



**Aneurin Bevan University Health Board**

# **Fetal Medicine Services Pathway for referral and Management**

*N.B. Staff should be discouraged from printing this document. This is to avoid the risk of out-of-date printed versions of the document. The Intranet should be referred to for the current version of the document.*



**Contents**

<b>Introduction .....</b>	<b>4</b>
<b>Policy Statement .....</b>	<b>4</b>
<b>Aims 4</b>	
<b>Scope.....</b>	<b>4</b>
<b>Roles and Responsibilities .....</b>	<b>4</b>
<b>Main Body.....</b>	<b>4</b>
<b>Resources.....</b>	<b>5</b>
<b>Training .....</b>	<b>5</b>
<b>Implementation.....</b>	<b>5</b>
<b>Further Information Clinical Documents.....</b>	<b>5</b>
<b>Standards for Health Services Wales .....</b>	<b>5</b>
<b>Equality .....</b>	<b>5</b>
<b>Environmental Impact .....</b>	<b>6</b>
<b>Audit.....</b>	<b>6</b>
<b>Review.....</b>	<b>6</b>
<b>References .....</b>	
<b>Appendices .....</b>	<b>Error! Bookmark not defined.</b>

## **1. Introduction/Overview**

This document is to provide guidance and a clinical pathway for all clinicians working within ABUHB.

## **2. Policy Statement**

Always consider the dignity and self-esteem of the families.  
This guideline is designed to support safe and effective practice.

## **3. Aims/Purpose**

The aim of this document is to streamline the pathway for the fetal medicine services in ABUHB to ensure standardised and high-quality care based on the available evidence.

This guideline aims to clarify the referral and care pathway for all pregnant women and pregnant people who do not identify as women, when a fetal disorder is detected.

## **4. Objectives**

The objective of this document is to ensure consistent high-quality care.

## **5. Scope**

This guideline applies to all health care professionals including obstetric medical staff and midwives working within ABUHB.

## **6. Roles and Responsibilities**

It is the responsibility of all the maternity team to ensure that these guidelines are adhered to when providing care.

The clinical effectiveness forum will ensure that the guideline is available on the intranet.

## **7. Main Body**

This will be achieved through education, supervision and regular audit of practice.

## **8. Resources**

There are no resource issues.

## **9. Training**

Staff are expected to access appropriate training where provided.  
Training needs to be identified through appraisal and clinical supervision.

## **10. Implementation**

This document will be available on the intranet for all members of the maternity team.

## **11. Further Information Clinical Documents**

- Integrated Care Pathway for intrauterine deaths over 20 weeks.
- Integrated Care Pathway for termination of pregnancy for fetal abnormality.

## **12. Health and Care Standards Wales**

This guideline contributes to compliance with:

Standard 6: Participating in quality improvement activities.

Standard 7: Safe and clinically effective care.

Standard 10: Dignity and Respect.

Also: this guideline links with:

Standard 18: Communicating effectively.

Standard 26: Workforce training and Organisational development.

## **13. Equality**

An equality impact assessment has been carried out and no adverse impact has been identified.

## **14. Environmental Impact**

An environmental impact assessment has been carried out and no adverse impact has been identified.

## **15. Audit**

This guideline will be audited by

- Compliance with the documentation on the ICP pathway for intrauterine deaths over 20 weeks' gestation.
- Compliance with the ICP for termination for fetal abnormality.
- Compliance with the Communication checklist within this guideline.

## **16. Review**

This guideline will be reviewed three years after the ratification date.

## **17. References**

Antenatal Screening Wales. ASW (2008) Amniocentesis and Chorionic Villus Sampling policy, standards and protocols. ASW.

Handbook of Fetal Medicine. Sailesh Kumar. Cambridge University Press. July 2010.

Nursing & Midwifery Council NMC. (2018). The code: Professional standards of practice and behaviour for nurses, midwives and nursing associates. NMC.

## **Overview**

Fetal medicine is a branch of the maternity service that provides care for the fetus (or fetuses') and pregnant mother. The aim of this specialised service is to provide evidence -based care to women with complex pregnancies where the fetus (or fetuses') has a confirmed or suspected disorder.

Fetal Medicine is the speciality that focuses on fetal health and its consequences for women and their families.

This includes assessment of fetal growth and well-being, diagnosis and management of fetal disorders (including fetal abnormalities), counselling and support for parents. These pregnancies require a multidisciplinary plan of care with input from other specialities such as radiology, neonatology, genetics, fetal cardiology and the tertiary fetal medicine unit

which include paediatric surgery, nephrology, urology, neurology and microbiology.

### **ABUHB Fetal Medicine Referral Pathway**

This service is provided at two sites within Aneurin Bevan University Health Board, those being the Royal Gwent Hospital and Nevill Hall Hospital.

There are 3 Fetal Medicine clinics every week in the Royal Gwent Hospital and 2 Fetal Medicine Clinics in Nevill Hall Hospital.

### **Provision of Clinics**

To confirm the days and times of fetal medicine clinics please contact:

Royal Gwent Hospital Fetal Medicine

Telephone number: 01633 **238952** /234747

Internal: 48952/44747

**And**

Nevill Hall Hospital Fetal Medicine

Telephone number: 01873 **732390**/91

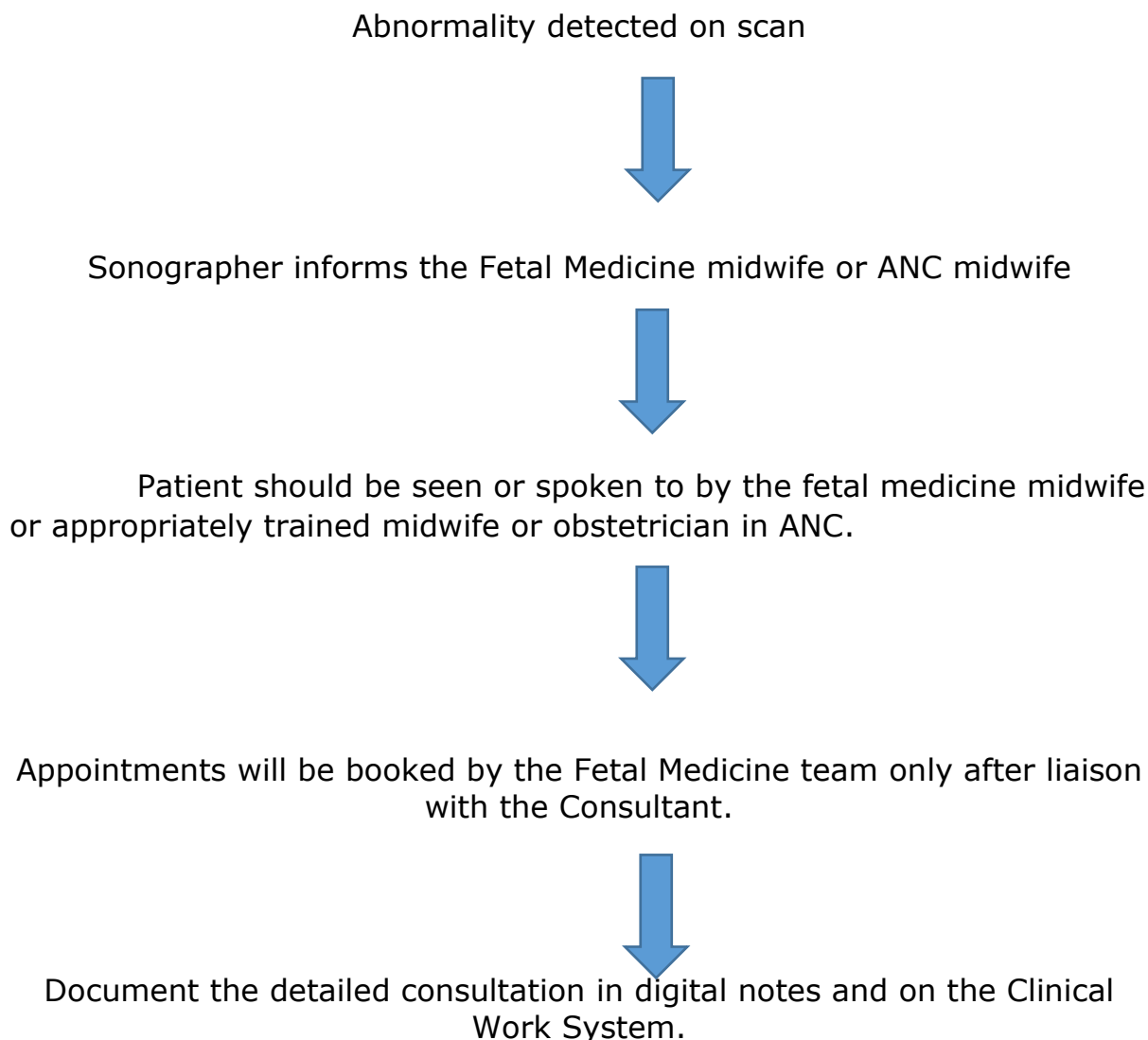
Internal: 82390/91

### **Aim**

This guideline aims to clarify the referral and care pathway for all women when a fetal disorder is detected.

The objective of the Fetal Medicine Clinic is to provide additional specialised patient focused high quality evidence-based care to women with complex pregnancies or whose fetus (fetuses) has a confirmed, suspected or at risk of a disorder.

## **Internal Referral Process when abnormality detected**



### **Referrals to FMC**

Any referral to Fetal Medicine Clinic should be emailed to the fetal medicine midwife or consultant using the correct form, (appendix) and patients' details, including an updated contact number. Referrals can be made via telephone contact and preferably alongside a referral form.

Any email referral sent should be followed up to ensure this has been reviewed by the team and appropriate care is given.

[ABUHB Referral form link](#)

## **Referral Criteria for Fetal Medicine Clinic in ABUHB**

- Fetal Abnormality suspected / detected during ultrasound screening at any gestation.
- Nuchal translucency at/greater than 3.5mm or Cystic Hygroma detected at the dating scan.
- Pregnancy complicated by a relevant family history or previous pregnancy with a chromosomal or genetic disorder (suspected reoccurrence): referral on individual basis.
- Pregnancy complicated by possible fetal infection (CMV, Toxoplasmosis, Parvovirus, Varicella, Syphilis, Rubella, Zika etc).
- All MCDA, MCMA and higher order multiple pregnancies only.
- Any twin pregnancy with fetal complications.
- Anhydramnios or oligohydramnios (deepest pool <2cm or AFI < 5 at less than 24 weeks gestation or unexplained oligohydramnios at any gestation. Premature rupture of membranes is not in the criteria.
- SGA (small for gestational age) at second trimester anomaly scan or if **less than 32 weeks'** gestation with raised PI > 95<sup>th</sup> centile in umbilical artery doppler or growth on or below the **3<sup>rd</sup>** centile.
- High or rising antibody titres/past obstetric history of fetal alloimmunisation.
- High chance NIPT/ or request for Amniocentesis.
- Ladies with Pre-term premature rupture of the membranes (PPROM) can be referred to an Obstetric Consultant for counselling and follow up.  
A Fetal Medicine Referral can be sent if a woman wishes a MTOP.

## **Pathway for some of the most encountered fetal abnormalities:**

### **Raised Nuchal Translucency/Cystic Hygroma**

A raised NT 3.5mm or above is associated with chromosomal abnormalities, an increased risk of cardiac, structural, skeletal abnormalities, fetal loss, but can also be a normal variant.

Investigations:

CGH Array, (consider tertiary referral for CVS) early scan at around 16 weeks in FMC, detailed anomaly scan at 20 weeks in Xray (with senior sonographer), Fetal Echocardiogram in UHW FMU. Serial scans to monitor growth and well-being.

[Raised NT patient leaflet](#)

**Short Long Bones**

A small but otherwise normal baby. Can be growth restriction due to placental insufficiency so must consider, AC/AFI/DOPPLERS.

A viral screen (rubella, CMV, Toxoplasmosis or Syphilis) is advised. There is an association with an underlying genetic condition so an amniocentesis can be discussed and referral to Cardiff Fetal Medicine Unit undertaken for further review or second opinion.

Assessment for likelihood of skeletal dysplasia undertaken. Some conditions are associated with short ribs, a small chest and significant underdevelopment of the lungs. (Pulmonary hypoplasia)

**Facial Cleft**

Incidence of cleft palate 1:700 births.

The cause of cleft lip/palate is multifactorial with genetic and environmental factors being involved. It can be isolated and unilateral cleft lip is rarely associated with a chromosome abnormality.

It can be associated with > 400 syndromes in 30% of cases.

Chromosome anomaly is mainly T13 and T18 and are found in 1-2% of cases.

The genetic link varies according to type: unilateral cleft lip 5%, Unilateral cleft lip and palate 10%.; Bilateral cleft lip and palate 20-30% and midline cleft lip and palate 50-80%.

Diagnosis of cleft **palate** is difficult during pregnancy.

Investigations:

Refer for 22-week cardiac views in radiology dept; Refer to the Cleft team in Morryston, Swansea.

Email [sbu.cleftenquiries@wales.nhs.uk](mailto:sbu.cleftenquiries@wales.nhs.uk)

Serial scans in FMC, Offer amniocentesis -SNP array.

[Cleft Lip/Palate patient leaflet](#)

## **Gastroschisis**

Incidence of gastroschisis: 0.03%

A full thickness defect of the abdominal wall usually in the right paraumbilical area. The protruding abdominal contents are not covered by a membrane. In 10-20% of cases there are associated gastrointestinal anomalies. Chromosomal abnormalities and genetic syndromes are rare. There is a slight increase in the incidence of associated congenital heart disease.

The pregnancy has an increased risk of premature labour, oligohydramnios, growth restriction and intrauterine death. Most however have no associated anomalies with a good long-term outcome.

There are no contraindications for a vaginal delivery and IOL will normally be arranged by UHW FMU around 37 -38 weeks of pregnancy.

### **Investigations:**

SNP array is not required if isolated. Referral to UHW FMU is necessary as this is the closest surgical unit where delivery will take place. Neonatal and surgical review will take place in UHW.

Serial Growth scans within FMC/FMU.

[Gastroschisis patient leaflet](#)

## **Exomphalos/Omphalocele**

A midline anterior abdominal wall defect in which the protruding abdominal contents are covered by a peritoneal membrane. The umbilical cord inserts into the sac instead of the abdominal wall.

Often exomphalos is associated with other anomalies: chromosomal abnormalities mainly Trisomy 18 is found in 30 – 50% of cases, genetic syndromes (10%) and congenital heart disease (30 –50%).

Fetal mortality is increased in the presence of other anomalies.

### **Investigations:**

SNP Array. Refer to UHW FMU for review for surgical input and delivery. Fetal Echo request. Neonatal and surgical review will take place in UHW. Serial Growth scans in FMC.

[Exomphalos patient leaflet](#)

## **Echogenic Bowel**

The vast majority will be normal. It can be associated with an intra-amniotic bleed which is of no significance. However, it is also associated with Cytomegalovirus infection (2%), Cystic Fibrosis (2%) which is an

autosomal recessive condition, Chromosomal abnormalities particularly Trisomy 21. There is an increased risk of placental insufficiency. The likelihood of SGA is 9%, the need for early delivery is 12% and the risk of IUD is 3%.

Investigations:

SNP array, CMV bloods, CF parental blood tests and serial growth scans.

[Echogenic Bowel patient leaflet](#)

### **Renal Pelvis Calyceal Dilatation**

In most cases this can be a normal variant, it can remain stable or resolve in the antenatal or neonatal period.

It is dilatation of the collecting system of the kidney.

In about 20% of cases there may be underlying obstruction or reflux that requires postnatal surgery.

Mild (only renal pelvis): 4-7mm in the second trimester; 7-9mm in the third trimester.

Moderate (pelvis and calyces): 8-10mm in the second trimester; 10-15mm in the third trimester.

Severe (cortical thinning) :>10mm in the second trimester;> 15mm in the third trimester.

Investigations:

Karyotyping should only be offered if other markers are present.

[Renal Pelvis Calyceal Dilatation Patient Leaflet](#)

### **Short Femur**

Dates need to be checked to ensure they are correct.

In the second trimester measurements less than the 5<sup>th</sup> centile can be associated with chromosomal anomalies, fetal infection, fetal growth restriction and skeletal dysplasia.

If the FL is < than the 3<sup>rd</sup> centile in the third trimester, then the above associations apply and referral to FMC can be made.

Investigations

Arrange a skeletal survey with radiology to measure all the long bones. SNP array, infection screen –CMV, Toxoplasmosis and rubella. Serial growth scans.

### **Congenital Diaphragmatic Hernia**

Prevalence: 1 in 4,000 births.

Abdominal viscera herniate into the thorax through defect in the diaphragm with associated deviation of the heart from its normal position. Left (80%) Right (15%) Anterior retrosternal (5%)

The resulting abnormalities (pulmonary hypoplasia, lung dysmaturity and pulmonary hypertension) can lead to polyhydramnios (> 26 weeks and in most cases) and hydrops and result in high mortality.

Associated abnormalities are Chromosomal abnormalities mainly T18 and T13 are found in 20% of cases. Structural abnormalities are found in 20% of cases.

The LHR (lung head ratio) is used to predict survival, with severe <25%, moderate if 26-45% and mild if > 45%.

Fetal Therapy: FETO (fetoscopic endoluminal tracheal occlusion).

This involves the endoscopic insertion of an inflatable balloon into the trachea with consequent retention of fluid produced by the lungs which may stimulate lung growth. The balloon is inserted at 26 weeks and removed at 34 weeks.

Prognosis: part of T18 – lethal. Isolated: survival is < 15% for severe disease, 50% for moderate and > 90% for mild disease.

Investigations:

SNP array, Fetal Echo, Fetal MRI, serial growth scans, shared care.

Refer to UHW FMU as it is the nearest neonatal surgical team where delivery will take place.

The LHR (lung head ratio) is used to predict survival, with severe <25%, moderate if 26-45% and mild if > 45%.

Fetal Therapy: FETO (fetoscopic endoluminal tracheal occlusion).

This involves the endoscopic insertion of an inflatable balloon into the trachea with consequent retention of fluid produced by the lungs which may stimulate lung growth. The balloon is inserted at 26 weeks and removed at 34 weeks.

[Congenital Diaphragmatic Hernia patient leaflet](#)

## **Fetal Arrhythmias**

Please refer to [Fetal Arrhythmia guidelines](#) .

No need for straight referral to Fetal Medicine Clinic unless there is a tachyarrhythmia or bradyarrhythmia.

Please follow the pathway and arrange weekly fetal heart auscultation by the community Midwife if this persists.

## **Fetal Medicine Information Leaflet Links**

All leaflets can be sent via badgernet and healthier together website.

[Parvovirus information leaflet](#)

[Multiple pregnancy patient leaflet](#)

[Cystic Hygroma patient leaflet](#)

[Congenital Pulmonary Airway Malformation patient leaflet](#)

[Absent Kidney patient leaflet](#)

[CMV in pregnancy patient leaflet](#)

[Spina bifida patient leaflet](#)

## **Genetics**

Prenatal genetic referrals can be emailed via the Badger net system.  
(Search Referral then complete)

There is another email address through which referrals can be made (see below):

[Awmgs.prenatalreferrals@wales.nhs.uk](mailto:Awmgs.prenatalreferrals@wales.nhs.uk)

Postnatal genetics referrals should be made where there is a clear genetic link established via history or post-mortem findings.

This should be done using a letter addressed to the Lead Genetics Counsellor and usually from the Obstetric Consultant.

Please specify the patients consent for the referral.

## **Referral for Fetal MRI**

These are performed in Southmead, Bristol. All requests will now be referred to UHW FMU so they can liaise and arrange this with Bristol.

## **Neonatology Counselling**

The fetal Medicine Team will refer the woman for neonatal review and counselling especially in complex cases.

Neonatal alerts will be uploaded on the Badgernet system.

Regular fetal medicine patient updates/emails are cascaded to the Neonatal Consultant.

## **Appendix 1**

### **Referral Pathway to tertiary units**

As per the current provision of services, the main tertiary referral unit for ABUHB is the University Hospital of Wales in Cardiff. All referrals including fetal cardiology requests are sent directly to the Fetal Medicine Unit in UHW for review. (See referral form in appendix 1)

All UHW referrals will require the consultant to be copied into the email for it to be accepted. The woman should be provided details including the patient information leaflet and a named contact within this health board. Referrals should be typed and emailed to:

[Fetal.med@wales.nhs.uk](mailto:Fetal.med@wales.nhs.uk)

The unit will contact the woman with an appointment time and date via phone or letter.

A recent blood group MUST be included with the referral.  
Any additional information i.e., digital notes summary, genetic tests, blood results etc should be attached to the referral and sent.  
Safeguarding concerns must be included.

**Referrals to the tertiary units should be made only by the Fetal Medicine Clinics. If this is not possible due to any reason, this should be done by an on-call consultant or consultant looking after the woman. It is advisable to discuss the case with the Fetal Medicine Consultants in the tertiary unit prior to the referral. All referrals should be recorded on the woman's digital notes (Badgernet) and CWS.**

**Paper handheld records should be issued if there is shared care between units . Any follow up appointment in ABUHB should be printed from badgernet and filed in the handheld notes. CMW should record in both badgernet and the handheld paper record to maintain a complete shared record.**

### **Useful Telephone Numbers**

Fetal Medicine Unit UHW Cardiff: 02920742279

Bristol Fetal Medicine Unit: 0117 3425470

UHW Prenatal Genetics: 02920742577

Cytogenetics UHW: 02920 744072

*Patient information leaflets can be accessed on the SharePoint or Healthier together website.*

## **Referral Criteria to UHW Fetal Medicine Unit**

- Conditions requiring fetal surgery and delivery in a paediatric surgical unit.
- Cardiac anomalies requiring surgery will be referred to St Michaels in Bristol by the UHW Fetal Cardiology team.
- Cases requiring a second opinion in diagnosis and counselling.

### **1. Invasive diagnostic procedures**

- CVS (Chorionic Villus Sampling) at <14 weeks.
- Amniocentesis for complex procedures particularly multiple pregnancies.
- Fetal Blood Sampling.

### **2. Referral for ultrasound guided therapeutic procedures**

- Transfusion therapy for fetal anaemia (alloimmune red cell disease or fetal infection).
- Amniotic fluid drainage
- Amniotic fluid infusion
- Fetoscopic laser ablation in twin-to-twin transfusion syndrome (TTTS). This will normally be undertaken by Bristol FMU but will need to be referred to UHW FMU first for assessment.
- Feto-amniotic shunting – pleuro-amniotic shunt, vesico-amniotic shunt.

### **3. Invasive procedures relating to termination of pregnancy**

- Feticide with late termination of pregnancy >21+6 weeks.
- Multi Fetal Pregnancy Reduction (MFPR)

#### **4. Assessment and management of complicated twin pregnancies and higher order pregnancies:**

- All invasive diagnostic tests.
- Suspected or confirmed TTTS.

#### **Service Provision**

On attending the Fetal Medicine Clinic:

- A detailed scan is normally performed at each visit.
- Fetal medicine counselling is given, including an explanation of the findings which may include specific diagnosis or differential diagnoses and the implications and prognosis for baby.
- Further information may be sought through referral to the tertiary FMU UHW.
- Consultation can include the option of terminating the pregnancy or access to palliative care via UHW.
- Due to the specialist nature and complexity of the cases seen within FMC, a face-to-face interpreter should be provided for those women requiring interpreting services.
- The Fetal Medicine midwife will provide support, information and be the first point of contact for these women. They liaise with all the multidisciplinary team ensuring streamlined care.

**Appendix 2**  
**Cardiff & Vale University Health Board**

**FETAL MEDICINE / CARDIOLOGY REFERRAL May 2021**

Referral Date:	Referring Hospital:	Health Board:	Hospital Number	NHS number		
		ABUHB				
Patient Name:	DOB	Patients Address:	Postcode	Telephone numbers (2 if possible)		
GP Practitioner + Address	Consultant <i>(NB: All referred patients must have a named Consultant)</i>		Community Midwife	Refers name and telephone number		
	Please confirm that the referral is approved + copied to the named Consultant and a local appt made:					
Language Spoken:		Interpreter Required	Height	Weight	BMI	
		Yes / No				
EDD by USS	Current gestation	Number of fetus	Chorionicity	Blood Group	1 <sup>st</sup> trimester screen result	NIPT
				<i>NB: Please attach copy</i>	<i>NB: Please attach copy</i>	<i>NB: Please attach copy</i>
Are there any Vulnerable Adult / Child protection / Social Issues?				Yes / No		
Details:						
Any Relevant Medical Issues? Yes / No						
Details:						
Reason for referral:		Fetal Medicine Yes / No		Fetal Echo Yes / No		
No						
<b>For Fetal Medicine use only:</b>						
Date received:	Date reviewed:	Accepted / Declined FMU Yes / No    Echo Yes / No		Emergency / Urgent / Routine		

Status: Issue 3  
Approved by: CEF  
Owner: Maternity Services

Issue date: 27-11-2024  
Review by date: 26-11-2027  
Policy Number: ABUHB/F&T/0756

Comment:	Reviewed by:
<p>Please supply <u>all</u> relevant clinical data and send images to UHW PACS, laboratory test results etc. so that we can deal with your referral as speedily &amp; efficiently as possible. Failure or incomplete supply of details may lead to delay in allocating an appointment.</p> <p><b>Tick Referral Criteria Category/ ies below on next page which apply.</b>  <b>Referrals can be discussed by telephone, but this form MUST be typed and <u>emailed to us and copied to referring consultant</u></b></p> <p><b>Telephone:02920 742279 / 5230Fax:02920 746606</b>  <b>Email:fetal.med@ wales.nhs.uk (Secure NHS Email)</b>  <b>Address:Fetal Medicine Unit, Maternity Unit, University Hospital of Wales, Heath Park, Cardiff, CF14 4XW</b></p>	

## FETAL MEDICINE / CARDIOLOGY REFERRAL CRITERIA Nov 2020

### Fetal Medicine Referral Criteria Nov 2020

Please

tick All that apply

#### Patients in these groups are eligible for a Fetal Medicine Referral

1) Specialised ultrasound examination and subsequent care of fetuses at risk of or with suspected malformations, dysmorphic or genetic syndromes	
2) Relevant family history of chromosomal or genetic disorders	
3) Relevant chromosomal or genetic disorder - <i>will be assessed on individual basis</i>	
4) Previous relevant structural anomaly - <i>will be assessed on individual basis.</i>	
5) Ultrasound guided Invasive testing – i.e Chorionic villus sampling, amniocentesis, fetal blood sampling <i>(excludes amniocentesis for maternal age and increased Downs Risk on Combined Screening)</i>	
6) Ultrasound guided therapies – i.e Amniotic fluid, drainage, transfusion therapy, feto-amniotic shunting,	
7) Procedures for the selective reduction of high multiple pregnancies ( <i>Triplets or greater</i> )	
8) Complicated multiple pregnancies - <i>TTTS and growth discrepancy</i>	
9) Feticide in pregnancies more than 21+6 weeks	
10) Pregnancies at risk of Isoimmunisation and allo-immune thrombocytopaenia ( <i>NAIT</i> )	
11) Fetal Infection – <i>Toxoplasmosis, CMV, Parvovirus, Varicella, Rubella and Syphilis</i>	
12) Cardiac arrhythmias – <i>Fetal SVT, Heart block (also see Fetal Echo Criteria below)</i>	
13) Exposure to Teratogens	
14) IUGR – <i>severe early onset in current pregnancy (growth below 3rd centile, prior to 32/40 and AREDV (see RCOG: “The management of the Small for Dates Fetus GTG 31”)</i>	

**Exclusion:** *Preterm Premature Rupture of the Membranes (PPROM) is an obstetric complication to be managed locally*

### Fetal Echo Referral Welsh Criteria Nov 2020:

#### Patients in these groups are eligible for a Fetal Echo

Please tick All that apply

1) Suspicion of fetal cardiac abnormality during an obstetric scan <ul style="list-style-type: none"> <li>i. Most cases of fetal congenital heart disease will occur in this group</li> <li>ii. Pericardial effusion &gt; 3mm.</li> </ul>	
2) Fetal arrhythmias	

Status: Issue 3

Approved by: CEF

Owner: Maternity Services

Issue date: 27-11-2024

Review by date: 26-11-2027

Policy Number: ABUHB/F&amp;T/0756

i. Sustained bradycardia - <i>heart rate &lt;110 beats per minute</i> ii. Tachycardia – <i>heart rate &gt;180 beats per minute</i>	
4) Paternal congenital heart disease ( <i>risk 2-6%</i> )	
5) Maternal congenital heart disease	
6) Previous child or fetus with congenital heart disease or congenital heart block a. 1 affected child ( <i>risk 2-3%, though higher for some lesions, e.g. isomerism</i> ) b. 2 affected children ( <i>risk 10%</i> ) c. 3 affected children ( <i>risk 50%</i> )	
7) Previous child with congenital complete heart block with maternal auto antibodies ( <i>risk CHB 20%</i> )	
8) Chromosomal anomalies, gene disorders or syndromes associated with congenital heart disease or cardiomyopathy ( <i>risk will depend on individual disorder</i> )	
9) Nuchal translucency under 14 weeks gestation measuring $\geq$ 3.5mm	

**Exclusion:** Irregular heart rhythms 120-180bpm can be managed in conjunction with the local obstetric teams and referral to tertiary centre should be avoided and agreed local management protocols should be in place.

**Fetal Echo Exclusion Welsh Criteria Oct 2019:**

**Patients in these groups have an increased risk of fetal cardiac anomalies but are currently NOT commissioned for fetal echo in Wales – consider local scan at 24 weeks to recheck cardiac views.**

1) Maternal exposure to cardiac teratogens: i. Anticonvulsant, retinoic acid, lithium ( <i>risk 2%</i> ) ii. Viral infection ( <i>rubella, CMV, coxsackie, parvovirus and toxoplasma</i> )	
2) Maternal collagen disease with anti-Ro/SSA and/or anti La/SSB ( <i>risk 2-3%</i> )	
3) Maternal medication with Non-Steroidal Anti-Inflammatory (NSAID) drugs	

## Fetal Medicine and Fetal Cardiology - Update May 2021

**To:** Antenatal Screening Wales, Obstetric Clinical Directors (Wales), Radiology Clinical Directors (Wales), Superintendent Sonographers (Wales), Heads of Midwifery (Wales), Antenatal Screening Wales (Wales), Welsh Maternity Network Lead, WHSSC

Dear Colleagues,

**We have made a number of changes in order to improve the co-ordination and quality of the Welsh Regional Fetal Medicine and Fetal Cardiology Services in Cardiff which will be implemented from 1<sup>st</sup> May 2021.** The main change is expansion of the fetal echo referral criteria and referrals under the new criteria will be accepted.

- 1) **Referrals:** Combined Fetal Medicine and Fetal Cardiology Referral Form with Fetal Medicine and Fetal Cardiology criteria to be **emailed** to [fetalmed@wales.nhs.uk](mailto:fetalmed@wales.nhs.uk). *Faxed and paper referrals will no longer be accepted.*
- 2) The **Welsh funded and commissioned referral criteria** for both Fetal Cardiology and Fetal Medicine are included in the Referral Form.
- 3) All emailed referrals must be **approved by and copied to the named referring Consultant Obstetrician** otherwise the referral will be declined. *This is important as it ensures effective communication and shared responsibility for ongoing obstetric care by the referral unit. Also, any patient who is concerned about possible preterm labour or other obstetric complications are always advised to attend their local unit for assessment regardless of where elective delivery is planned.*
- 4) **Daily weekday triage** of all referrals by the Fetal Medicine Consultant or Lead Midwife to ensure that all referrals meet the agreed Welsh Fetal Medicine and Welsh Fetal Cardiology commissioned referral criteria. *All declined Fetal Cardiology referrals will be additionally reviewed weekly by Fetal Cardiology from a governance and audit perspective.*
- 5) **Daily prioritisation** by Fetal Medicine Consultants of referrals as **urgent** (5 days) or **routine**. *Patients to be subsequently allocated to either a Fetal Medicine or a combined Fetal Medicine and Fetal Cardiology appointment.*
- 6) **There is no commissioned emergency out of hours service for Fetal Cardiology in Wales/ UK.**
- 7) **There is no commissioned emergency out of hours service for Fetal Medicine in Wales/ UK**
  - a. **During Fetal Medicine Clinics (Monday to Friday 9am to 2pm except Bank Holidays)**, Fetal Medicine emergency referrals or advice requests should be by consultant-to-consultant phone call Tel: 02920 742279 (Dr Bryan Beattie, Dr Christine Conner, Dr Mark Denbow))
  - b. **Out of hours Fetal Medicine emergency referrals or advice requests** should be by consultant-to-consultant phone call to the Obstetric Consultant On Call at the University Hospital of Wales in Cardiff (Switchboard 02920 747747, Main Delivery Suite 02920 742680/ 2686).

**Fetal Medicine:** Dr Bryan Beattie, Dr Mark Denbow, Mr Armin Vandepierre – Consultants in Fetal Medicine

**Fetal Cardiology:** Dr Orhan Uzun, Dr Alan Pateman, Dr Chris Gillett – Consultants in Paediatric Cardiology

**Fetal Medicine Midwives:** Judith Bibby (Lead), Jacqui Cartlidge, Jayne Frank.

**Co-ordinators:** Wendy Pryce, Amy Chick