OBSTETRICS AND GYNAECOLOGY
CLINICAL PRACTICE GUIDELINE

Multiple pregnancy

Scope (Staff):	Medical and nursing/midwifery staff
Scope (Area):	Obstetrics and gynaecology

This document should be read in conjunction with the Disclaimer.

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Aim

This guideline outlines the management of multiple pregnancies in the antenatal and intrapartum periods.

Antenatal Management

Antenatal Care

Routine Antenatal Investigation

Management as for a singleton pregnancy.

Referrals

Refer to the Maternal Fetal Medicine team (MFM) for the following:

- Monochorionic monoamniotic twins
- Monochorionic monoamniotic triplets
- Monochronic diamniotic triplets
- Dichorionic diamniotic triplets
- Chorionic villus sampling (CVS) or amniocentesis
- Structural or chromosome anomaly
- Single fetal death on monochorionic twins
- Suspected twin – twin transfusion syndrome (TTTS)
- Severe early onset fetal growth restriction

Offer genetic counselling prior to screening for aneuploidy with nuchal translucency (NT) measurement.

Frequency of Antenatal Clinic Visits

Women with twin pregnancies without complications are seen:

- 4 weekly until 28 weeks gestation
- 2 weekly until 34 weeks gestation
- weekly from 34 weeks gestation

In women with a high risk multiple pregnancy, the frequency of care is individualised. The consultant must be involved in the decision.

- Women with uncomplicated monochorionic, triamniotic and dichorionic triamniotic triplet pregnancies should have at least 11 antenatal appointments. Combine the appointments with the scans from approximately 11 weeks to 13 weeks 6 days gestation and then at estimated gestations of 16,18, 20, 22, 24, 26, 28, 30, 32 and 34 weeks.[10]
- Women with uncomplicated trichorionic, triamniotic triplet pregnancies should have appointments combined with scans from approximately 11 weeks 0 days to 13 weeks 6 days and then at 20, 24, 28, 32 and 34 weeks. Offer an additional appointment without a scan at 16 weeks.[10]

Genetic Screening

- Offer nuchal translucency in the first trimester. Serum screening tests are not as sensitive in multiple gestations mainly due to limited available data. Serum

levels markers are masked due to analytes from the normal and abnormal fetus both entering the maternal serum, and are in effect averaged together.[11] In monochorionic twin pregnancy maternal serum values can be used as each fetus has the same risk of aneuploidy. The role of these serum values is less certain in dichorionic twin pregnancies

- Where a first trimester screening for Down's syndrome cannot be offered to a woman with a twin pregnancy, consider second trimester screening and explain the potential problems of such screening including the increased risk of pregnancy loss associated with double invasive testing. **Second trimester serum screening for Down's syndrome must not be used in triplet pregnancies**.

Fetal Surveillance

Ultrasound

- Perform an ultrasound at 12-13 weeks gestation. This ultrasound identifies whether the twins are dichorionic or monochorionic.
- Perform an anatomy scan at 19 weeks gestation. Congenital malformations are more common in multiple than singleton pregnancies. The incidence of malformations are higher in monozygotic twins than dizygotic twins.[1]
- Arrange serial growth and well- being scans according to chorionicity and clinical concern. The frequency of antenatal scans are generally
    - Monochorionic twins: screen for growth discordancy and TTTS every 2 – 3 weeks from 16 – 19 weeks gestation and then 2 weekly until delivery. Consider a fetal echo at 22 – 24 weeks.
    - Uncomplicated dichorionic diamniotic twins – screen for growth 4 weekly from 26 weeks.
    - If a woman with a twin or triplet pregnancy presents after 14 weeks 0 days, determine chorionicity at the earliest opportunity by ultrasound.[10]
    - If the woman presents late in pregnancy manage the pregnancy as monochorionic until proven otherwise.[10]

Cardiotocograph (CTG) Monitoring

- CTG monitoring should be done for
    - Discordant growth – weekly after 34 weeks. Serial ultrasounds provide the best method for monitoring discordant growth, with evaluation of fetal wellbeing by use of a CTG monitoring, biophysical profiles and Doppler studies.[12]
    - Risk factors of fetal compromise.

Diet and Nutrition

- Offer referral to Dietician Services. Multiple pregnancy increases calorie, protein, mineral and vitamin requirements.

- Recommend twice daily iron and folic acid supplementation. The risk for anaemia increases in multiple pregnancies.
- Recommend multivitamin supplementation for women with poor nutritional status. Iron deficiency anaemia is associated with pre-term delivery and low ferritin levels are linked to prematurity.

Hypertension

- Advise women with twin and triplet pregnancies that they should take 75mg of aspirin daily from 12 weeks until the birth of the babies if they have one or more of the following risk factors for hypertension:
  - First pregnancy
  - Age 40 years or older
  - Pregnancy interval of more than 10 years
  - BMI of 35 kg/m^2 at first visit
  - Family history of pre-eclampsia

Parent Education

- Advise the Parent Education department of all women with multiple pregnancies. This allows individual contact to provide information on specific classes and links to specialised community groups and services[13].
- Consider booking Parent education classes early. Multiple gestation pregnancy has a higher risk for pre-term birth[13].

Timing and Mode of Birth

- The optimal timing of birth is uncertain with clinical support for both elective delivery at 37 weeks gestation (either by induction of labour or caesarean section) and waiting for labour to start spontaneously.
- NICE[10] recommends the following:
- Monochorionic twin pregnancies – elective birth from 36+0 weeks gestation after a course of prophylactic corticosteroids has been offered.
- Dichorionic twin pregnancies – elective birth from 37+0 weeks gestation.
- When appropriate obstetric experience is available, vaginal birth is the preferred mode of birth for all twin pregnancies that meet the following criteria[4]
  - Twins must be diamniotic
  - Twin 1 cephalic
  - Twin 2 is not >500g heavier than twin 1
  - Neither twin has any evidence of fetal compromise requiring caesarean section.

- Triplet pregnancies: elective birth from 35 weeks 0 days after a course of antenatal corticosteroids has been offered.[10]

Intrapartum Management

Admission

If a woman presents in labour with a multiple pregnancy notify the:

- Midwifery Labour and Birth Suite Co-ordinator
- Consultant
- Obstetric Registrar
- Resident Medical Officer (RMO).

The Senior Registrar, Consultant and Anaesthetic Registrar should be advised of admission by the Obstetric Registrar.

Intrapartum Care

Intravenous Access

- Insert an intravenous large bore cannula (16g). The risk for both intrapartum and postpartum haemorrhage is increased with multiple pregnancy.[14]
- Collect blood for:
  - Full blood picture
  - Group and hold
  - Cross-match blood if indicated e.g. anaemia

Fetal Monitoring

Monitor the fetal heart rates (FHR) with the cardiotocograph (CTG) continuously in active labour (>4cm). Consider application of a fetal scalp electrode on twin one, and external monitoring on twin two if it is difficult to maintain continuous monitoring.[14]

Analgesia

Discuss the option and benefits of intrapartum epidural analgesia. An epidural is recommended due to the increased risk of operative delivery in twin births, and the possibility of intrauterine manipulation of twin two.

Diet and Nutrition

Allow the woman to consume a low fat, low fibre, high calorie diet in labour. The incidence of aspiration pneumonia and Mendelson's Syndrome associated with emergency caesarean section in the developed world is relatively low[15]. Current evidence suggests that a policy of fasting in labour makes no difference to length of the labour or the obstetric or neonatal outcomes[15].

Preparation for Birth

- Notify obstetric personnel to be present at the birth:

  - Registrar
  - Senior Registrar. If the senior obstetric registrar is not credentialed for twin birth, the Consultant should be present
  - Consultant if required.
- Notify the neonatal and paediatric staff to attend the birth.
- Ensure a portable ultrasound is available.
- Advise the theatre coordinator and the duty Anaesthetic Registrar / Consultant that the birth is imminent.
- Ensure an oxytocin infusion is available to be used after the first twin is delivered. Oxytocin infusion may be required if uterine inertia occurs between twin births.[14]
- The oxytocin regime used between twins is:
  - 10 I.U. of oxytocin in 500mL of Hartmann's or Normal Saline commencing at 6mL/hour.

Birth

Delivery of the First Twin

- Conduct the delivery of the first twin, if it is a cephalic presentation, as for a normal birth.
- Withhold the I.M. oxytocin after the birth of the first twin.
- Clamp and cut the umbilical cord after the birth of the first twin.
- Consider the commencement of an oxytocin infusion in consultation with the obstetric staff. This assists in the prevention of uterine inertia.[14] The solution should be titrated according to the frequency/strength of contractions and consultation with medical staff.

Delivery of the Second Twin

- Perform an abdominal palpation and vaginal examination immediately after delivery of twin one. This allows determination of the lie and presentation and position of twin two[8] and excludes cord presentation/prolapse.
- Confirm fetal presentation by portable ultrasound as required. External cephalic version or internal pedalic manipulation of the fetus may be required for malpresentation.
- Monitor the FHR of twin two continuously.
- Perform an artificial rupture of membranes (ARM) when clinically appropriate. The fetal presentation must be confirmed prior to performing an ARM. Cord presentation must be excluded.
- Withhold the third stage oxytocin until after delivery of the second twin.

- Aim to deliver the second twin within 30 minutes. If the condition of the second twin is satisfactory, the time factor becomes less important and should be weighed against the clinical situation.
- Collect cord blood from both twins after the birth of twin two.

Third Stage Management

- Administer IM oxytocin after delivery of the second twin. See O&G clinical guideline: Labour: Third Stage
- Commence active management. A prophylactic oxytocin infusion is beneficial to prevent post-partum haemorrhage due to the risk of uterine atony which is increased with twin births[9]. See O&G Clinical Guideline: Postpartum Complications (See Oxytocin infusion regimens: Prophylaxis and therapeutic)

References and resources

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13. Denton J, O'Brien W. Multiple pregnancy. In: Macdonald S, Johnson G, editors. Mayes' midwifery. Sydney: Elsevier; 2017. p. 965-78.

14. Dodd JM, Crowther CA. Evidence-based care of women with multiple pregnancy. Best Practice & Research Clinical Obstetrics and Gynaecology. 2005;19(1):131-53.

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Related WNHS procedures and guidelines

WNHS Clinical Guidelines, Obstetrics and Gynaecology:

- Abnormalities of Lie / Presentation
- Labour: Third Stage
- Postpartum Complications (see Oxytocin infusion regimens: Prophylaxis and therapeutic) (available to WA Health employees through Healthpoint)

CMP Clinical Guideline: Primary PPH at Home – Community Midwifery Program (available to WA Health Employees through HealthPoint)

Useful resources (including related forms)

Medical Record Form: Obstetric Special Instruction Sheet (KEMH MR 004/OPH MR1.1)

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Version History

Version Number	Date	Summary
1.0	June 2019	First version – amalgamation of: • Multiple Pregnancy: Antenatal Management • Multiple Pregnancy: Intrapartum Planned Vaginal Twin Birth
2.0	October 2024	Three yearly review, minimal changes to links and updated to new template

The health impact upon Aboriginal people has been considered, and where relevant incorporated and appropriately addressed in the development of this policy.

This document can be made available in alternative formats on request for a person with a disability.