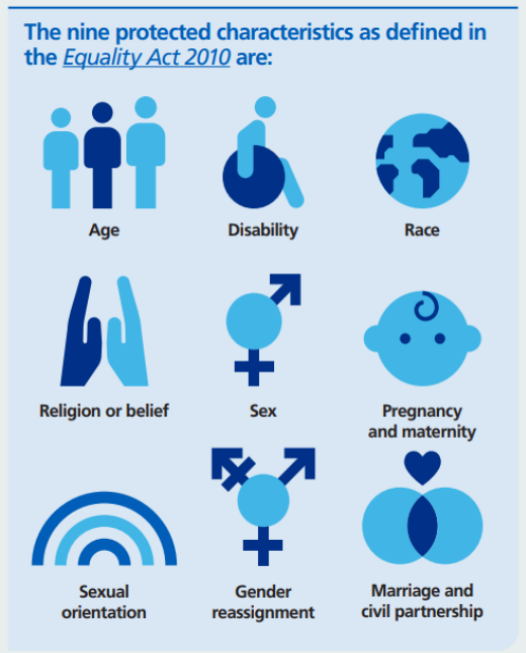
Quarterly reports are submitted to NHSE and are sent to the contributing TVNMMS Integrated Care Boards/Systems.

Membership of TVNMMS Steering Committee	
NHSE	Head of Programmes, Maternity and/or Clinical Delivery & Networks, Maternity NHS England South East Representative from training

Service user voice	Maternity Voices Partnerships Chair from each locality group: if the chair cannot attend, a co-chair can attend in their place Patients and/or families and carers with lived experience of complex maternal medicine pregnancies, applications to be approved by TVNMMS steering committee
Providers	**Network representation** TVNMMS Obstetric Physician(s) TVNMMS Obstetrician(s) subspecialty trained in Maternal and Fetal Medicine TVNMMS Specialist Maternal Medicine Midwife/Midwives TVNMMS Obstetric Anaesthetics lead TVNMMS Physician leads for Haematology, Cardiology, Renal, other as indicated/required TVNMMS Audit Lead TVNMMS Trainee representatives (x2) Thames Valley and Wessex Neonatal Network Lead TVNMMS Administrative Lead **Local representation** Maternal Medicine Obstetric Leads (all participating trusts) Maternal Medicine Midwives (all participating trusts) Operations Service Manager (all participating trusts)
Commissioners	Local Maternity and Neonatal System representatives (BOB, Frimley, BLMK, Northamptonshire, BSW) Local Authority directors of public health/prevention
Others	Patient safety manager and MatNeoSIP Lead, Patient Safety Collaborative Administrative support

Equality, Diversity, and Inclusion

Achieving equality of health outcomes requires identification of barriers, and biases. It needs targeted action to overcome specific inequalities, discrimination, and marginalisation experienced by certain groups and individuals as highlighted in the Equality Act 2010.



Many sources highlight the consequences of complex pregnancy and potential morbidity and mortality. Women and birthing people from Black and minority ethnic backgrounds (BME), along with those with severe and multiple disadvantages are more likely to die in pregnancy compared to white women or those who do not have a disadvantage.
The main elements of multiple disadvantages include domestic abuse, mental health diagnosis and/or substance use. Tackling these inequalities needs focused leadership. This is to ensure the best and most suitable care designed to meet individual needs.

The MDT in the TVNMMS should endeavor to provide equal and accessible care to all service users with a focus on underrepresented groups or those with multiple disadvantages. This can be achieved with the use of collaborative, specialist, multi-agency input and support. This includes early intervention and effective communication between services. Hospitals within the TVNMMS should use their own local referral pathways to ensure timely individualised support for service users and their families. The vision is to ensure exceptional quality care for all through equitable access, experience, and optimal outcomes.

Appendices

Appendix 1: Conditions for Referral

Cardiovascular		
Category A	**Category B**	**Category C**
Isolated atrial or ventricular ectopic beats	Arrhythmias that are problematic or >=2 agents	Pulmonary hypertension
Postural tachycardia syndrome (PoTS)	LV impairment (any cause)	Heart transplant
Non-problematic SVT	Pervious peripartum cardiomyopathy	Marfan syndrome with aorta >40mm
Ablated WPW	Hypertrophic cardiomyopathy with no high-risk features	Loeys-Dietz syndrome (any aortic dimension)
Mild AS with no LV/RV dysfunction	Previous aortic dissection	Aorta >45mm in association with bicuspid aortic valve
Mild/moderate AR with no LV/RV dysfunction	Marfan syndrome with normal aorta	Turner's syndrome irrespective of aortic dimensions
Mild/moderate MR with no LV/RV dysfunction	Treated ischaemic heart disease	New ischaemic heart disease
Mitral valve prolapse	Myocarditis	Mechanical valve
Mild/moderate PS with no LV/RV dysfunction	Any bioprosthetic valve	Severe AS or with evidence of LV dysfunction
Mild/moderate PR with no LV/RV dysfunction	Moderate AS	Moderate/severe mitral stenosis
Mild/moderate TR with no LV/RV dysfunction	Severe AR or with evidence of LV dysfunction	Systemic right ventricle
Repaired ASD/VSD/PDA with no arrythmia, LV/RV dysfunction	Bicuspid AV with aorta <45mm	Fontan
Essential hypertension	Mild MS	Cyanotic heart disease (unrepaired)
	MR severe or with evidence of LV dysfunction	Other complex congenital heart disease
	PS/PR severe or with evidence of RV dysfunction	
	Severe TR or evidence of RV dysfunction	
	Atrioventricular septal defect	
	Unrepaired ASD/VSD/PDA	
	Repaired tetralogy of Fallot	
	Unrepaired or repaired coarctation	
	Peripheral vascular disease	

Neurology		
Category A	**Category B**	**Category C**
Stable epilepsy (provided there is access to specialist obstetric and neurology input)	Unstable epilepsy (increasing seizure frequency, nocturnal seizures, status epilepticus)	Neuromuscular disorders with respiratory muscle involvement e.g., myasthenia gravis, Guillain-Barré syndrome
Stable, small cerebrovascular malformation, reviewed within 2 years of conception & plan for mode of delivery	CVM, not reviewed within 2 years of conception	Symptomatic raised intracranial pressure
Previous cerebral vein thrombosis (CVT)	New cerebral vein thrombosis (CVT)	Unstable CVM/AVM/cavernoma
Previous brain tumour	Previous intracranial haemorrhage	Acute stroke
Meningitis	Untreated intracranial aneurysm	New-onset Guillain-Barre syndrome
Previous encephalitis	Previous Guillain Barre Syndrome	
Stable multiple sclerosis	Treated, stable myasthenia gravis	
Mononeuropathy e.g.: Bell's palsy, carpal tunnel, peroneal nerve compression	Unstable multiple sclerosis	
Post-dural puncture headache	New encephalitis	
Migraine	Reversible Cerebral Vasoconstriction Syndrome (RCVS)	
Stable idiopathic intracranial hypertension	Posterior Reversible Encephalopathy Syndrome (PRES)	
	Spinal cord injury	
	Neurofibromatosis	
	Neuromuscular dystrophy	
	Spinal muscular atrophy	
	Motor neurone disease	
	Previous ischaemic stroke	
	Myotonic dystrophy	
	Pituitary apoplexy	
	Cluster headache	

Respiratory		
Category A	**Category B**	**Category C**
Uncomplicated Asthma	Complicated asthma: • Repeated presentations of asthma (>/=3) in pregnancy • Asthma receiving biologics • Long-term corticosteroids	Restrictive lung disease (e.g., ILD, kyphoscoliosis) with FVC <50%
Pneumonia	Restrictive lung disease (e.g., ILD, kyphoscoliosis) with FVC >50%	Cystic fibrosis
TB	Any respiratory condition receiving immunotherapy / biologics	Lung transplant
Chronic Obstructive Airways Disease	Bronchiectasis	
Pneumothorax	New diagnosis of obstructive sleep apnoea/obesity hypoventilation in pregnancy	
Sarcoidosis without restrictive lung disease, no renal involvement	COVID pneumonitis	
Managed obstructive sleep apnoea/obesity hypoventilation		

Haematology		
Category A	**Category B**	**Category C**
Stable immune thrombocytopenia	White cell disorders	Sickle cell disease
Gestational thrombocytopenia	New VTE in pregnancy: <4 weeks before EDD OR extensive	Previous or current HUS/TTP
Current (>4 weeks before EDD) or previous VTE	Thrombotic antiphospholipid syndrome	Complex thalassaemia: • iron overload • endocrine disease • pulmonary hypertension
Obstetric antiphospholipid syndrome	Stable myeloproliferative/myelodysplastic disease	Antithrombin deficiency
Inherited thrombophilia (except antithrombin deficiency)	Beta thalassaemia major	Carriers of haemophilia with male or unknown gender of fetus
Alpha/beta thalassaemia trait	Haemophilia carrier with female fetus	Von-Willebrand disease: Type 1 if VWF not normalised, Type II and Type III
Sickle cell trait	Aplastic anaemia	Transfusion dependent disease
B12/folate deficiency	Type 1 Von-Willebrand disease with normalised VWF	Paroxysmal nocturnal haemoglobinuria
	Clotting factor deficiency	
	Platelet function disorder	

GI / Hepatology		
Category A	**Category B**	**Category C**
Hyperemesis gravidarum	Achalasia	Bowel transplant
Constipation	Complex inflammatory bowel disease - active disease despite treatment	Complex pancreatitis • Not responding to tx • Recurrent disease • Hypertriglyceridemia • IR/surgical intervention
Gastro-oesophageal reflux disease	Acute pancreatitis	Decompensated liver disease/liver failure
Coeliac disease	Unexplained jaundice	Liver transplant
Uncomplicated inflammatory bowel disease	Acute fatty liver of pregnancy	
Non-problematic chronic pancreatitis	Liver infarction/haematoma	
Gallstones	Autoimmune hepatitis	
Viral hepatitis	Wilson's disease	
Intrahepatic cholestasis	Crigler Najjar syndrome	
Cholecystitis	Primary biliary cirrhosis	
HELLP	Primary sclerosing cholangitis	
Previous bariatric surgery >2 years ago and stable weight	Portal hypertension	
	Cirrhosis	
	Bariatric surgery within 2 years AND/OR ongoing significant weight loss or significant nutritional deficiency	

Rheumatology		
Category A	**Category B**	**Category C**
Uncomplicated* rheumatoid arthritis	Rheumatological disorders not controlled on current treatment or with evidence of extra-articular manifestations involving heart, lungs or kidneys	Vascular Ehlers Danlos
Uncomplicated* seronegative arthritis: • Ankylosing spondylitis • Psoriatic arthritis • Reactive arthritis • IBD related arthritis	Other Ehlers Danlos syndromes	Systemic sclerosis (scleroderma)
Uncomplicated* connective tissue disease: • SLE • Scleroderma (restricted disease) • Sjogren's	Polymyositis-dermatomyositis	Antisynthetase syndrome
Osteoarthritis	Behcet's syndrome	New vasculitis or vasculitis on treatment
Hypermobile Ehlers Danlos (type III)	SLE with renal (lupus nephritis in remission or controlled on treatment), cardiac or cerebral involvement	
Limited cutaneous scleroderma	Vasculitis in remission and no longer on treatment	
	CREST syndrome (calcinosis, Raynaud's, oesophageal dysmotility, sclerodactyly and telangiectasia)	

Renal		
Category A	**Category B**	**Category C**
Non-lupus glomerulonephritis/ tubulointerstitial nephritis: • No immunosuppression AND • Stable pre-pregnancy CKD stage 1-2 AND • uPCR <100 or uACR <30 AND • BP <140/90	Non-lupus glomerulonephritis/ tubulointerstitial nephritis: • On immunosuppression OR • Pre-pregnancy CKD stage 3-4 OR • uPCR ≥100 or uACR ≥ 30 OR • BP >=140/90	Renal (+/- pancreas) transplant
Recurrent UTI	Reflux nephropathy with CKD 3-4	CKD 5
Reflux nephropathy with normal kidney function, or CKD 1-2	Autosomal dominant polycystic kidney disease with abnormal kidney function	Dialysis
Autosomal dominant polycystic kidney disease with normal kidney function	AKI not responding to treatment or not resolving post-partum	Active lupus nephritis
AKI responding to treatment	Previous urinary tract reconstructive surgery	
AKI due to pre-eclampsia resolved post-partum	Kidney disease requiring biologic treatment	
Single kidney	Progressive kidney disease in pregnancy	
Kidney stones	Heavy proteinuria (>5g/24h) due to pre-existing kidney disease	
	Lupus nephritis in remission or controlled on treatment	

Endocrinology		
Category A	**Category B**	**Category C**
Gestational diabetes mellitus	Type I and II diabetes mellitus with significant renal impairment (CKD 2 AND uPCR >30, OR CKD 3-5), autonomic neuropathy; cardiovascular disease; or retinopathy requiring treatment during pregnancy	Pheochromocytoma
Type I and II diabetes mellitus including diabetic retinopathy not requiring treatment during pregnancy or CKD 1	Uncontrolled hyperthyroidism	Cushing's syndrome
Hypothyroidism	Adrenal tumours	Primary and secondary hyperaldosteronism
Hyperthyroidism and gestational hyperthyroidism	Congenital adrenal hyperplasia	
Thyroid nodules	Acromegaly	
Microprolactinoma	Hyperparathyroidism	
PCOS	Hypoparathyroidism	
Vitamin D deficiency	Monogenic diabetes	
	Macroprolactinoma	
	Pituitary disease on hormone replacement therapy	
	Addison's disease	

Metabolic Medicine		
Category A	**Category B**	**Category C**
None	None	Phenylketonuria
		Glycogen storage disorders
		Urea cycle defects
		Galactosaemia
		Fatty acid oxidation defects
		Peroxisomal disorders
		Inherited hypophosphatemia
		Lysosomal storage disorders

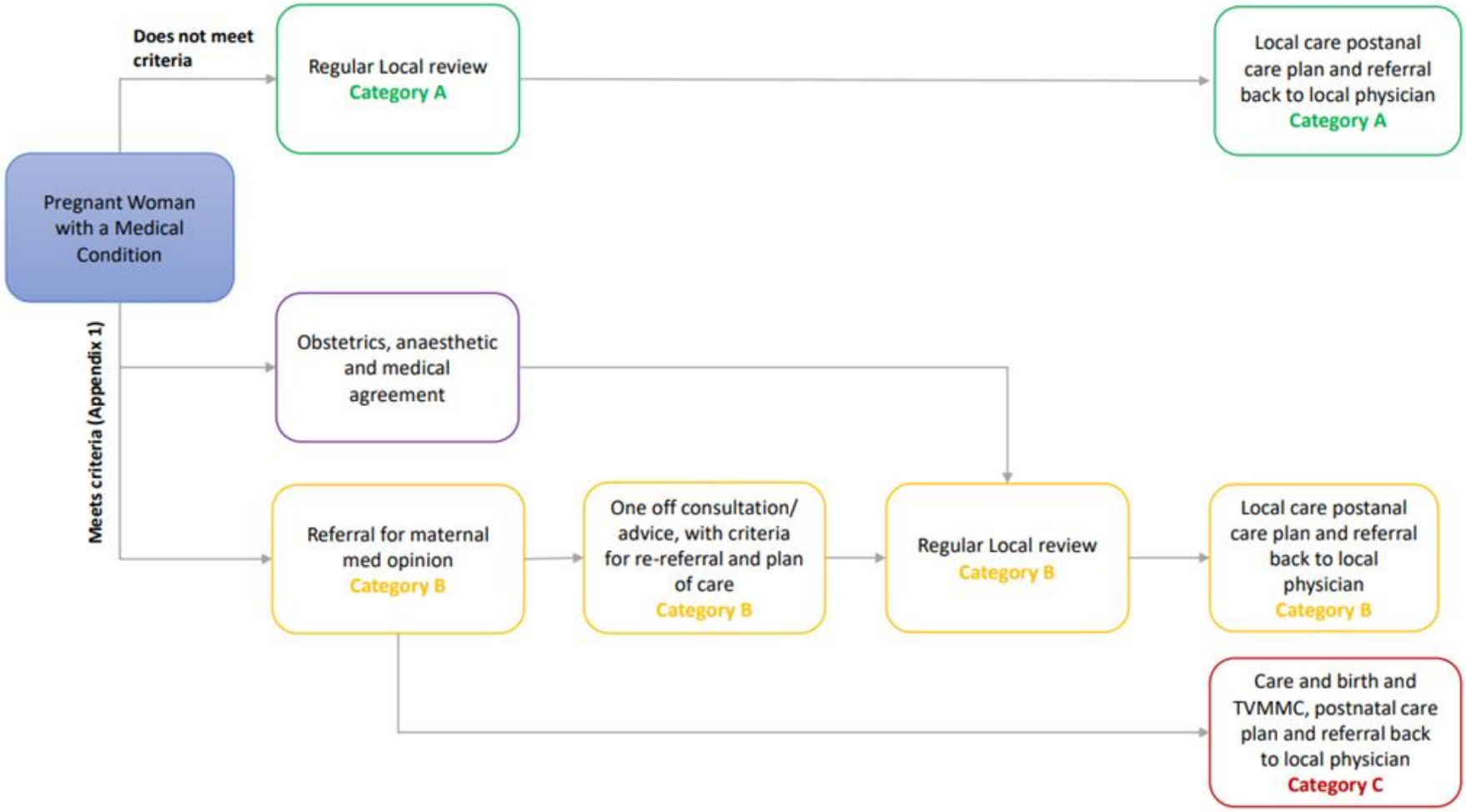
Oncology		
Category A	**Category B**	**Category C**
Previous malignancy in remission	Current malignancy requiring treatment	Active haematological malignancy
		Progressive brain tumour

Infectious Disease		
Category A	**Category B**	**Category C**
Latent or previously treated tuberculosis	HIV without access to specialist services	None
Tuberculosis stable on current treatment	AIDS	
	Malaria in current pregnancy	

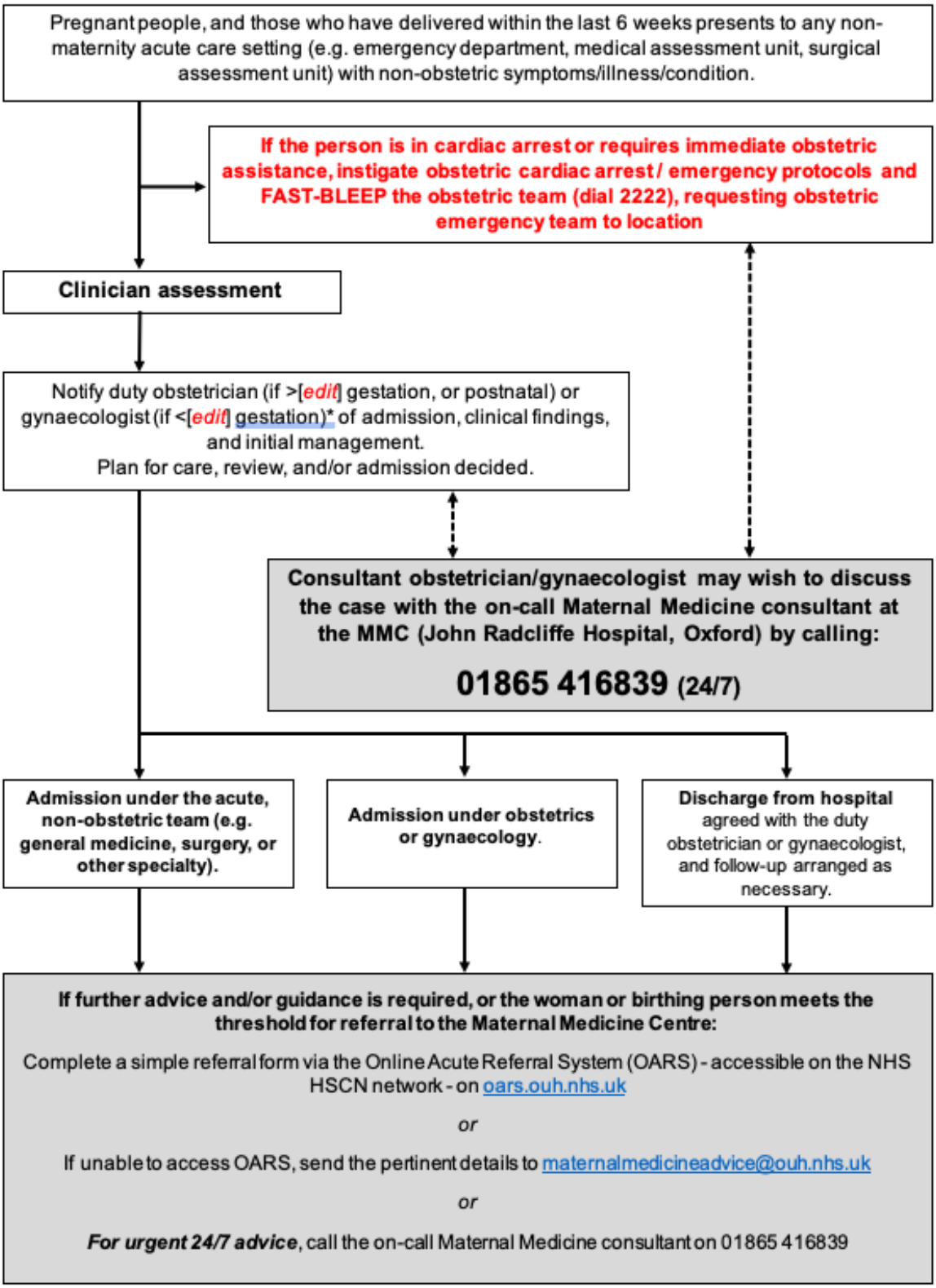
Appendix 2: Pre-pregnancy counselling services across TVNMMS

Trust	Provision	Referral pathway
Oxford University Hospitals (MMC)	Weekly dedicated clinic	Referrals by email (maternalmedicineadvice@ouh.nhs.uk), OARS (see Appendix 5) or letter to Silver Star Unit, Level 6, Women's Centre, John Radcliffe Hospital, Headley Way, Oxford, OX3 9DU.
Buckinghamshire Health	First slot in Maternal Medicine antenatal clinics (one per week at Stoke Mandeville and one per week at Wycombe) is for pre-pregnancy counselling. Pre-pregnancy counselling for pre-existing diabetics is by an Obstetrician in a dedicated clinic slot.	
Frimley Health	Frimley Park: Fortnightly dedicated clinic with the Maternal Medicine Lead; the other Maternal Medicine Obstetrician will fit women into antenatal clinic who are referred from medical specialists or gynaecology. Wexham Park: Can be seen in high-risk antenatal clinic.	
Great Western Hospital	One dedicated clinic per month (Willow clinic). Referrals can be from GP, medical specialties, or fertility team.	Referral by letter to PPC clinic: Women's Health Outpatients, 2nd Floor, Great Western Hospital, SN3 6BB
Milton Keynes University Hospital	DSN will see pre-existing diabetics planning to conceive. Maternal Medicine Obstetrician will fit women into AN clinic who are referred from medical specialists or GPs.	
Northampton General Hospital	Can be seen in high-risk antenatal clinic. Weekly diabetes pre-pregnancy counselling clinic.	
Royal Berkshire Hospital		

Appendix 3: Care Pathways (Obstetric)



Appendix 4: Referrals to TVMMN (Non-obstetric settings)



** Gestation cut off for obstetrics versus gynaecology referrals, this will vary locally, but is usually ~16/40.*

Appendix 5: Referrals to TVNMMC (Obstetric settings)

Oxford University Hospitals NHS
NHS Foundation Trust

At a Glance...

Referrals to Thames Valley Maternal Medicine Centre (Silver Star)

	Within OUH	From Network Units*
Routine referrals	*Referral from booking appointment* **Create Referral (Maternal Medicine) within Badgernet (additional information can be sent using EPR Communicate to "Maternity – Silver Star Triage" (Pool))**	*Following antenatal referral or appointment for category B or C conditions (as per TVMMN guideline)* **Referral via OARS – (www.oars.ouh.nhs.uk); letters or other documents can also be uploaded**
Non-urgent (reply within 48h Mon – Fri)	*Non-urgent clinical queries / referral from antenatal appointment* **Create Referral (Maternal Medicine) within Badgernet or send EPR Communicate to "Maternity – Silver Star Triage" (Pool)**	*Non-urgent clinical queries* **Referral via Maternal Medicine email maternalmedicineadvice@ouh.nhs.uk**
Urgent (24/7)	*Urgent advice for inpatient* **Consultant to Consultant Maternal Medicine baton number – 01865 416839**	

* Buckinghamshire, Frimley Park, Great Western, Milton Keynes, Northampton, Royal Berkshire, Wexham Park.

Appendix 6: TVNMM obstetric medicine MDT outcome form

TVMMN Obstetric Medicine MDT Outcome Form

MDT Referral Date	_ _ / _ _ / 202 _		
MDT Discussion Date	_ _ / _ _ / 202 _		
BACKGROUND			
Surname		**DOB**	_ _ / _ _ / _ _ _ _
Forename		**Postcode**	
NHS Number		**Ethnicity**	
Estimated due date	_ _ / _ _ / 202 _	**Gravidity / Parity**	G _ P _ + _
Referring Trust	Bucks/FPH/GWH/MKUH/NGH/RBH/WPH/other *[delete as appropriate]*		
Named Consultant			
CLINICAL DETAILS			
Primary body system	☐ Cardiovascular ☐ Endocrinology ☐ Gastroenterology ☐ Haematology ☐ Hepatology ☐ Infectious disease	☐ Neurological ☐ Oncology ☐ Renal ☐ Respiratory ☐ Rheumatology ☐ Other	
Case summary	*[Please type a short summary of the medical / obstetric / surgical history]*		
Reason for referral	☐ New diagnosis ☐ Pre-existing issue		
Aim of referral	☐ Pre-pregnancy counselling ☐ Pregnant – for consideration of transfer of care ☐ Pregnant – for clinical advice (antenatal care) ☐ Pregnant – for clinical advice (intrapartum) ☐ Other		
Question(s) for the MDT			
OUTCOME			
MDT Outcome	☐ Transfer of care to OUH ☐ For OUH review ☐ Local care ☐ More information required		
Other issues identified?			
Summary			
Antenatal Care Plan	Appointments: VTE risk: Aspirin: *Y/N* GTT: *Y/N* BP target: Medications: Additional investigations: Fetal ultrasound:		
Intrapartum Care Plan	Planned timing of birth: Planned mode of birth: Planned place of birth: Fetal monitoring: CEFM/ IA / not applicable		

	Epidural: if and when required / as soon as in established labour / prior to ARM Fluid management: no fluid restriction required / fluid restrict to _ _ ml/h BP target: Second stage: normal / limit active 2nd stage to _ _ mins / not applicable Third stage: Any contraindicated drugs? Other precautions:
Postnatal Care Plan	Level of care immediately PN: 1/2/3 *[delete as appropriate]* LMWH: *[dose/duration]* Postnatal medications: Recommended PN stay: Contraception plan: Postnatal follow up appointment: *Y/N Specify which clinic/consultant* Plan for handover back to usual medical team:
MDT Attendance	

Appendix 7: Definitions

Term	Definition
AEDs	Anti-epileptic medication
ANCA	Anti-nuclear cytoplasmic antibody
Anti-GBM	Anti-glomerular basement membrane
AS/AR	Aortic stenosis/aortic regurgitation
ASD	Atrial septal defect
BOB	Buckinghamshire, Oxfordshire and West Berkshire
CKD	Chronic kidney disease
CTD	Connective tissue disease
DSN	Diabetes Specialist Nurse
GDM	Gestational diabetes mellitus
GN	Glomerulonephritis
HUS	Haemolytic uraemic syndrome
ILD	Interstitial lung disease
MMN	Maternal Medicine Network
MMC	Maternal Medicine Clinic
MBRRACE(UK)	Mothers and Babies: Reducing Risk through Audits and Confidential Enquires across the UK
MS/MR	Mitral stenosis/mitral regurgitation
NICE	National Institute for Health and Care Excellence
OUHFT	Oxford University Hospitals NHS Foundation Trust
PDA	Patent ductus arteriosus
PS/PR	Pulmonary stenosis/pulmonary regurgitation
RCOG	Royal College of Obstetricians and Gynaecologists
SLE	Systemic lupus erythematosus
TS/TR	Triscuspid stenosis/tricuspid regurgitation
TVNMMS	Thames Valley Networked Maternal Medicine Service
TVNMMC	Thames Valley Networked Maternal Medicine Centre
T1	Type 1
T2	Type 2
TTP	Thrombotic thrombocytopenic purpura
VSD	Ventricular septal defect
VTE	Venous thromboembolic disease

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Guideline review information

Category	Guideline
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Version Control:	3.0
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Link to national guidance:	Maternal medicine networks service specification
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