Guideline for the Management of Multiple Pregnancy and Birth

Author/Owner	**Obstetric Consultant, Midwives**	
Equality Impact Assessment	N/A if clinical guideline or procedure	Date:
Version	1	
Status	Approved	
Publication date	28/03/2023	
Review date	23/03/2026	
Approval recommended by	Maternity guideline group	Date: N/A
	Women's Business and Governance Meeting	Date:17/03/2023
Approved by	CBU 3 Overarching Governance Meeting	Date:22/03/2023
Distribution	Barnsley Hospital NHS Foundation Trust – intranet Please note that the intranet version of this document is the only version that is maintained. Any printed copies must therefore be viewed as "uncontrolled" and as such, may not necessarily contain the latest updates and amendments	

Table of Contents

	Section heading		Page
1.0	Introduction		3
2.0	Objective		3
3.0	Scope		3
4.0	Main body of the document		3-9
5.0	Roles and responsibilities		9
6.0	Associated documents and references		9
7.0	Training and resources		9
8.0	Monitoring and audit		9
9.0	Equality, diversity and inclusion		10
	9.1	Recording and monitoring of equality, diversity and inclusion	10
Appendix 1	Glossary of terms		11
Appendix 2	Document history/version control – must be the last appendix		11

Section Headings

1.0 Introduction

The guideline uses the terms 'woman' or 'mother' throughout. These should be taken to include people who do not identify as women but who are pregnant.

Multiple pregnancy occurs in 1 in 60 pregnancies, resulting in 3% of live-births being from multiple pregnancies. The incidence has been rising, mainly due to increasing use of assisted conception techniques and changing maternal demographics – twins are more common at later maternal age, and more women are deferring pregnancy. There were 49 sets of twins born in Barnsley in 2022.

Multiple pregnancies are at higher risk and adverse outcomes may be more likely, necessitating increased monitoring and contact with health professionals.
Increased risks include:

- Preterm birth
- Fetal growth restriction (FGR)
- Pre-eclampsia
- Postpartum haemorrhage (PPH)

The risks to the babies are partly dependent upon the chorionicity and amnionicity of the pregnancy. Approximately 30% of twin pregnancies in the UK are monochorionic, and particular risks can arise from the shared placenta and vascular placental anastomoses. As a result, these pregnancies carry a higher overall risk of fetal/perinatal loss and require increased prenatal surveillance. Determining chorionicity early in the pregnancy helps to stratify risk, and enable further detailed counselling and onward referral to tertiary centres if required.

2.0 Objective

The aim of this guideline is to describe the antenatal, intrapartum and post-natal care of a woman with a twin pregnancy.
Triplet and higher order pregnancies will be referred to the tertiary centre for management.

3.0 Scope

This guideline applies to all medical and midwifery staff working in maternity services

4.0 Main body of the document

<u>Antenatal care for pregnant women with multiple pregnancies</u>

Following confirmation of the pregnancy the woman should be booked by the community midwife and a dating ultra sound scan should be arranged between 11^{+0} and 13^{+6} weeks gestation to:

- Estimate gestational age from the largest fetus
- Determine chorionicity
- Measure nuchal translucency

If it is difficult to determine chorionicity a second opinion will be sought. If it still not possible to determine chorionicity the pregnancy should be managed as monochorionic until proved otherwise
The **multiple pregnancy proforma** should be completed after the dating scan by the medical team reviewing the patient at her booking visit.
The pregnant woman with a multiple pregnancy should follow the high-risk antenatal care pathway.
All women should be given the opportunity at each appointment to ask questions to enable them to make informed choices about their care. Their treatment should be based on their individual needs. Women should be signposted to information that is "twin specific" e.g. Twins Trust website Twins Trust | Twins Trust - We support twins, triplets and more...

The woman should be seen by senior medical staff throughout her pregnancy. At least two appointments should be with an obstetrician with a special interest in fetal medicine (Dr Khanem/Dr Fawzy) who will discuss the mode and timing of birth with the woman. This needs to be done between 24 and 28-weeks gestation because of the risk of preterm labour.

Recommended mode of birth:

Vaginal birth is safe and will be considered for DCDA and MCDA twins if the following apply:

- The first baby is in cephalic presentation
- There are no other obstetric contraindications for labour
- The pregnancy is >32 weeks and there are no complications
- There is no significant size discordance between the twins

For women giving birth in an uncomplicated twin pregnancy >32 weeks:

- More than one third who plan vaginal birth may go on to have caesarean section
- Almost all women who plan caesarean do have one, but few may have a vaginal birth before caesarean can be carried out
- A small number of women may need an emergency caesarean to deliver the second twin after vaginal delivery of the first

For mono-amniotic twins, if there is a single sac, or with higher order multiple births, elective caesarean section is normally advised.

Timing of birth

Approximately 60% of twin pregnancies will result in a spontaneous birth before 37^{+0} weeks gestation and 75% of triplet pregnancies result in a spontaneous birth before 35^{+0} weeks gestation (NICE). **Link to Preterm birth guidelines here please**

For uncomplicated dichorionic twin pregnancies elective birth at 37^{+0} does not appear to be associated with an increased risk of serious adverse outcomes. However, continuing beyond 37^{+6} increases the risk of fetal death. Therefore, an elective birth should be planned from 37^{+0} weeks.

For uncomplicated monochorionic diamniotic (MCDA) twin pregnancies, elective birth at 36^{+0} weeks does not appear to be associated with an increased risk of serious adverse outcomes. However, continuing beyond 36^{+6} weeks increases the risk of fetal death. Therefore, elective birth from 36^{+0} should be planned and a course of corticosteroids should be offered.

For uncomplicated MCMA twin pregnancies, elective birth at 32 weeks does not appear to be associated with an increased risk of serious adverse outcomes. However, continuing beyond 33^{+6} weeks increases the risk of fetal death. Therefore, an elective birth should be

planned between 32 and 33^{+6}; and a course of corticosteroids should be offered. These babies will usually need to be admitted to the neonatal unit and have an increased risk of respiratory problems.

Women who decline elective birth will be offered weekly appointments with the specialist obstetrician. At each appointment offer an ultrasound scan for liquor volume and umbilical artery doppler and perform weekly biophysical profile assessments and fortnightly fetal growth scans.

Antenatal screening for Down's syndrome

Women will be informed about the following:

- The increased likelihood of Down's syndrome
- Different screening options and possible outcomes such as the higher false positive rate and incidence of invasive testing with its complications
- The physical risks and psychological implications of selective fetal reduction

Healthcare professionals who screen for Down's syndrome in twin pregnancies should:

- Map the fetal positions
- Use the combined screening test (nuchal translucency, beta-human chorionic gonadotropin, pregnancy-associated plasma protein-A) for Down's syndrome when crown–rump length measures from 45 mm to 84 mm (at approximately 11 weeks 0 days to 13 weeks 6 days
- Calculate the risk of Down's syndrome **per pregnancy** in monochorionic twin pregnancies
- Calculate the risk of Down's syndrome **for each baby** in dichorionic twin pregnancies

<u>Ultrasound scanning and antenatal clinic appointments in twin pregnancies</u>

Dichorionic Twins

- After the booking appointment, dichorionic diamniotic (DCDA) twins will be offered an antenatal clinic appointment at 16 weeks with the specialist consultant obstetrician; an ultrasound scan is not required at this appointment
- The woman will have an ultrasound scan booked at 20 weeks to check for any abnormalities
- Scans will be repeated every four weeks at 24, 28, 32 and 36 weeks
- At each scan appointment the woman will also have an appointment at the antenatal clinic to review her results and discuss the plan of care.
- A minimum of eight antenatal appointments will be offered, two of which will be with the specialist consultant obstetrician

Monochorionic diamniotic (MCDA) Twins

- The woman will be offered USS at booking, and at 16, 18, 20, 22, 24, 26, 28, 30, 32, 34 weeks noting fetal biometry and liquor volumes
- At each scan appointment the woman will also have an appointment in antenatal clinic to review her results and discuss the plan of care
- A minimum of 11 appointments will be offered, two of which will be with the specialist consultant obstetrician

Monochorionic monoamniotic (MCMA) Twins

- MCMA twins will be reviewed in the fetal clinic at 14-16 weeks to confirm chorionicity and amnionicity.

- Uncomplicated MCMA twins will be managed locally in the twin clinic by the specialist consultant obstetrician but any concerns will prompt referral to a tertiary centre.
- The schedule for care will be individualised but not less than the schedule for USS monitoring of Monochorionic diamniotic (MCDA) twins above.

If the woman wishes she can see her community midwife at any time in between these appointments for support and reassurance.

Monitoring for intrauterine growth restriction

With twin pregnancies, it is important that staff:

- Do not use abdominal palpation or symphysis-fundal height measurements to predict intrauterine growth restriction.
- Monitor fetal growth at every USS from 24 weeks calculating estimated fetal weight and liquor volume (Deepest Vertical Pool)
- Calculate the EFW discordance and document it using:
  (EFW largest fetus – EFW smallest fetus) ÷ EFW largest fetus x 100
- Increase monitoring to at least weekly USS with umbilical doppler if EFW discordance is ≥20%, or either twin is below the 10th centile
- Consider a size difference between the fetuses of >25% as an indicator of discordant fetal growth restriction. If this occurs and EFW is below the 10th centile refer to the specialist consultant obstetricians
- Referral to a tertiary centre is recommended if the local fetal consultants are unavailable or if recommended by the local fetal consultant

Twin to twin transfusion syndrome (TTTS)

Discordant fetal growth in monochorionic twins may be a sign of twin-to-twin transfusion syndrome.
After 16 weeks, twin to twin transfusion is monitored at each ultrasound scan visit every two weeks.
The diagnosis of TTTS is based on the following ultrasound criteria:

- The presence of a single placental mass
- Concordant gender
- Oligohydramnios with a maximum vertical pocket (MVP) <2cm in one sac and polyhydramnios with an MVP≥10cm in the other sac at over 20 weeks gestation
- Discordant bladder appearance
- Haemodynamic and cardiac compromise (indicative of severe TTTS)

Cases where TTTS is suspected or where there is evidence of polyhydramnios at less than 20 weeks gestation should be discussed with the specialist obstetric consultants.
Where applicable the woman will be referred to the Feto-maternal Unit at Sheffield for further management.

Twin anaemia polycythaemia sequence (TAPS) management

TAPS is a rare condition that occurs in monochorionic twins when one of the twins is anaemic and the other has polycythaemia.

There is no routine screening for TAPS. However, weekly ultrasound monitoring for TAPS using middle cerebral artery peak systolic velocity (MCA-PSV) should be offered from 16 weeks of pregnancy to women whose pregnancies are complicated by:

- Feto-fetal transfusion syndrome that has been treated by fetoscopic laser therapy

- Or selective fetal growth restriction defined by an EFW discordance of 25% or more and an EFW of any of the babies below the 10th centile for gestational age

Perform ultrasound MCA-PSV measurements to help detect advanced stage TAPS, and seek management advice from a tertiary unit for women with a monochorionic pregnancy showing any of the following:

- Cardiovascular compromise (such as fetal hydrops or cardiomegaly)
- Or unexplained isolated polyhydramnios
- Or abnormal umbilical artery Doppler

Indications for referral to a specialist fetal medicine centre

Pregnancies complicated by:

- Fetal anomaly – referral will be based on individual circumstances and will be dependent upon the anomaly and if the woman is considering fetal reduction
- Conjoined fetuses
- Size difference of 25% and EFW <10% - if indicated after local fetal review.
- Twin to twin transfusion syndrome
- Twin reverse perfusion arterial sequence (TRAP)
- Suspected twin anaemia polycythaemia sequence (TAPS)
- Discordant fetal death in monochorionic or dichorionic twins

The following do not automatically require referral:

- Pregnancies with discordant fetal growth not satisfying the above criteria for referral
- MCMA pregnancies without other complications

If there are any abnormalities detected the screening coordinator will be available to see the woman to offer additional support.

Possible maternal complications

- **Anaemia** is more likely with a twin pregnancy.

Perform a full blood count at 20–24 weeks to identify women with twin pregnancies who need early supplementation with iron or folic acid.
Repeat at 28 weeks as in routine antenatal care.

- **Hypertension** is more common with twin pregnancies.

Measure blood pressure and test urine for protein at each antenatal visit

- **Pre-eclampsia**

To reduce the risk, advise women to take 150 mgs of aspirin daily from 12 weeks of pregnancy if any of the following additional risk factors apply:

- First pregnancy
- Age 40 years or over
- Pregnancy interval > 10 years
- BMI > 35 or more at booking
- Family history of pre-eclampsia

- The risk of **Venous Thromboembolism** is greater with a twin pregnancy.

Multiple pregnancy will add 1 to the patient TRAF score.

Attendance in Triage

All women with multiple pregnancy who attend maternity triage or present in labour should have a clinical review by an obstetric Registrar or Consultant.

Guidelines for Managing Labour

The Consultant must be informed when the woman is admitted to the Birthing Centre.
An obstetric review must be performed by a Registrar or Consultant.
The plan for delivery should be discussed with the woman and documented on the partogram.

The lie and presentation of the first twin must be determined - if necessary by ultrasound scan.
This should be confirmed vaginally. If not cephalic, caesarean section is advisable.

Management of the first stage of labour
Once labour is diagnosed it should be managed as high risk
The woman should be advised to only have water to drink
IV access should be obtained, and bloods sent for FBC, Group and Save
The woman's preferences for pain relief will be discussed - epidural analgesia is the preferred form of pain relief to facilitate emergency intervention in case of fetal compromise

Continuous Electronic Fetal Heart Monitoring should be commenced if >26/40.

- After 34 weeks a fetal scalp electrode should be used for the leading twin if there are no contraindications.
- If problems occur locating both fetal hearts, ultrasound scans will be used for confirmation.
- It should be documented on the CTG and in the clinical records which CTG trace belongs to which fetus; consider separating by 20 beats/minute if there is difficulty differentiating
- Fetal scalp stimulation should not be used for reassurance in the case of a pathological CTG
- Twin pregnancy should be considered a fetal clinical risk factor when classifying a cardiotocography trace as 'abnormal' versus 'non-reassuring'

Management of the second stage of labour
The delivery will be conducted by the most appropriate person in accordance with the plan of care. This could be the midwife, the obstetric registrar or the obstetric consultant
Paediatricians/neonatal team must be present.
The theatre staff and anaesthetist must be on standby in the birthing centre
The mobile scanner and an intravenous Syntocinon infusion should be readily available.

Process for delivery

- Following delivery of the first twin, the abdomen should be palpated or scanned to determine the lie of the second twin and if necessary convert it to longitudinal lie.
- The fetal heart should be monitored throughout.
- **The membranes should not be ruptured until the presenting part is engaged.**
- Pushing should recommence once a longitudinal lie is confirmed. If there are no contractions then Syntocinon infusion as per protocol will be commenced.
- If the presentation remains cephalic the midwife will conduct the delivery with the registrar present.
- If the presentation of the second twin is breech the delivery will be conducted by or under the supervision of a Registrar or other suitably experienced practitioner.

- The consultant obstetrician should be contacted immediately to attend should any complications arise.
- If there is a delay in the delivery (>30 minutes) or there is evidence of fetal distress in the second twin:
    - inform the consultant obstetrician
    - consider instrumental vaginal delivery or caesarean section

Management of the third Stage of labour

- An additional cord clamp should be placed on the cord belonging to the second twin for identification of the placentas
- Syntometrine is given (unless contra-indicated) with consent for active 3rd stage management.
- Any Syntocinon infusion will continue post delivery or be commenced if clinically indicated
- Consider the use of additional uterotonics for the 3rd stage if there are additional risk factors for PPH present
- The placenta will be examined and sent for pathological examination only if there have been complications during pregnancy or birth.

5.0 Roles and responsibilities

Midwives/Support staff

To work in collaboration as part of a multi-disciplinary team in delivery care throughout the ante-natal, intrapartum and postnatal period for women with multiple pregnancies in order to optimise outcome for the mother and her babies

Obstetricians

To work in collaboration as part of a multi-disciplinary team in delivery care throughout the ante-natal, intrapartum and postnatal period for women with multiple pregnancies in order to optimise outcome for the mother and her babies

Paediatricians

To attend delivery for multiple births; perform neonatal assessment and resuscitation as required and formulate any relevant management plans for the postnatal period if the babies are nursed on the postnatal ward

6.0 Associated documents and references

- National Institute for Health and Clinical Excellence (NICE). Clinical guideline 137. Twin and Triplet Pregnancy (2019) [online] www.nice.org.uk
- MBRRACE-UK Perinatal Confidential Enquiry 2020: Stillbirths and Neonatal Deaths in Twin Pregnancies (2021) [online] https://www.npeu.ox.ac.uk/mbrrace-uk/reports
- RCOG Management of monochorionic twin pregnancy 2016
- Agreement between Barnsley fetal clinic with local tertiary referral centre

7.0 Training and resources

Training will be given as documented in the Maternity Training Needs Analysis. This is updated on an annual basis.

8.0 Monitoring and audit

Any adverse incidents relating to the guideline for the Management of Multiple pregnancy and birth will be monitored via the incident reporting system. Any problems will be actioned via the case review and root cause analysis action plans. The action plans are monitored by the risk midwife to ensure that improvements in care are made. The trends and any root

cause analysis are discussed at the monthly risk meetings to ensure that appropriate action has been taken to maintain safety.

The guideline for the Management of the Management of Multiple pregnancy and birth will be audited in line with the annual audit programme, as agreed by the CBU. The audit action plan will be reviewed at the monthly risk management meetings on a quarterly basis and monitored by the risk midwife to ensure that improvements in care are made.

9.0 Equality and Diversity

The Trust is committed to an environment that promotes equality and embraces diversity in its performance as an employer and service provider. It will adhere to legal and performance requirements and will mainstream equality, diversity and inclusion principles through its policies, procedures and processes. This guideline should be implemented with due regard to this commitment.

To ensure that the implementation of this guideline does not have an adverse impact in response to the requirements of the Equality Act 2010 this policy has been screened for relevance during the policy development process and a full equality impact assessment is conducted where necessary prior to consultation. The Trust will take remedial action when necessary to address any unexpected or unwarranted disparities and monitor practice to ensure that this policy is fairly implemented.

This guideline can be made available in alternative formats on request including large print, Braille, moon, audio, and different languages. To arrange this please refer to the Trust translation and interpretation policy in the first instance.

The Trust will endeavour to make reasonable adjustments to accommodate any employee/patient with particular equality, diversity and inclusion requirements in implementing this guideline. This may include accessibility of meeting/appointment venues, providing translation, arranging an interpreter to attend appointments/meetings, extending policy timeframes to enable translation to be undertaken, or assistance with formulating any written statements.

9.1 Recording and Monitoring of Equality & Diversity

The Trust understands the business case for equality, diversity and inclusion and will make sure that this is translated into practice. Accordingly, all guidelines will be monitored to ensure their effectiveness.

Monitoring information will be collated, analysed and published on an annual basis as part of Equality Delivery System. The monitoring will cover the nine protected characteristics and will meet statutory employment duties under the Equality Act 2010. Where adverse impact is identified through the monitoring process the Trust will investigate and take corrective action to mitigate and prevent any negative impact.

Appendix 1 Glossary of Terms

FBC – full blood count
FGR – Fetal growth restriction
IV – intravenous
MVP – maximum vertical pocket
TTT – twin to twin transfusion
EFW - estimated fetal weight

Appendix 2 (must always be the last appendix)
Maintain a record of the document history, reviews and key changes made (including versions and dates)

Version	Date	Comments	Author

Review Process Prior to Ratification:

Name of Group/Department/Committee	Date
Reviewed by Maternity Guideline Group	N/A
Reviewed at Women's Business and Governance meeting	17/03/2023
Approved by CBU 3 Overarching Governance Meeting	22/03/2023
Approved at Trust Clinical Guidelines Group	N/A
Approved at Medicines Management Committee (if document relates to medicines)	N/A

Trust Approved Documents (policies, clinical guidelines and procedures)

Approval Form

Please complete the following information and attach to your document when submitting a policy, clinical guideline or procedure for approval.

Document type (policy, clinical guideline or procedure)	Guideline
Document title	Management of Multiple Pregnancy and Birth
Document author (Job title and team)	Obstetric Consultant, Midwives
New or reviewed document	Reviewed
List staff groups/departments consulted with during document development	Obstetricians, Midwives
Approval recommended by (meeting and dates):	WB&G 17/03/2023 CBU3 Governance 22/03/2023
Date of next review (maximum 3 years)	23/03/2026
Key words for search criteria on intranet (max 10 words)	Twins, Triplets
Key messages for staff (consider changes from previous versions and any impact on patient safety)	
I confirm that this is the FINAL version of this document	Name: Jade Carritt Designation: Governance Midwife

FOR COMPLETION BY THE CLINICAL GOVERNANCE TEAM

Approved by (group/committee): CBU3 Governance **Date approved: 22/03/2023** **Date Clinical Governance Administrator informed of approval: 23/03/2023** **Date uploaded to Trust Approved Documents page: 28/03/2023**