Standard Operational Procedure for the Management of Multiple Pregnancies

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Table A
ANTENATAL CARE PLAN FOR WOMEN WITH A MULTIPLE PREGNANCY

GESTATION	DICHORIONIC TWINS PLAN OF CARE
11-13+6 wks.	• Arrange Dating scan, confirm Chorionicity, • Offer First Trimester screening- or Second Trimester screening if they are a late booker or NT is unavailable- see guidance Appendix 1 • Arrange anomaly scan • Arrange Consultant led antenatal appointment
11-14 wks.	• Consultant clinic appointment • Complete and follow twin proforma (Table B) ,discuss individualised management plan • Routine antenatal check
18-20+6	• Anomaly ultrasound scan • Arrange follow up scans and antenatal consultant led appointments on a 4 weekly basis starting from 28weeks
28-37 weeks	• Consultant led antenatal clinic appointments 4 weekly • Aim for delivery at 37/40 • Ensure proforma for management of multiple pregnancy is followed and complete
	MONOCHORIONIC TWINS PLAN OF CARE
11-13+6 wks.	• Dating scan to confirm Chorionicity, complete USG documentation sheet (Table C) • Arrange Consultant led antenatal appointment • Offer First Trimester screening- or Second Trimester screening if they are a late booker or NT is unavailable- see guidance Appendix 1 • Arrange anomaly scan
11-14 wks.	• Consultant clinic appointment • Complete and follow twin proforma (Table B) ,discuss individualised management plan • Routine antenatal check
14-36 wks.	• Organise 2 weekly consultant led antenatal clinic and ultrasound appointments • Complete and follow the twin Performa (Table B)-Discuss individualised management plan. Routine antenatal check.
18-20+6 wks.	• Anomaly ultrasound scan
32 wks.	• Plan for delivery at 36 weeks. Ensure the Plans for birth are clearly documented in the mothers notes • Ensure proforma for management of multiple pregnancy is followed and complete

Table B

Patient details

Multiple Pregnancy Proforma-page 1

DCDA MCDA MCMA	
Multiple pregnancy patient information leaflet given	
Discussion of risks: Premature labour Hypertension / PET/PIH Growth restriction	
Inform Monochorionic – symptoms TTTS- especially about reporting abdominal pain **Ferrous sulphate 200mg tds and folic acids 400ug daily** **MCMA twins** **TTTS** **Triplet pregnancy refer to Southampton FMU** **Anaesthetic appt to be organised**	
Antenatal discussion of benefits and risks of different modes of delivery	
Appropriate place of birth discussed	
Timing of delivery discussed	
Agreed mode and timing of delivery Signed: Name: Date:	
Management plan for second stage of labour To follow departmental guidelines Y/N Additional information Signed: Name: Date:	

Multiple Pregnancy Proforma cont

Management checklist for first stage of labour		
Action:	**tick**	**signed**
Inform obstetric registrar		
Inform duty anaesthetist		
Inform SCBU		
Inform Consultant obstetrician		
IV access		
FBC / G+S		
Continuous CTG monitoring		
Scan to check presentation of first twin		
Management checklist for second stage of labour		
Inform consultant obstetrician		
Transfer to theatre		
ODA asked to attend		
Paediatricians asked to attend		
Continuous CTG monitoring		
Check presentation by scan after delivery of twin 1		
Syntocinon infusion prepared		
ARM when presenting part in pelvis		
Inform consultant if twin interval > 30 minutes		
Management checklist for third stage of labour		
Syntocinon infusion initiated		
Send placenta for histology if same sex		

Table C

Ultrasound Reporting Guide (USG) for Monochorionic Twins ONLY

Monochorionic Twin Proforma - aide memoire – place in Hand Held Notes and complete at every scan (NICE 2016)

Patient Name + IW No.	1st Scan – required information – light grey		Subsequent scan information required - white Not required – dark grey		Gestation																	
					14/15	16/17	18/19	20/21	22/23	24/25	26/27	28/29	30/31	32/33	34/35	36						
Date			Year																			
EDD with largest twin	CRL 11+2 to 14+0		HC Over 14+0																			
Confirm membrane attachment +/- Membranes thickness <1.8 and attach image.	Image attached to Scan report in HH notes + hard copy Second opinion ASAP	Y N	Electronic copy	Y N																		
Nomenclature	Left/right - 1st on the report is A on Voluson, but not reported		Right/Left Upper/Lower		L R	L R	L R	L R	L R	L R	L R	L R	L R	L R	L R	L R	U L	U L	U L	U L	1st	1st
Placental site	Documented	Y N			Y N	Y N	Y N	Y	Y	Y	Y	Y	Y	Y	Y	Y						
Equal bladder size	Documented	Y N			Y N	Y N	Y N	Y	Y	Y	Y	Y	Y	Y	Y	Y						
Free Floating membrane present –	Documented	Y N			Y N	Y N	Y N	Y	Y	Y	Y	Y	Y	Y	Y	Y						
Suspected weight discordance of above 20%	Larger twin EFW – smaller twin ÷ larger twin x 100 = %							Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N						
Liquor	Oligohydramnios (< 2cm) Polyhydramnios (> 8cm under 20 wks/ >10cm over 20wks)	Y N			Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N						
	Discordance of deepest pool of 3.1cm or more >20 weeks							Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N						

1. Purpose/Background:

Multiple pregnancies are associated with an increased risk of obstetric complications

Monochorionic twins carry the highest risk of all multiple pregnancies

2. Scope:

This document aims to provide guidance on the management of multiple pregnancies

This document is for use by all obstetricians and midwives and it applies to all women cared for by the St Mary's Hospital Maternity Services.

3. Responsibilities

It is the responsibility of all Midwifery Nursing and medical staff to:

- Access read understand and apply this guidance
- Attend any mandatory training pertaining to the guidance

It is the responsibility of the department to:

- Ensure the guideline is reviewed as required in line with trust and national recommendations

Ensure the guideline is accessible to all relevant staff

4. Procedure:

4.1 Booking

- Women identified with a multiple pregnancy should be referred to a Consultant as early as possible.
- Women should be given the multiple pregnancy patient information leaflets.

4.2.1 Screening

- Viability, chorionicity and major congenital malformations should be identified / excluded and documented. If there is uncertainty about the diagnosis of chorionicity a second opinion should be sought from Southampton fetal medicine unit
- Combined screening for Down's syndrome using Nuchal translucency will be offered to all women. Quad Testing -See Appendix 1

- Ultrasound scans should be arranged using a double slot. Complete scan documentation sheet for Monochorionic (MC) twins at each ultrasound scan (Table C)

4.3 Antenatal care

- See Table A for the schedule of antenatal care
- .All women should be offered an appointment at the obstetric anaesthetic clinic.
- Any case of TTTS, Monochorionic Monoamnionic (MCMA) twins and Triplets need early liaison with FMU Southampton for their antenatal care.
- All women with Monochorionic (MC) twins who contact the dept. for abdominal pain at any stage of pregnancy should be admitted and assessed and have an ultrasound scan to rule out TTTS.

4.4 Supporting women when planning for birth

- Mode and timing of delivery must be documented in the twin proforma (Table B)

4.5 Modes of delivery

- **First twin vertex**
  Aim for Vaginal delivery
- **First twin non vertex**
  Delivery by caesarean section is advised.

4.6 Location and timing of birth

- Home birth for multiple pregnancies is not advised. The timing of birth will be dependent upon the type of multiple pregnancy and any other complications that occur during the antenatal period.
- Delivery should be planned at 36 weeks of gestation for monochorionic twins and between 37 weeks for dichorionic twins, unless there is an indication to deliver earlier.

- In cases of monochorionic monoamnionic twins are best delivered at 34 weeks by caesarean section and should be arranged in Southampton FMU.

4.7 Fetal demise

After the single fetal death in a twin, there is high risk to the surviving twin of death or neurological abnormality. It should be noted that the risk of this is much higher in monochorionic twins as compared to dichorionic twins. The woman should be given steroids and should be referred and assessed in a regional foetal medicine centre.

4.8 Preterm Labour

- Magnesium Sulphate for neuroprotection of the baby should be offered to women between 24+0 weeks and 30 weeks of pregnancy and considered from 30 weeks onwards, including multiple births, which are at risk of early preterm birth, except when birth is urgent (birth should not be delayed to administer MgSO4). (See SOP-Preterm Birth)
- If the woman presents with threatened preterm labour a fibronectin test can be used (Please see Guideline for the use of Fetal Fibronectin Test.)
- If the woman presents <34weeks gestation in preterm labour or if the SCBU is closed then timely transfer to the mainland should be made after discussion with the consultant on call.

4.9 Management of the first stage of labour

See Table B

- On admission the obstetric registrar, anaesthetist on call, neonatal team should be informed of the admission and if labour is confirmed, the Consultant on call should be informed of the situation.
- IV access should be established and bloods taken for full blood count and GS.
- CTG should be commenced to monitor the fetal heart rates separately and this monitoring should continue throughout labour.
    - If there is fetal heart rate abnormality in twin one, fetal blood sampling should be performed as for singletons.

- If there is fetal heart rate abnormality in twin second, suggestive of hypoxia, immediate Caesarean section should follow.

- Pain relief should be discussed with the woman. Epidural anaesthesia is advisable as there is a high likelihood of manipulation being required for the second twin.

4.10 Management of the second stage of labour

- Following the diagnosis of full dilatation, women should be transferred to the obstetric theatre for management of the second stage. The following personnel should be available on the labour
  - obstetric registrar,
  - anaesthetist,
  - Operating department practioner (ODP)
  - The neonatal team
- Continuous CTG monitoring should be continued throughout the second stage of labour

4.11 Following the birth of twin 1

- The second twin must be palpated to define presentation.
- A syntocinon infusion (10 iu Syntocinon in 500ml Normal Saline- as per protocol) should be commenced after the delivery of the first twin.
- An artificial rupture of membranes can be performed once the presenting part is in the pelvis.
- Delivery of the second twin should be expedited when the time interval between the two twins exceeds 30 minutes. The risk of acidosis in the second twin increases with increasing birth interval
- Internal podalic version and breech extraction should only be performed by an experienced obstetrician.

4.12 Identification of birth order

Midwife to ensure adequate number of umbilical cord clamps to enable identification of babies at delivery:

One cord clamp for twin 1

Two cord clamps for twin 2

4.13 Third stage

These women are at significant risk of post-partum haemorrhage. Syntometrine should be given at delivery of the second twin and a Syntocinon infusion (40 units in 500ml Hartmann's) should be commenced at 125 mls hour via an infusion pump.

The placenta should be sent for histology to confirm Chorionicity if the twins are the same sex.

4.14 Twin to twin transfusion (TTTS)

If following an ultrasound scan, TTTS is suspected, the consultant obstetrician should be informed immediately. Further management should be decided following discussion with the regional fetal medicine unit in Southampton.

5 Implementation/training/awareness

- This is a review of a current document and it formalises current practice.
- Once ratified it will be available in all clinical areas within the Maternity Unit and on the intranet.
- All new, reviewed and ratified documents are notified to staff via the monthly maternity newsletter

6. Auditable Standards

What aspects of compliance with the document will be monitored	What will be reviewed to evidence this	How and how often will this be done	Detail sample size (if applicable)	Who will coordinate findings	Which group or report will receive findings
Complete the twin proforma	Maternal Notes	Not less than every 2 years	All twin Births/no more than 25 sets of notes	Audit Lead	Audit Group/MCSG
Complete the USG documentation sheet	Maternal Notes	Not less than every 2 years	All twin Births/no more than 25 sets of notes	Audit Lead	Audit Group/MCSG

7. Related Documents:

- SOP-Provision of antenatal care
- SOP- Referral to the fetal medicine unit (FMU)
- SOP- Fetal Fibronectin Test

- SOP-Preterm Labour

8.References:

- RCOG guidelines Monochroionic twins' guideline no.51 December 2008

9 DISCLAIMER

It is the responsibility of staff to check the Trust intranet to ensure that the most recent version/issue of this document is being referenced.

Version Control History:

DOCUMENT HISTORY					
Date of Issue	**Version No.**	**Next Review Date**	**Date Approved**	**Director Responsible for Change**	**Nature of Change**
April 2006	1.1		April 2006	A Pearson	Draft
January 2007	2.0	January 2009	January 2007	A Pearson	CSG
April 2010	2.1		April 2010	Miss Sabeena Allahdin	Draft for comment
October 2010	3.0	October 2012	October 2010	Miss Sabeena Allahdin	Maternity CSG
20th Dec 2011	4.0	20th Dec 2014	20th Dec 2011	Miss Sabeena Allahdin	Maternity CSG
10th Jan 2012	4.0	20th Dec 2014	10th Jan 2012	Miss Sabeena Allahdin	Slight amendments for CNST
23rd April 2012	5.0	23rd April 2015	23rd April 2012	Miss Sabeena Allahdin	Amendments made to monitoring box to reflect CNST recommendations. Approved at Maternity CSG
11th Dec 2012	6.0	11th Dec 2015	11th Dec 2012	A Pearson	Proforma updated Approved at Maternity CSG
5th July 2015	7.0	5th July 2019	5th July 2015	Miss Sabeena Allahdin	Updated as per regional guidance
Nov 2016		Dec 2019	Nov 2016	Amanda Pearson	Ratified at Maternity CSG
Oct 2019	SOP v1,	Oct 2022	Oct 2019	S Allahdin	Reviewed, Converted to SOP. Ratified by MCSG
Sept 2020	V2	Sept 2023	24th Sept 2020	S Allahdin/MCSG	Minor changes made. Quad Screening guidance added

Appendix 1:-Quad Screening and Guidance for Multiple pregnancies

NHS
Screening Programmes
Fetal Anomaly

Twin pregnancies: second trimester screening for Down's syndrome (T21)

Information for health professionals

The test of choice for both singleton and twin pregnancies is first trimester combined screening and every opportunity must be made to maximise this offer.

Women who have a twin pregnancy and miss first trimester screening should be offered a second trimester quadruple test. It is the woman's choice whether to have screening or not.

For women with a twin pregnancy who choose to have a quadruple screening test, FASP recommends the discussion take place with a health professional with a specialist interest in multiple pregnancies. This is due to the complexities and limitations of the quadruple test in this scenario. There might also be other factors to consider when offering screening or making decisions about further diagnostic testing and management of the pregnancy eg fetal sex (where chorionicity is unknown) and other ultrasound findings.

This information sheet includes the minimum information to include in the discussion with the woman.

Prevalence

There are likely to be between 500 and 1,600 women with twin pregnancies in the eligible population each year who fall outside of the combined screening programme who may be offered second trimester quadruple testing.

Among these, fewer than four pregnancies affected with Down's syndrome would be expected.

When is the quadruple screening test offered?

There is the choice of quadruple screening in twin pregnancies for:

- women who present for the first time in the second trimester
- where the nuchal translucency (NT) could not be measured in the first trimester

Quadruple screening can be offered between 14 weeks and 2 days, and 20 weeks and 0 days. The ideal time to screen is around 16 weeks of pregnancy.

Monochorionic twins – the risk of a T21 birth from a monochorionic pregnancy is lower than that from a singleton pregnancy due to a higher fetal loss rate among affected pregnancies.

Dichorionic twins – the risk of a T21 birth of at least one baby from a dichorionic twin pregnancy is higher than that from a singleton pregnancy.

Key issues:

- pregnancies in this group are more likely to be of uncertain chorionicity
- the decision making process is more difficult at the second trimester stage
- the second trimester quadruple test is less sensitive than first trimester combined screening
- any subsequent decisions about invasive diagnostic testing and selective reduction will have to be made later in the pregnancy

Performance using a 1 in 150 cut-off at term

The performance of screening in monochorionic twins is comparable to that of singletons.

In dichorionic twins where one baby is affected and the other unaffected, the performance is poorer due to the markers being less discriminatory.

However, it is better than using maternal age only where the detection rate is only 30% for a 5% screen positive rate.

The approach used in calculating quadruple twin pregnancy risk is referred to as 'pseudo risk' in the literature.

This is the established methodology currently available and simply means that the risk would be accurate in predicting a false-positive rate (which relates only to the marker distributions in unaffected twin pregnancies).

As the calculation of risks in twin pregnancies relies on limited evidence and assumptions, the risk estimate should be interpreted as a guide only.

Monochorionic twins: detection rate is 80% for a screen positive rate of 3%.

Dichorionic twins: detection rate of 40-50% for a screen positive rate of 3%.

Diagnostic test

The risks of miscarriage and other procedure related complications are higher, around 1 in 50, in twin pregnancies.

If one fetus is affected, selective reduction may be an option.

The method of diagnostic testing depends on the clinician performing the procedure.

Although both chorionic villus sampling (CVS) and amniocentesis can be performed in a twin pregnancy, there is evidence that a double amniocentesis has a lower risk of sampling the same fetus twice (known as contamination) compared to double CVS. It is essential that any invasive diagnostic test is performed in a unit with experience in invasive procedures in multiple pregnancies and preferably by the same person who will be responsible for a selective feticide if required.

The pregnancy should be clearly mapped using ultrasound scan prior to the procedure, using features such as placental localisation, fetal sex, fetal biometry and any structural features, such that each fetus can be specifically identified at a later stage if selective feticide is required.

Clinician notes

(can be inserted into woman's hand-held maternity notes if required)

Public Health England is responsible for the NHS Screening Programmes
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