Clinical Practice Guideline **Fetal Diagnostic Service**
Peninsula Care Goal **Safe**

The Fetal Diagnostic Service provides COGU level services for the diagnosis and management of pregnancies complicated by fetal structural or genetic anomalies and those requiring tertiary level monitoring. This guideline outlines the referral indications and the pathway through the service with follow up protocols. This is a public service for women birthing at Peninsula Health

Target Audience
Clinical staff in Women's Health

Purpose
To guide clinicians in the appropriate use of the Fetal Diagnostic Service (FDS), including the referral pathway and follow up. The guideline covering the consent for and performance of amniocentesis and chorionic villus sampling (CVS) is covered in a separate guideline.

Guideline
Indications for Referral
Indications for referral to the fetal diagnostic service are outlined in Appendix 1 of this guideline. If there is uncertainty about whether it is appropriate to refer to the Fetal Diagnostic Service, the case should be discussed with a specialist in the antenatal clinic.

Referral Process
The coordination of the Fetal Diagnostic Service occurs from the Peninsula Health antenatal clinic in close conjunction with Peninsula Health radiology. Referral to the service must be approved by a specialist obstetrician at Peninsula Health. Visiting Medical Officers (VMO) with admitting rights may refer to the service directly. General Practitioners (GP) may refer women with indications for invasive testing. All women referred by a GP require a timely appointment with an obstetrician in the antenatal clinic for counselling and consent prior to an FDS scan or procedure.

Referrals must be made using the Fetal Diagnostic Service referral form Referral Fetal Diagnostic Service.

The Fetal Diagnostic Service operates on Tuesday and Thursday from 0830-1700 and is based in the antenatal clinic. Ultrasounds are performed in Peninsula Health radiology on Tuesdays between 0800am and 1230pm.

FDS referrals can be personally handed to a midwife in the antenatal clinic or faxed to Mastercare on 97881879 (attention to the Fetal Diagnostic Service).

For **urgent referrals** outside of the FDS hours please contact the Women's Services manager on 9784 2647 and fax referral to 97881880.

Ultrasound requests for COGU scans must be made using a paper referral form signed by a consultant obstetrician - provider number is required. Electronic ultrasound requests are NOT used by the Fetal Diagnostic Service.

Information to be included in the referral to FDS

Demographics	Name, date of birth, address, mobile number, partner's name
GP details	Name, clinic, telephone and fax numbers
Clinical indication	See indications below
Current pregnancy	LMP / EDD Ultrasound reports, antenatal screening results, blood group and antibody status, other relevant results
Obstetric history	Previous pregnancies and outcomes
Family history	History of genetic, developmental or congenital anomalies
Medical history	Relevant medical history & medication, allergies
Psychosocial information	Relevant psychological or social information
Genetic counselling	Has the woman been referred to Monash Genetics for genetic counselling?

Counselling

- The referring clinician should discuss with the woman the reason for referring to the Fetal Diagnostic service, including discussion of aneuploidy screening results and ultrasound findings. Where possible the impact of the potential anomaly on the pregnancy and birth should be discussed. Documentation of this discussion should be made in the woman's electronic pregnancy record (BOS). Consumer information leaflets should be provided where possible.

- Referral for genetic counselling is best made after attending an FDS scan for sonologist assessment and opinion

- The coordinating midwife will not provide any genetic counselling to women over the phone

Genetic counselling

Genetic counselling services will be provided by Victorian Clinical Genetics Services through Monash Genetics. Referral should be made after an appointment in FDS for confirmation and assessment.

- Women should be offered genetic counselling for any identified fetal structural or genetic anomaly or high risk aneuploidy screening result. They may also be referred if they have a history of abnormalities themselves, in a previous pregnancy or in the family.
- Referrals should be made according to the Monash Genetics Referral Guidelines. The information required for the referral is the same as that included in the Fetal Diagnostic Service referral.
- Referrals must be addressed to Dr Mathew Hunter and include the provider number of the specialist referring the woman.

  Fax 9594 6022

Phone 9594 2026
Email monashgenetics@monashhealth.org

Appointments
The coordinating midwife will compile the referrals and ensure appropriate information is included. Triage of referrals will be carried out at the earliest opportunity in conjunction with the Sonologist, FDS consultant or other senior clinician from the complex pregnancy clinic or FDS. Appointments for scans are allocated on the live weekly planner. The coordinating midwife will contact the women with their appointment details.

The ultrasound examination will be performed by the COGU sonologist or a Peninsula Health sonographer with input from the COGU sonologist. Radiology and/or obstetric trainees may be present with the woman's consent. Scanning appointments will made be on a Tuesday some time between 8.00am and 12.00pm.

Invasive Testing
Invasive diagnostic testing, chorionic villus sampling (CVS) and amniocentesis is provided by the Fetal Diagnostic Service. Please refer to the clinical practice guideline for further information
Invasive Fetal Testing by Amniocentesis or Chorionic Villus Sampling

If there is any uncertainty regarding which tests to order on the sample (such as banded karyotype/microarray/FISH), this should be discussed with a senior clinician

Women planning invasive diagnostic testing are required to complete the consent form in an obstetric clinic appointment prior to their scan/procedure.

Any potential costs and the waiting time for results should be discussed with the woman. A guide to the testing options and costs, along with a consent form that requires banking details is found in the Fetal Diagnostic Service folder in the antenatal clinic or at Fetal Diagnostic Service Referral

Follow up
The coordinating midwife or clinician will contact women with the results of any testing as soon as practical. Follow up appointments should be arranged with the antenatal clinic at Peninsula Health or the woman's referring VMO for counselling regarding the results.

Any further appointments with the Fetal Diagnostic Service will be made at the discretion of the COGU sonologist.

Reporting
Following the ultrasound examination, the COGU sonologist will prepare a radiology report on the findings.

The COGU sonologist will have access to BOS and DMR and the paper-based Outpatient Medical Record MR054650 to document any important discussion or management plan made during the ultrasound examination.

Copies of reports and medical documentation will be sent to the referring GP, VMO and other relevant clinicians.

Sonologist leave
In the case of planned or unplanned sonologist leave:

Scheduled cases
Scheduled cases will be assessed individually by CPC consultant, FDS midwife, and radiologists/sonographers
Where possible scheduled scans will be kept and reported by radiology
Some patients might need to be rebooked or referred to Monash Health (or Peninsula Imaging)
New referrals
New referrals will be assessed individually by CPC consultant, FDS midwife, and radiologists/sonographers
More urgent cases may need to be referred to Monash Fetal Diagnostic Unit
Others may be able to be delayed until Sonologist's return

Information for Shared Care GPs
Women can be referred to the fetal diagnostic service using the process described above. An antenatal appointment will be made for them to discuss the indications for the fetal diagnostic ultrasound. Women will triaged as Group B or C by the reviewing obstetrician according to the Risk Assessment for Models of Care CPG. Following the scan, an antenatal management and follow up plan will be made and documented in the Birth Outcomes System (BOS) and the handheld Victorian Maternity Records (VMR).

Appendix 1: Indications for referral to the Peninsula Health Fetal Diagnostic Service
Exclusions* refers to exclusion from the Fetal Diagnostic Service. Ultrasound through the general radiology service is still required in these clinical scenarios.

Reason for referral	Inclusions	Exclusions*
Suspected fetal anomaly	Physical or structural anomaly	Fetal renal pyelectasis<10mm Single umbilical artery Isolated choroid plexus cyst with normal aneuploidy screen Isolated intracardiac echogenic focus with normal aneuploidy screen.

Suspected genetic anomaly	For diagnostic testing (Amniocentesis/CVS) High risk antenatal screening Personal or family history of genetic anomalies Physical markers suspicious of genetic anomaly High risk of fetal biochemical disease	Advanced maternal age alone is not usually considered an indication - FTS or NIPT should be considered prior to invasive testing Blood borne virus with high viral load will require additional counselling
Maternal Infection	History or serology suspicious of maternal infectious disease (eg CMV, parvovirus, toxoplasma, rubella)	
Placental concern	Suspected placenta accreta Vasa praevia	Routine follow up for low lying placenta
Abnormal biometry	FGR with EFW <5th% in the 2nd trimester FGR with EFW <3rd% in the 3rd trimester FGR with abnormal dopplers (UA PI or CPR >95th%, UA AREDV, MCA PI<5th%,) Short long bones < 3rd percentile Microcephaly HC <3rd percentile	Routine surveillance of women at risk of growth restriction. Growth scan follow up where EFW is between 5th (T2) or 3rd (T3) and 10th percentile in the presence of normal dopplers. Concern for biparietal diameter measurement
Twin pregnancy	All MCDA twin pregnancies from 16 weeks DCDA with selective FGR Fetal demise of one twin during or after 2nd trimester	DCDA twin pregnancy for routine monitoring MCMA and higher order multiples to be referred to Monash Fetal Diagnostic Unit
Amniotic Fluid abnormality	Oligohydramnios in the second trimester Polyhydramnios – AFI >30	Oligohydramnios in 3rd trimester with normal growth and dopplers

Key Aligned Documents

- Anti Rh D immunoglobulin – antenatal and postnatal administration
- Clinical documentation
- Escalation to senior O&G staff
- Indication for antenatal ultrasound
- Intrauterine Fetal Death and Stillbirth
- Invasive Fetal testing by amniocentesis & chorionic villus sampling
- Management of the Small for gestational age or growth restricted fetus
- Management of Placenta praevia , placenta accreta and vasa praevia
- Prenatal Screening tests
- Ultrasound
- Twin Pregnancy

Evaluation

Evaluation of the service will occur by consumer questionnaire and clinical audit of the outcomes and effectiveness of the service.
Adverse outcomes will be recorded using the VHIMS process. Consumer complaints to occur using the Riskman process.

Keywords

AFI	amniotic fluid index
AMA	advanced maternal age
BOS	Birthing Outcomes System (electronic pregnancy record)
DMR/EMR	digital (Electronic) medical record
COGU	Certificate of Obstetric and Gynaecological Ultrasound (subspecialist of a fellow of RANZCOG)
CVS	chorionic villus sampling
DCDA	dichorionic diamniotic (twins)
EDD	estimated due date
EFW	estimated fetal weight.
FGR	fetal growth restriction
FISH	fluorescent in-situ hybridisation
FTS	first trimester screen
MCDA	monochorionic diamniotic (twins)
NIPT	non-invasive prenatal testing also known as cell-free DNA testing

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