

Conditions for considerations of referral into a Maternal Medicine Centre



Issue Date: 1/11/24

Next Review Date: 1/11/25.

1. Objective

The Yorkshire and The Humber (Y&H) regions have come together to form The Y&H Maternal Medicine Network (MMN). The aim of the MMN is to provide equitable and expert care to women and birthing people with pre-existing or pregnancy induced medical conditions

The purpose of the document is to provide guidance to professionals regarding who to refer to the MMN.

2. Background

The criteria for referral has been developed using the NHSE Maternal Medicine Service Specification (2020) as guidance, in consultation with Lead Obstetricians and Physicians at both Maternal Medicine Centres. There have been some amendments to reflect local expertise and capacity at both Maternal Medicine Centres at Leeds Teaching Hospitals Trust and Sheffield Teaching Hospitals.

The criteria for referral for cardiology has been developed in consultation with the Pregnancy Care Guideline for Women in Yorkshire & Humber Network with known Congenital Cardiac Disease (Yorkshire and Humber Congenital Heart Disease Operational Delivery Network 2021).

Version 1.2 has been updated to reflect feedback from local Trusts and to further align the document with the National Service Specification.

3. Referral information

For any conditions that are not included in this document that you require advice for/referral to a Maternal Medicine Centre, please email leedsth-tr.maternalmedicine@nhs.net for Leeds or sth.jessopwing.maternalmedicine@nhs.net if referring to Sheffield MMC. The Leeds Maternal Medicine Centre has 2 individual referring emails for both Cardiology and Haematology for direct referrals. The email addresses for these specialties are leedsth-tr.obscardiac@nhs.net and leedsth-tr.obschaem@nhs.net

The Maternal Medicine Network does not currently provide a 24-hour service however, there continues to be support available out of hours from the on-call Consultant Obstetrician.

Unwell women should be discussed with the Obstetric Consultant on call at either Leeds or Sheffield for advice and transfer if required.

The decision which MMC to refer to should be based on several factors:

1. Geography (see table)
2. Medical History and where care have previously been received. For example, if a woman from NLAG has received or is currently receiving care from Leeds, then it is in her best interest to continue care at Leeds.
3. Woman's choice

4. Provider Trust	MMC to be referred to
Airedale Bradford Calderdale Harrogate	Hull* Mid Yorkshire York Leeds
Barnsley Chesterfield Doncaster NLAG Rotherham	Sheffield

*Women from Hull with Sickle cell disease should be referred to Sheffield, as per the local agreement

When referring a patient, please take into consideration that those who are from an ethnic minority, have a severe mental illness or are socially deprived, are at higher risk of poor physical health and poor outcomes, compared with the general patient population. The perinatal period adds further complexity, therefore please ensure you consider mental health needs of the patient and refer to your local perinatal mental health service appropriately. Additional information can be found at [Every Mum Matters - Home](#)

4. Pre-Pregnancy Counselling

The MMN will facilitate PPC for women with the most complex medical conditions (conditions in Category C) , however the MMN are not able to provide PPC to all women with a pre existing medical condition. PPC can also be accessed locally.

5. In-utero transfer

If an in-utero transfer is required during the pregnancy, please consider any maternal medical conditions prior to transfer, as this may affect the appropriateness of the receiving unit.

6. Definitions

Category A- Local Expertise - Medical conditions that can be managed using local expertise and evidence based maternity care.

Category B- Review, Advice and Guidance from Maternal Medicine Centre - Complex medical conditions where a Maternal Medicine Centre provides clinical review (either virtually or face to face according to clinical need) and ongoing **advice and guidance** to local maternity unit.

Category C- Care led by Maternal Medicine Centre - Highly complex medical conditions where care in pregnancy is **led by the Maternal Medicine Centre** during pregnancy and includes plan for delivery.

These categories are a guide only. They can be modified according to local expertise and experience. Where local expertise is sufficient, a condition may move from category C to B, or B to A. However please ensure that any woman with a condition in category B or C is referred to the MMC in the first instance.

Cardiology- Acquired Cardiac Disease

Urgent referral to MMC	Care led by Maternal Medicine Centre	Review, advice & guidance from MMC	Local expertise
➤ Pulmonary hypertension – refer to Sheffield	Cardiomyopathies: <ul style="list-style-type: none"> ➤ Hypertrophic - Dilated or Previous or Peripartum 	➤ ICD	➤ Common arrhythmias*
➤ Mod-Severely impaired left ventricular dysfunction	Channelopathies: <ul style="list-style-type: none"> ➤ Catecholaminergic Polymorphic Ventricular Tachycardia (CPVT) ➤ Brugada ➤ Other 	➤ Common arrhythmias (where concerned)	
➤ Heart Transplant		➤ Ischaemic heart disease (stable)	
		➤ Acute coronary syndrome	
		➤ SCAD	
		➤ Previous Cardio toxic chemotherapy with abnormal 1st or 3rd trimester echo	
		➤ Long QT	
		➤ Heart Failure	
		➤ Mildly impaired left ventricular dysfunction	
		➤ Family History of inherited cardiomyopathy	

* Should be reviewed by local Obstetric and Cardiology teams. Refer after local Cardiology review if required

Cardiology-Congenital Heart Disease

Urgent referral to MMC	Care led by Maternal Medicine Centre	Review, advice & guidance from MMC	Local expertise
<ul style="list-style-type: none"> ➤ BAV with aortopathy or Turner's syndrome with max aortic root/ascending aorta diameter ≥45mm ng aorta diameter ≥45mm 	<ul style="list-style-type: none"> ➤ Severe aortic or mitral regurgitation 	<ul style="list-style-type: none"> ➤ Mild-moderate aortic /mitral regurgitation 	<ul style="list-style-type: none"> ➤ Repaired ASD/VSD**
<ul style="list-style-type: none"> ➤ Marfan's syndrome or other CTD* with dilated aortic root 	<ul style="list-style-type: none"> ➤ Severe pulmonary stenosis 	<ul style="list-style-type: none"> ➤ Severe Pulmonary regurgitation 	<ul style="list-style-type: none"> ➤ Repaired Patent Ductus Arteriosus**
<ul style="list-style-type: none"> ➤ Severe systemic ventricular impairment 	<ul style="list-style-type: none"> ➤ Moderate or severe aortic stenosis 	<ul style="list-style-type: none"> ➤ Moderate aortic stenosis (Pre-pregnancy peak gradient <50mmHg) 	
<ul style="list-style-type: none"> ➤ Mechanical (metal) valve 	<ul style="list-style-type: none"> ➤ Moderate or severe mitral stenosis 	<ul style="list-style-type: none"> ➤ TGA repair: good quality/function arterial switch 	
<ul style="list-style-type: none"> ➤ Pulmonary hypertension associated with congenital heart disease 	<ul style="list-style-type: none"> ➤ Coarctation of aorta, native, operated or intervened on 	<ul style="list-style-type: none"> ➤ Mild mitral stenosis 	
<ul style="list-style-type: none"> ➤ *Ehlers-Danlos Type 4, Loeys-Dietz, Familial Thoracic Aortic Aneurysm and Dissection syndrome or high suspicion of unidentified cause 	<ul style="list-style-type: none"> ➤ TGA repair: Mustard/Senning, Arterial switch (not good function/quality) 	<ul style="list-style-type: none"> ➤ Unrepaired ASD 	

	➤ Fontan circulation	➤ Tetralogy of Fallot	
	➤ Cyanotic heart disease without pulmonary hypertension	➤ Repaired Fallot's Tetralogy	
	➤ Bicuspid Aortic Valve (BAV) with aortopathy or Turner's syndrome with maximum aortic root/ascending aorta	➤ Restrictive VSD (unrepaired)	
		➤ Repaired ASD/VSD with ongoing congenital cardiology follow up	
		➤ Isolated Patent Ductus Arteriosus (without pulmonary hypertension) with ongoing congenital cardiology input	
		➤ Repaired total anomalous pulmonary venous drainage	
		➤ Bicuspid aortic valve; no aortopathy	
		➤ Mild aortic stenosis Mild/moderate pulmonary stenosis / regurgitation	

*** Should be reviewed by local Obstetric and Cardiology teams. Refer after local Cardiology review if required**

**** Can be managed locally if discharged from congenital cardiology input**

Diabetes and Endocrine

Care led by Maternal Medicine Centre	Review, advice & guidance from MMC	Local expertise
➤ Pheochromocytoma	➤ Uncontrolled hyperthyroidism	➤ Hyperthyroidism – well controlled
➤ Cushing's syndrome	➤ Adrenal tumours	➤ Hypothyroidism
➤ Acromegaly	➤ Congenital adrenal hyperplasia	➤ Thyroid nodules
➤ Metabolic disorders	➤ Addison's disease	➤ Micro prolactinoma
➤ Hyperparathyroidism with raised calcium	➤ Hypopituitarism	➤ Type 1/ 2 diabetes
➤ Hyperaldosteronism	➤ Thyroid Cancer	
	➤ Macroprolactinoma	
	➤ Type 1 diabetes with autonomic neuropathy	
	➤ Monogenic diabetes	
	➤ CVD	
	➤ Type 1/ 2 diabetes with retinopathy requiring treatment during pregnancy	
	➤ Type 1/ 2 diabetes with renal impairment: *CKD 2 with significant proteinuria i.e. PCR>30 at booking ➤ *CKD 3	
	➤ Dumping Syndrome post bariatric surgery	

Haematology

Care led by Maternal Medicine Centre	Review, advice & guidance from MMC	Local expertise
<ul style="list-style-type: none"> ➤ Fetus affected by moderate to severe haemophilia (or not known whether fetus affected) ➤ Carrier of haemophilia with low levels Factor VIII/IX 	<ul style="list-style-type: none"> ➤ Haemophilia carrier (refer carriers of haemophilia as early as possible) ➤ Partner of pregnant patient with Haemophilia A/B 	<ul style="list-style-type: none"> ➤ Gestational thrombocytopenia ➤ Historical ITP and platelets >75
<ul style="list-style-type: none"> ➤ Type 2 & 3 VWD ➤ Type 1 VWD if VWF not normalised 	<ul style="list-style-type: none"> ➤ Type 1 VWD: VWF normalised in pregnancy 	<ul style="list-style-type: none"> ➤ Inherited thrombophilia (no previous VTE, not antithrombin deficiency)
<ul style="list-style-type: none"> ➤ Any bleeding disorder already under care in MMC, or likely to require haemostatic support antenatally or peripartum to reduce haemorrhage risk (including severe platelet disorders) 	<ul style="list-style-type: none"> ➤ Mild bleeding disorder, or partner of patient with mild bleeding disorder (platelet function defect, other mild coagulation factor deficiency such as Factor XI deficiency) 	<ul style="list-style-type: none"> ➤ Obstetric antiphospholipid syndrome
<ul style="list-style-type: none"> ➤ Antithrombin deficiency 	<ul style="list-style-type: none"> ➤ Current ITP and platelets <75 	<ul style="list-style-type: none"> ➤ Current or previous VTE event ➤
<ul style="list-style-type: none"> ➤ Thrombotic Antiphospholipid Syndrome 	<ul style="list-style-type: none"> ➤ Inherited thrombophilia with previous VTE 	<ul style="list-style-type: none"> ➤ Sickle cell trait
<ul style="list-style-type: none"> ➤ Sickle cell disease 	<ul style="list-style-type: none"> ➤ Current extensive VTE or new VTE > 36/40 gestation 	<ul style="list-style-type: none"> ➤ Alpha/beta thalassaemia trait
<ul style="list-style-type: none"> ➤ Transfusion Dependent Thalassaemia 	<ul style="list-style-type: none"> ➤ Rarer red cell disorders already under MMC care 	<ul style="list-style-type: none"> ➤ Previous treated haematological malignancy
<ul style="list-style-type: none"> ➤ Active haematological malignancy 	<ul style="list-style-type: none"> ➤ Non-transfusion dependent thalassaemia ➤ Thalassaemia trait and Hb <75 	<ul style="list-style-type: none"> ➤ Thrombocytosis
<ul style="list-style-type: none"> ➤ TTP requiring treatment 	<ul style="list-style-type: none"> ➤ Myeloproliferative disorders 	
<ul style="list-style-type: none"> ➤ PNH 	<ul style="list-style-type: none"> ➤ TTP in remission 	

Gastroenterology

Care led by Maternal Medicine Centre	Review, advice & guidance from MMC	Local expertise
<ul style="list-style-type: none"> ➤ Complex pancreatitis <ul style="list-style-type: none"> • not responding to treatment • Hypertriglyceridemia • Recurrent disease • IR/ surgical intervention 	<ul style="list-style-type: none"> ➤ Complex IBD (Incl perianal disease/pouch/stoma) 	<ul style="list-style-type: none"> ➤ Uncomplicated IBD
<ul style="list-style-type: none"> ➤ Active GI malignancy 	<ul style="list-style-type: none"> ➤ Acute and chronic pancreatitis 	<ul style="list-style-type: none"> ➤ Active IBD controlled on steroids /biologics (Should be reviewed by local Obstetric and Gastro team. Refer after local review if required)
	<ul style="list-style-type: none"> ➤ Treated GI malignancy 	

Hepatology

Care led by Maternal Medicine Centre	Review, advice & guidance from MMC	Local expertise
➤ Any degree of portal hypertension	➤ Autoimmune hepatitis	➤ viral hepatitis*
➤ Decompensating Liver disease	➤ Crigler Najjar syndrome	
➤ Cirrhosis	➤ Wilson's disease	
➤ Liver Transplant	➤ Primary sclerosing cholangitis	
➤ Budd Chiari Syndrome	➤ Primary biliary cholangitis	

*Should be reviewed by local Obstetric and Hepatology team. Refer after local review if required.

Infectious Diseases

Care led by Maternal Medicine Centre	Review, advice & guidance from MMC	Local expertise
	➤ Malaria	➤ HIV
		➤ TB

Neurology

Care led by Maternal Medicine Centre	Review, advice & guidance from MMC	Local expertise
➤ New diagnosis/ flare up of Myasthenia gravis	➤ Unstable Multiple Sclerosis or on disease modifying drugs	➤ Previous ischaemic stroke
➤ Acute Stroke	➤ Untreated intracranial aneurysm	➤ Epilepsy *
➤ Progressive brain Tumour	➤ Previous intracranial haemorrhage	➤ Previous CVT
➤ Unstable CVM/ AVM/cavernoma/ intracerebral bleed within 2 years	➤ Complex or poorly controlled epilepsy on multiple AEDs	➤ Meningitis /encephalitis *
➤ New onset Guillian barre syndrome	➤ Stable CVM/AVM/Cavernoma	➤ Idiopathic intracranial hypertension
➤ Motor Neurone Disease with respiratory involvement	➤ Symptomatic raised intracranial pressure	➤ Stable MS without disease modifying drugs *
	➤ New CVT	➤ Previous brain tumour
	➤ Previous Guillian Barre syndrome	
	➤ Stable Myasthenia Gravis	
	➤ Spinal Muscular Atrophy	
	➤ MND	
	➤ Current stable brain tumour	
	➤ Myotonic dystrophy	
	➤ Reversible CVS	
	➤ Neuromuscular dystrophy	
	➤ Neurofibromatosis	

* Should be reviewed by the local obstetric and neurology teams. Refer after local review if required or if no local neurology input.

Renal

Care led by Maternal Medicine Centre	Review, advice & guidance from MMC	Local expertise
➤ CKD 5	➤ CKD 3-4	➤ CKD 1-2
➤ Combined kidney pancreas transplant	➤ GN on maintenance immunotherapy	➤ AD polycystic kidney disease with normal renal function
➤ New renal vasculitis	➤ Lupus nephritis (stable)	➤ Reflux nephropathy with normal kidney function
➤ Active/ Unstable Lupus nephritis	➤ Autosomal dominant polycystic kidney disease (ADPKD) with abnormal kidney function	
➤ Scleroderma renal crisis	➤ Previous renal vasculitis in remission/ no treatment	
➤ Renal dialysis	➤ Reflux nephropathy and congenital abnormality of kidney and urinary tract with CKD stage 3-4	
➤ Renal Transplant	➤ Type 1/2 Diabetes with CKD 2 and significant proteinuria i.e. PCR>30 at booking	
	➤ Kidney disease on biologics	

Respiratory

Care led by Maternal Medicine Centre	Review, advice & guidance from MMC	Local expertise
➤ Cystic Fibrosis	➤ Restrictive lung disease (e.g. ILD)	➤ Asthma
➤ Lung Transplant	➤ Any pulmonary condition currently receiving immunotherapy	➤ Obstructive sleep apnoea
➤ Pulmonary Hypertension	➤ Bronchiectasis	
➤ Pulmonary Vasculitis	➤ COPD	
	➤ Lung cancer	

Rheumatology

Care led by Maternal Medicine Centre	Review, advice & guidance from MMC	Local expertise
➤ Scleroderma	➤ Any CTD with evidence of extra-articular manifestations involving heart, lungs or kidneys	➤ Stable inflammatory arthritis on pregnancy appropriate treatment
➤ Vascular/Type IV Ehlers Danlos Syndrome	➤ SLE with renal, cardiac or cerebral involvement	➤ Stable CTD not on biologics
	➤ Vasculitis (anti-GBM or ANCA positive)	➤ Hypermobile Ehlers Danlos type 3
	➤ Sjogren's syndrome with Ro antibody positivity	
	➤ Other Ehlers Danlos syndrome	
	➤ Rheumatological condition- not controlled on current treatment	

Miscellaneous

Care led by Maternal Medicine Centre	Review, advice & guidance from MMC	Local expertise
	➤ Cancer	➤ Polymorphic Eruption of Pregnancy
	➤ Acute illness where the underlying condition is not clear: headache, breathlessness, chest pain, abdominal pain, fever/sepsis	➤ Essential Hypertension
	➤ Skin Disease e.g. Pemphigoid Gestationis	
	➤ Behcet's syndrome	

7. Declarations of Interests

No declaration of interest.

8. References

Maternal Medicine Service Specification (2021)

NHSE 13th October 2021, version 1

Pregnancy Care Guideline for Women in Yorkshire & Humber Network with known Congenital Cardiac Disease (2021)

Yorkshire and Humber Congenital Heart Disease Operational Delivery Network

9. Contributors

The following Obstetric and Medical leads have been consulted by Dr Tessa Bonnett and Dr Medha Rathod during the development of this document:

Obstetricians:	Physicians:
Dr Tessa Bonnett	Dr Laurence O'Toole
Dr Gemma Govinden	Professor Tim Chico
Dr Victoria Stern	Dr Emma Walkinshaw

Dr Yash Choudhary
Mr Roobin Johki
Dr Shehnaaz Jivraj
Dr Priya Madhuvrata
Dr Samantha Lowe
Dr Hannah Yeeles
Dr Etienne Cianter
Dr Thomas Everett
Dr Medha Rathod
Dr Tracy Glanville
Dr Jayne Shilito

Dr Siew Wong
Dr Kar-Ping Kuet
Dr Mohammed Akil
Dr Rachel Kilding
Dr Josh Chew
Dr Giorgia Saccullo
Dr Rhona Maclean
Dr Clare Samuelson
Dr Ida Pernacova
Dr William Bennet
Dr Veena Reddy
Dr Ana Garcia
Dr Alex Simms
Dr Kate English
Dr Kate Gatenby
Dr Christian Selinger
Dr Shovik Dass
Dr Ana Swain
Dr Jayne Dillon
Professor Helen Ford
Jo Geldard (epilepsy nurse)

10.Target Professional Group

All professionals caring for women with complex medical conditions.

Document Control			
Name:	<i>Conditions for consideration for referral into the Y&H MMN</i>	First published:	March 2023
Version:	V1	Current Version Published:	March 2023
Ratification Committee:	Leeds Teaching Hospitals, Women's Clinical Support Group Quality Assurance Group	Review Date:	March 2026
Document Managed by Name:	Debbie Scott	Document Managed by Title:	Consultant Midwife MMN
Consultation Process			
Y&H Maternal Medicine Network, ratified at Leeds Teaching Hospitals, Women's Clinical Support Group Quality Assurance Group Meeting March 2023			
Version Control			
Date	Version	Contributor	Revision description
March 2023	V1	As above	New policy
September 2023	V1.1	As above	To reflect SBLv3
November 2024	V1.2	As above	To further reflect national service spec In response to regional feedback