Multiple pregnancy: the management of twin and triplet pregnancies in the antenatal period

Implementation advice

For those responsible for the planning and development of maternity services and multidisciplinary teams or networks

2011

NICE clinical guideline 129
This implementation advice accompanies the clinical guideline 'Multiple pregnancy: the management of twin and triplet pregnancies in the antenatal period' (available online at: http://www.nice.org.uk/CG129).

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This implementation advice is aimed at those responsible for the planning and development of maternity services and multidisciplinary teams or networks involved in the care of women with a multiple pregnancy.

This is a support tool containing suggested steps towards implementing our guidance informed by your local baseline assessment. It is not NICE guidance.

Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this guidance should be interpreted in a way which would be inconsistent with compliance with those duties.

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Steps to implementing NICE clinical guidelines

The algorithm below outlines the process for implementing NICE clinical guidelines. When using this advice online, hold down the ‘Ctrl’ button and click on the hyperlinks in the boxes to go directly to the advice you need. The advice has been developed in consultation with a range of experts from patient and professional groups. A list of these contributors is available here.
Why implement this guideline?

In 2009 16 women per 1000 giving birth in England and Wales had multiple births compared with 10 per 1000 in 1980. The incidence of triplet pregnancies is rare, with less than 200 women giving birth to triplets in England and Wales each year.

The rising multiple birth rate is due mainly to increasing use of assisted reproduction techniques, including in vitro fertilisation (IVF). Up to 24% of successful IVF procedures result in multiple pregnancies.

Multiple pregnancy is associated with higher risks for the mother and babies than singleton pregnancies. Risks to the babies depend partly on the chorionicity and amnionicity of the pregnancy. Early diagnosis of multiple pregnancy and appropriate support and referral are necessary to provide optimum care. Because of the increased risk of complications, women with multiple pregnancies need more monitoring and increased contact with healthcare professionals during their pregnancy than women with singleton pregnancies.

NICE recommends that networks agree care pathways for the management of twin and triplet pregnancies, to provide women with care and support that is appropriate for the chorionicity of their pregnancy. Care for women with twin and triplet pregnancies should be provided by a multidisciplinary team of specialists who are responsible for core pregnancy care, and an enhanced team for referrals. Members of the core and enhanced teams should have experience and knowledge relevant to twin and triplet pregnancies.

The relevant recommendations and associated definitions are shown on the next page.
Relevant recommendations

Chorionicity

1.1.2.11 Networks should agree care pathways for managing all twin and triplet pregnancies to ensure that each woman has a care plan in place that is appropriate for the chorionicity of her pregnancy.

Specialist care

1.2.3.1 Clinical care for women with twin and triplet pregnancies should be provided by a nominated multidisciplinary team consisting of:

- a core team of named specialist obstetricians, specialist midwives and ultrasonographers, all of whom have experience and knowledge of managing twin and triplet pregnancies
- an enhanced team for referrals, which should include:
  - a perinatal mental health professional
  - a women’s health physiotherapist
  - an infant feeding specialist
  - a dietitian.

Members of the enhanced team should have experience and knowledge relevant to twin and triplet pregnancies.

1.2.3.2 Referrals to the enhanced team should not be made routinely for women with twin and triplet pregnancies but should be based on each woman’s needs.

1.2.3.3 Coordinate clinical care for women with twin and triplet pregnancies to:

- minimise the number of hospital visits
- provide care as close to the woman’s home as possible
- provide continuity of care within and between hospitals and the community.
1.2.4.4 The core team should offer information and emotional support specific to twin and triplet pregnancies at their first contact with the woman and provide ongoing opportunities for further discussion and advice including:

- antenatal and postnatal mental health and wellbeing
- antenatal nutrition (see 1.2.2.1)
- the risks, symptoms and signs of preterm labour and the potential need for corticosteroids for fetal lung maturation
- likely timing and possible modes of delivery
- breastfeeding
- parenting.
Who should be involved?

The guideline refers to three organisational ‘units’:

- the core team, which should consist of specialist obstetricians, midwives and ultrasonographers with knowledge and experience of multiple pregnancy
- the enhanced team for referrals, which should include a perinatal mental health professional, a women’s health physiotherapist, an infant feeding specialist and a dietitian
- a network which should agree care pathways.

Practitioners with experience and enthusiasm for these areas, who will champion the guideline and inspire others to implement the recommendations, should be involved in putting the guideline into practice, along with service users. If a local maternity service liaison committee is in place, this could be used for this purpose. The service users involved should have knowledge and experience of multiple pregnancy.

Where a core team exists, its members may wish to lead the action planning to put the guideline into practice.

Where a core team does not already exist, identifying one individual lead may be the starting point for its development.

The guideline recognises the importance of maternity networks, as proposed in the NHS White Paper ‘Equity and excellence: liberating the NHS’. However, networks are not uniformly in place across England and Wales. The term ‘network’ is used in the context of Department of Health guidance, and it may be beneficial to consider this when identifying or developing a network.

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Promote the guideline

It is important that the guideline is disseminated to other practitioners involved in the care of women with a multiple pregnancy, or who may encounter women with a multiple pregnancy during the antenatal period. While the core and enhanced teams will be responsible for the majority of antenatal care, making other practitioners aware of the guideline will ensure that women are referred appropriately to the core team for their care.

Dissemination of the NICE guideline might involve making presentations or running workshops. The slide set provided by NICE should help you raise awareness.

The recommendations from this guideline have been developed into a NICE pathway. NICE pathways are an online tool which provides quick and easy access, topic by topic, to the range of guidance from NICE, including quality standards, technology appraisals, clinical and public health guidance and NICE implementation tools. The NICE pathway may also be useful in promoting the use of the guideline in practice.

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Carry out a baseline assessment

Using the published guideline, compare current practice with the recommendations. This may involve assessing:

- the multiple pregnancy rate within the local unit
- maternal and fetal outcomes for multiple pregnancies within the unit
- referrals made to tertiary units (particularly those which may be unnecessary if the guideline is implemented, in terms of local units being able to provide the full range of antenatal care)
- associated clinical complications in pregnancy and childbirth that may influence the care that is needed
- which professional groups need to be involved in implementation.

As the network or core team will be responsible for providing care and information for women with a multiple pregnancy in line with the recommendations, they should consider the impact on:

- patients
- staffing
- equipment and training
- configuration of services.

The NICE audit criteria may help you with this process. Alternatively, there may already be data collection processes in place in your hospital or region that you can use to undertake a baseline assessment.

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Assess cost

The costing report and template consider all the recommendations that have cost or savings implications, and it may be useful to be aware of these when planning implementation of care pathways, and sharing information with midwifery and obstetric staff.

It might be possible to make some of the required changes using existing resources, and there may be potential for savings to be achieved, or capacity freed up to be used for other aspects of care.

If the core team can be established using current resources then it is unlikely that there will be significant cost implications. Because there are relatively few multiple pregnancies each year, staff at some hospitals may have little experience of multiple pregnancies. Therefore training may be required, which could have some resource implications.

An increase in the number of women receiving specialist care for multiple pregnancy may reduce preterm births and neonatal complications, resulting in savings. The amount saved will need to be assessed at a local level.

Click here to view NICE’s costing report.

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Build an action plan

The details of your action plan will depend on the results of your baseline assessment and your local circumstances.

The suggested actions below do not constitute NICE guidance. They are based on the learning of a range of experts who have experience of implementing networks and establishing core multidisciplinary teams. In consultation with them we identified four key areas to address:

- Build a robust system for data collection and benchmarking.
- Establish appropriate local service organisation and provision.
- Develop the knowledge, skills and experience of the multidisciplinary team.
- Develop local pathways.

*Suggested actions for implementation*

**Build a robust system for data collection and benchmarking**

Collecting data on existing cases and outcomes will help organisations to identify where changes may be needed in service planning and provision.

Where networks are established, benchmarking may help to improve services and care provision, and set standards across the network.

- Identify one or more people responsible for data collection and collation.
- Identify data already collected that could be used to monitor outcomes and trends.
- Use the audit tools developed by NICE to identify how local practice compares with the recommendations.
- Develop a system for feedback of data within the organisation, and within the wider network where this is established.
- Develop a system for benchmarking and setting standards across the network, where available.
Service organisation and provision

Rates of multiple pregnancy will vary nationally and some units, particularly tertiary units and those providing IVF treatment, will be more likely to have higher rates of multiple pregnancy. Service design and provision should be tailored to the local needs of the population. The service planning process should take into account the findings of local data collection and needs assessment.

For example, in a small obstetric unit, where the incidence of multiple pregnancy is low, creating full time specialist roles in multiple pregnancy for the core team would not be a beneficial use of resources. However, it is important to develop services that utilise existing resources while still maintaining a high standard of specialist care. Identifying leads, even within a smaller maternity unit, may lead to improved care, as women will have a named point of contact who will give continuity of care and consistent evidence-based advice and support. In a larger unit, with a higher rate of multiple pregnancies, a weekly multiples clinic staffed by a core team of specialists may be a practical option.

Having lead practitioners with enthusiasm and a particular interest in multiple pregnancy may be beneficial in ensuring successful implementation.

In some areas there may be limitations on the service that can be provided by the enhanced team for referrals, due to shortages of resources or staffing levels. There may be external resources and services available to which women can be referred or signposted to receive the full range of care recommended. For example, the Twins and Multiple Birth Association (TAMBA) provide a network of parenting sessions for parents who have had a multiple birth (see table).

- Use local birth rate and needs assessment to determine appropriate use of resources and level of service needed.
- Identify practitioners with knowledge, skills and experience of caring for women with multiple pregnancy.
or

- identify practitioners with enthusiasm for, and an interest in, caring for women with multiple pregnancy.

- Assess training needs of staff and how these can be met (see related action point below).
- Disseminate information about the core team to other practitioners who may be involved in the care of women with a multiple pregnancy.
- Identify external resources for signposting and referral where necessary.

**Develop the skills of the multidisciplinary team**

Although members of the core and enhanced team for referrals may have received some information about multiple pregnancy during their professional training, they may lack the specialised knowledge and skills to provide advice and support on all aspects of twin and triplet pregnancies.

Particularly in units where the multiple pregnancy rate is lower, practitioners may not regularly come into contact with women carrying twins or triplets, so may lack the specialised skills to support them.

Having a named obstetrician, midwife and ultrasonographer, all of whom have knowledge and skills in caring for women with a multiple pregnancy, will formalise the role, and ensure that there is at least one practitioner from each of these professions who has extended knowledge and skills in this area. Once established in this role, the practitioner will gain further experience of applying their knowledge and skills in the care of women referred to them.

Similarly, the skills of the enhanced team may be developed by accessing training where it is available, or through practical experience.

It may be possible for practitioners to 'shadow' a more experienced colleague for professional development purposes, either within the organisation or in a different hospital if such arrangements can be made.

Organisations may wish to form links to share learning and experiences.
• Carry out a training needs assessment.
• Identify training resources to improve the knowledge and skills of members of the core and enhanced teams.
• Consider liaising with other units within the network or health community to share opportunities to build practical experience.
• Consider the training needs of the wider workforce within the unit, and how the core team may be able to disseminate knowledge and skills.

**Develop local pathways**

Developing local pathways which are agreed with the network will enable practitioners to provide care in line with the NICE guideline, including determining when referrals should take place. Having a local pathway should ensure that a care plan is in place for each woman who is pregnant with twins or triplets.

• Identify one or more people responsible for developing local pathways.
• Check any existing pathways for consistency with the NICE guideline and any related guidance (see table).
• Use the NICE guideline to inform the development of up-to-date care pathways\(^1\).
• Disseminate local pathways within the organisation both within the core and enhanced team for referrals and also to other practitioners who may be involved in the care of women with a multiple pregnancy, to facilitate care planning.
• Consider developing the pathway into a resource for pregnant women, or providing them with a schedule of the relevant care pathway for the chorionicity of their pregnancy\(^1\).

\(^1\) In particular, the [web-based version](#) of the guideline and the NICE pathway for multiple pregnancy may be useful in developing local guidelines. NICE has also produced [a chart](#) showing recommended timings of specialist antenatal appointments and other elements of care which could be included into local care pathways.
### National support for local action* Back to build an action plan

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<tbody>
<tr>
<td><strong>Supporting Families in the Foundation Years</strong> Department of Education (2011)</td>
<td>● Maps the government's vision for the foundation years and sets the framework for future collaboration and co-production for practitioners working in this field.</td>
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### Sources of further information* Back to build an action plan

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<tr>
<td><strong>Parenting with multiples in mind workshop</strong> Twins and Multiple Birth Association (TAMBA)</td>
<td>● This link will direct you to further information on the range of parenting classes held by TAMBA to support parents of multiple birth children.</td>
</tr>
<tr>
<td><strong>Liverpool Women's Hospital Specialist Fetal Clinics</strong> Liverpool Women's NHS Foundation Trust</td>
<td>● This is the website of one of the services that was consulted in the development of this resource. It may be useful to give further background to the way in which services could be developed and provided.</td>
</tr>
<tr>
<td><strong>Website of the Maternity Service Liaison Committees</strong> Hosted by ChiMat</td>
<td>● Including service user input in the development of networks, as documented in the guideline and in this resource, may be facilitated by discussion with local maternity service liaison committee (MSLC). This website gives guidance and support for the development and maintenance of local MSLCs.</td>
</tr>
<tr>
<td><strong>Fetal Anomaly Screening Programme</strong></td>
<td>● This site provides information on the standards for fetal anomaly screening to ensure quality for all pregnant women, including specific recommendations for screening in multiple pregnancy.</td>
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Families in the Foundation Years

- A new web-based resource with separate entry portals for professionals and parents. Links together resources and documents from across the sector, and references the 2011 Department of Education policy document.

*Please note that NICE is not responsible for the quality or accuracy of any information or advice provided by any other organisation.

### Related NICE guidance [Back to build an action plan](#)

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<tr>
<td>‘Caesarean section (update)’ NICE clinical guideline CG132</td>
<td>● This guideline contains recommendations about mode of delivery for multiple pregnancy</td>
</tr>
<tr>
<td>‘Pregnancy with complex social factors’ NICE clinical guideline 110 (2010)</td>
<td>● This guideline refers to additional input that women with complex social needs may require, over and above the routine antenatal care specified in CG62. Women who have a multiple pregnancy may require specialist input to address social needs that are not related to the multiple pregnancy. Women should receive care appropriate to their pregnancy, but other issues should not be overlooked (for example domestic abuse or substance misuse)</td>
</tr>
<tr>
<td>‘Antenatal care’ NICE clinical guideline 62 (2008)</td>
<td>● This guideline presents the routine antenatal care that women should expect to receive. The multiple pregnancy guideline is presented as additional or different care that women with multiple pregnancy should expect.</td>
</tr>
<tr>
<td>‘Antenatal and postnatal mental health’ NICE clinical guideline 45 (2007)</td>
<td>● This guideline contains recommendations about the care and treatment of women with mental health problems during pregnancy and in the postnatal period. It contains recommendations on recognising mental health problems, which should be incorporated into antenatal care pathways for all women, including those with a multiple pregnancy.</td>
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Disseminate and implement plan

To implement the recommendations covered in this document, it is important to ensure sign-up from the obstetric and midwifery teams, along with the ultrasonographers involved in the care of women with a multiple pregnancy. It is also important to have support and commitment from professionals from the enhanced team for referrals, and from other members of staff who will come into contact with, and may provide care for, this group of women. This may include community midwives and delivery suite and other hospital-based midwifery and obstetric specialists. As stated, disseminating the action plan, along with any care pathways, local policies and guidelines, may be a useful step in sharing information and engaging other staff members.

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Review and monitor

Implementation of the guideline should be reviewed and monitored. Regular meetings of the network or the local core and enhanced teams should be scheduled to give an opportunity for feedback on progress or barriers to implementation.

It may be possible to use network meetings to benchmark care among different organisations involved, and to use audit data to discuss how standards and care could be improved.

Within an organisation, regular team meetings could be used to share learning gained through practice, discussing cases, and whether care has been provided in line with the NICE guideline and local care pathways.

One way to monitor implementation of the guideline is to audit current practice against the NICE guideline. The guideline is accompanied by audit criteria to help you with this.

Implementation and uptake of NICE guidance

The ERNIE (Evaluation and review of NICE implementation evidence) database is a source of information on the implementation and uptake of NICE guidance.

ERNIE will provide:

- a bank of guidance-specific NICE implementation uptake reports
- references to external literature
- a simple classification system summarising the uptake of NICE guidance.

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Share learning

To inform the development of this resource, NICE liaised with two key organisations which are implementing specialist services for women with a multiple pregnancy. This implementation advice resource is based on the experiences of these two examples, but we would welcome any other examples from practice through submission to NICE’s ‘shared learning’ database.

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**Northern Survey of Twins and Multiple Pregnancy (NorSTAMP)**

NorSTAMP is a regional network based in the North East and North Cumbria region. Clinicians from the region began their collaboration 3 years ago, by collecting data and auditing outcomes with a multiple pregnancy register. NorSTAMP was supported in its work by the regional maternity service office. This network enabled clinicians to work together to compare outcomes across the region and formulate guidelines to promote best practice and improve standards of care for women with a multiple pregnancy.

The collaboration includes consultant obstetricians and midwives from the 11 maternity units in the region, along with some representation from ultrasonography colleagues. Network meetings take place regularly, with past key speakers including the Multiple Birth Foundation.

NorSTAMP has created an information package for women with a multiple pregnancy that details the care that they can expect to receive, along with additional information and support.
**Liverpool Women's NHS Foundation Trust Multiple Pregnancy Clinic**

The multiple pregnancy clinic at Liverpool Women's Hospital was set up in 1998, and has since grown from being staffed by one obstetrician and one midwife to its present format of a team of specialists working together to provide a year-round service.

As a hospital with its own fertility unit as well as a tertiary centre receiving referrals from across the North West and Wales, the number of multiple pregnancies seen in the unit is higher than the average multiple birth rate.

The multiple pregnancy team consists of three specialist midwives, two specialist obstetric consultants and one specialist ultrasonographer, who are supported by a wider team to provide care and support for women with a multiple pregnancy. The team provides parent education targeted at parents expecting twins or triplets, and encourages mothers who have experience of multiple birth to share this with expectant parents. The team also has links with the Twins and Multiple Births Association (TAMBA), and recommends its parenting classes, information resources and specialist support to parents-to-be, as part of an information pack specially designed by the Liverpool team.

The obstetric and midwifery care pathway followed by the unit was developed jointly by the team, led by the specialist obstetrician, with specific pathways documented for women with different types of multiple pregnancy. These pathways are not only shared with the other staff within the hospital, but a copy of the relevant pathway is provided to each woman that attends the clinic, to ensure that she is aware of the care and support that she can expect to receive at each stage of pregnancy.
Acknowledgements

NICE would like to thank everyone who has contributed to the development of this implementation advice:

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- Angela Hancock, Children, Young People and Families Network, Manchester (seconded from Mid Cheshire Hospitals NHS Foundation Trust)
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