

## Multiple pregnancy overview

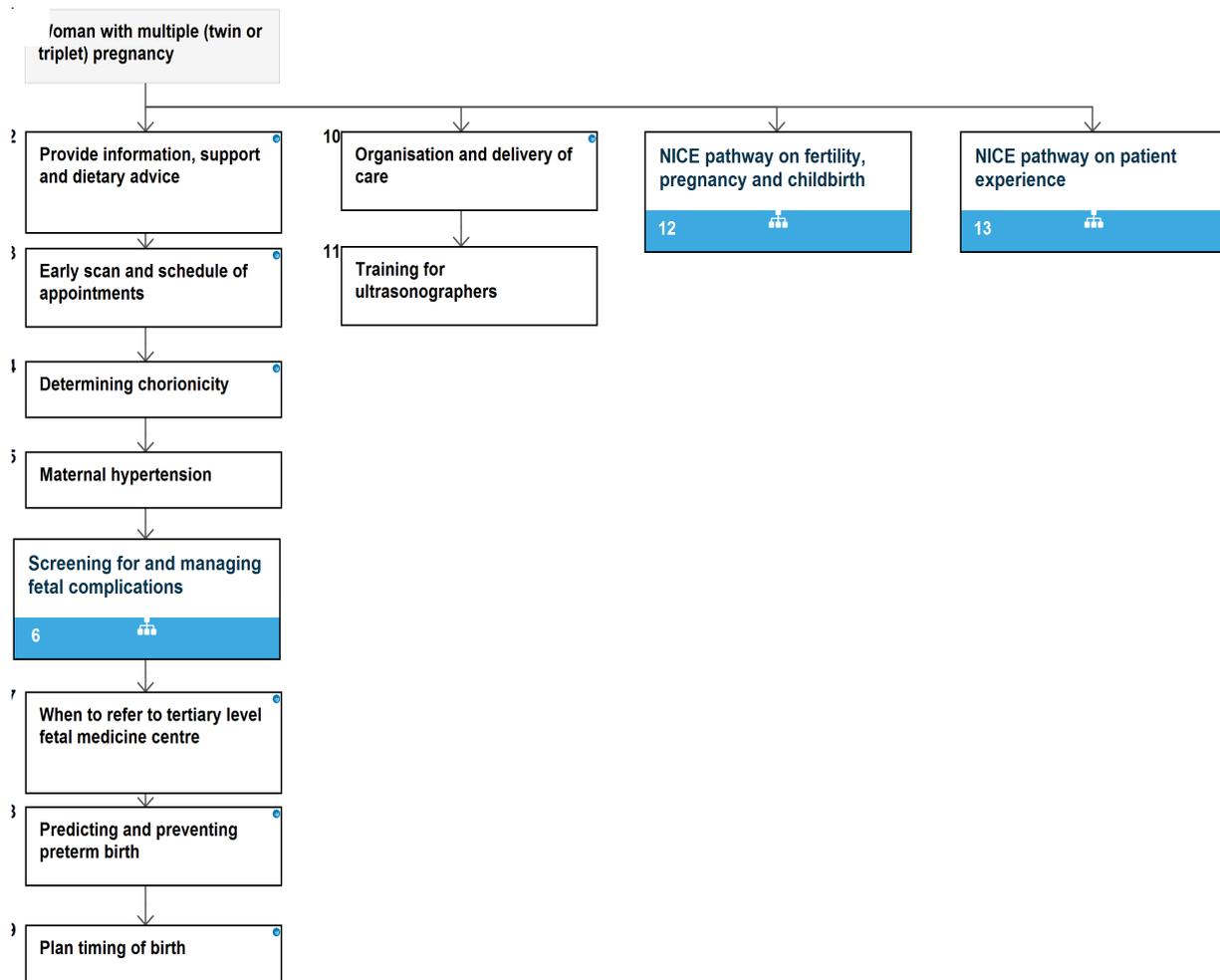
NICE Pathways bring together everything NICE says on a topic in an interactive flowchart. NICE Pathways are interactive and designed to be used online.

They are updated regularly as new NICE guidance is published. To view the latest version of this NICE Pathway see:

<http://pathways.nice.org.uk/pathways/multiple-pregnancy>

NICE Pathway last updated: 25 November 2016

This document contains a single flowchart and uses numbering to link the boxes to the associated recommendations.



## 1 Woman with multiple (twin or triplet) pregnancy

No additional information

## 2 Provide information, support and dietary advice

Explain sensitively the aims and possible outcomes of all screening and diagnostic tests to women with twin and triplet pregnancies to minimise their anxiety.

The core team should offer information and emotional support (see [organisation and delivery of care](#) [See page 11] in this pathway) 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 below)
- 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 (specific recommendations about mode of delivery are outside the scope of this pathway)
- breastfeeding
- parenting.

NICE has written information for the public explaining the guidance on [multiple pregnancy](#).

See also the NICE pathways on [antenatal and postnatal mental health](#) and [preterm labour and birth](#).

### Nutritional supplement, diet and lifestyle advice

Give women with twin and triplet pregnancies the same advice about diet, lifestyle and nutritional supplements as in routine antenatal care (see [lifestyle considerations](#) in the NICE pathway on antenatal care for uncomplicated pregnancies).

Be aware of the higher incidence of anaemia in women with twin and triplet pregnancies compared with women with singleton pregnancies.

Perform a full blood count at 20–24 weeks to identify women with twin and triplet pregnancies who need early supplementation with iron or folic acid, and repeat at 28 weeks as in routine

antenatal care. This is in addition to the test for anaemia at the routine booking appointment; see [appointments and records](#) in the NICE pathway on antenatal care for uncomplicated pregnancies.

See also the NICE pathways on [maternal and child nutrition](#) and [diabetes in pregnancy](#).

## Quality standards

The following quality statements are relevant to this part of the interactive flowchart.

3. Composition of the multidisciplinary core team
7. Advice and preparation for preterm birth

### 3 Early scan and schedule of appointments

#### Early scan

Offer women with twin and triplet pregnancies a first trimester ultrasound scan when crown–rump length measures from 45 mm to 84 mm (at approximately 11 weeks 0 days to 13 weeks 6 days) to estimate gestational age, [determine chorionicity](#) [See page 6] and [screen for Down's syndrome](#) (ideally, these should all be performed at the same scan).

The antenatal care guideline recommends determination of gestational age from 10 weeks 0 days. However, the aim in this recommendation is to keep to a minimum the number of scan appointments that women need to attend within a short time, especially if it is already known that a woman has a twin or triplet pregnancy. See [screening](#) in the NICE pathway on antenatal care for uncomplicated pregnancies.

Assign nomenclature to babies (for example, upper and lower, or left and right) in twin and triplet pregnancies and document this clearly in the woman's notes to ensure consistency throughout pregnancy.

Use the largest baby to estimate gestational age in twin and triplet pregnancies to avoid the risk of estimating it from a baby with early growth pathology.

#### Schedule of appointments

Offer women with uncomplicated monochorionic diamniotic twin pregnancies at least nine

antenatal appointments with a healthcare professional from the core team. At least two of these appointments should be with the specialist obstetrician.

- Combine appointments with scans when crown–rump length measures from 45 mm to 84 mm (at approximately 11 weeks 0 days to 13 weeks 6 days) and then at estimated gestations of 16, 18, 20, 22, 24, 28, 32 and 34 weeks.

Offer women with uncomplicated dichorionic twin pregnancies at least eight antenatal appointments with a healthcare professional from the core team. At least two of these appointments should be with the specialist obstetrician.

- Combine appointments with scans when crown–rump length measures from 45 mm to 84 mm (at approximately 11 weeks 0 days to 13 weeks 6 days) and then at estimated gestations of 20, 24, 28, 32 and 36 weeks.
- Offer additional appointments without scans at 16 and 34 weeks.

Offer women with uncomplicated monochorionic triamniotic and dichorionic triamniotic triplet pregnancies at least 11 antenatal appointments with a healthcare professional from the core team. At least two of these appointments should be with the specialist obstetrician.

- Combine appointments with scans when crown–rump length measures from 45 mm to 84 mm (at approximately 11 weeks 0 days to 13 weeks 6 days) and then at estimated gestations of 16, 18, 20, 22, 24, 26, 28, 30, 32 and 34 weeks.

Offer women with uncomplicated trichorionic triamniotic triplet pregnancies at least seven antenatal appointments with a healthcare professional from the core team. At least two of these appointments should be with the specialist obstetrician.

- Combine appointments with scans when crown–rump length measures from 45 mm to 84 mm (at approximately 11 weeks 0 days to 13 weeks 6 days) and then at estimated gestations of 20, 24, 28, 32 and 34 weeks.
- Offer an additional appointment without a scan at 16 weeks.

To view this information in table format see [schedule of specialist antenatal appointments](#) [See [page 14](#)]. This information is also available in an [appointments chart](#) on the NICE website.

See also [screening for and managing fetal complications](#) and [plan timing of birth](#) [See [page 10](#)] in this pathway.

## Quality standards

The following quality statements are relevant to this part of the interactive flowchart.

1. Determining chorionicity and amnionicity

2. Labelling the fetuses
4. Care planning

## 4 Determining chorionicity

Determine chorionicity at the time of detecting twin and triplet pregnancies by ultrasound using the number of placental masses, the lambda or T-sign and membrane thickness.

If a woman with a twin or triplet pregnancy presents after 14 weeks 0 days, determine chorionicity at the earliest opportunity by ultrasound using all of the following:

- the number of placental masses
- the lambda or T-sign
- membrane thickness
- discordant fetal sex.

Do not use three-dimensional ultrasound scans to determine chorionicity.

See also [training for ultrasonographers \[See page 12\]](#) in this pathway.

### Problems determining chorionicity

If transabdominal ultrasound scan views are poor because of a retroverted uterus or a high BMI, use a transvaginal ultrasound scan to determine chorionicity.

If it is not possible to determine chorionicity by ultrasound at the time of detecting the twin or triplet pregnancy, seek a second opinion from a senior ultrasonographer or offer the woman referral to a healthcare professional who is competent in determining chorionicity by ultrasound scan as soon as possible.

If it is difficult to determine chorionicity, even after referral (for example, because the woman has booked late in pregnancy), manage the pregnancy as monochorionic until proved otherwise.

### Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

1. Determining chorionicity and amnionicity

## 5 Maternal hypertension

Measure blood pressure and test urine for proteinuria to screen for hypertensive disorders at each antenatal appointment in twin and triplet pregnancies as in routine antenatal care (see [pre-eclampsia](#) in the NICE pathway on antenatal care for uncomplicated pregnancies).

Advise women with twin and triplet pregnancies that they should take 75 mg of aspirin<sup>1</sup> 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<sup>2</sup> or more at first visit
- family history of pre-eclampsia.

See the NICE pathway on [hypertension in pregnancy](#) for more information.

## 6 Screening for and managing fetal complications

See [Multiple pregnancy / Screening for and managing fetal complications in multiple pregnancy](#)

## 7 When to refer to tertiary level fetal medicine centre

Seek a consultant opinion from a tertiary level fetal medicine centre for:

- monochorionic monoamniotic twin pregnancies
- monochorionic monoamniotic triplet pregnancies
- monochorionic diamniotic triplet pregnancies
- dichorionic diamniotic triplet pregnancies
- pregnancies complicated by any of the following:
  - discordant fetal growth (see also [intrauterine growth restriction](#) in this pathway)
  - fetal anomaly
  - discordant fetal death
  - feto–fetal transfusion syndrome (also see [feto–fetal transfusion syndrome](#) in this

<sup>1</sup> At the time this pathway was created (November 2011) this drug did not have UK marketing authorisation for this indication. Informed consent should be obtained and documented.

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### Multiple pregnancy

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## Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

6. Involving a consultant from a tertiary level fetal medicine centre

## 8 Predicting and preventing preterm birth

Inform women with twin and triplet pregnancies that spontaneous preterm birth and elective preterm birth are associated with an increased risk of admission to a special care baby unit.

### Predicting the risk of preterm birth

Be aware that women with twin pregnancies have a higher risk of spontaneous preterm birth if they have had a spontaneous preterm birth in a previous singleton pregnancy.

Do not use fetal fibronectin testing alone to predict the risk of spontaneous preterm birth in twin or triplet pregnancies.

Do not use home uterine activity monitoring to predict the risk of spontaneous preterm birth in twin or triplet pregnancies.

Do not use cervical length (with or without fetal fibronectin) routinely to predict the risk of spontaneous preterm birth in twin or triplet pregnancies.

### Preventing preterm birth

Do not use the following interventions (alone or in combination) routinely to prevent spontaneous preterm birth in twin or triplet pregnancies:

- bed rest at home or in hospital
- intramuscular or vaginal progesterone
- cervical cerclage
- oral tocolytics.

### Use of corticosteroids

Inform women with twin and triplet pregnancies of their increased risk of preterm birth and about

the benefits of targeted corticosteroids.

Do not use single or multiple untargeted (routine) courses of corticosteroids in twin or triplet pregnancies. Inform women that there is no benefit in using untargeted administration of corticosteroids.

See the NICE pathway on [preterm labour and birth](#).

## Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

7. Advice and preparation for preterm birth
8. Preparation for birth

## 9 Plan timing of birth

Discuss with women with twin and triplet pregnancies the timing of birth and possible modes of delivery early in the third trimester.

For information on deciding the mode of birth, see [multiple pregnancy](#) in the NICE pathway on caesarean section.

### Uncomplicated twin pregnancies

Inform women with twin pregnancies that about 60% of twin pregnancies result in spontaneous birth before 37 weeks 0 days.

Inform women with uncomplicated monochorionic twin pregnancies that elective birth from 36 weeks 0 days does not appear to be associated with an increased risk of serious adverse outcomes, and that continuing uncomplicated twin pregnancies beyond 38 weeks 0 days increases the risk of fetal death.

Inform women with uncomplicated dichorionic twin pregnancies that elective birth from 37 weeks 0 days does not appear to be associated with an increased risk of serious adverse outcomes, and that continuing uncomplicated twin pregnancies beyond 38 weeks 0 days increases the risk of fetal death.

Offer women with uncomplicated:

- monochorionic twin pregnancies elective birth from 36 weeks 0 days, after a course of antenatal corticosteroids has been offered
- dichorionic twin pregnancies elective birth from 37 weeks 0 days

Specific recommendations about mode of delivery are outside the scope of this pathway.

### **Uncomplicated triplet pregnancies**

Inform women with triplet pregnancies that about 75% of triplet pregnancies result in spontaneous birth before 35 weeks 0 days.

Inform women with triplet pregnancies that continuing uncomplicated triplet pregnancies beyond 36 weeks 0 days increases the risk of fetal death.

Offer women with uncomplicated triplet pregnancies elective birth from 35 weeks 0 days, after a course of antenatal corticosteroids has been offered.

Specific recommendations about mode of delivery are outside the scope of this pathway.

### **If elective birth is declined**

For women who decline elective birth, offer weekly appointments with the specialist obstetrician. At each appointment offer an ultrasound scan, and perform weekly biophysical profile assessments and fortnightly fetal growth scans.

## **Quality standards**

The following quality statement is relevant to this part of the interactive flowchart.

8. Preparation for birth

## **10 Organisation and delivery of care**

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.

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.

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.

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.

Women with twin and triplet pregnancies involving a shared amnion should be offered individualised care from a consultant in a tertiary level fetal medicine centre (see when to refer to tertiary level fetal medicine centre in this pathway).

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## Quality standards

The following quality statements are relevant to this part of the interactive flowchart.

3. Composition of the multidisciplinary core team
4. Care planning

## 11 Training for ultrasonographers

Provide regular training so that ultrasonographers can identify the lambda or T-sign accurately and confidently. Less experienced ultrasonographers should have support from senior

colleagues.

Training should cover ultrasound scan measurements needed for women who book after 14 weeks 0 days (see [early scan and schedule of appointments \[See page 4\]](#) in this pathway) and should emphasise that the risks associated with twin and triplet pregnancies are determined by chorionicity and not zygosity.

Conduct regular clinical audits to evaluate the accuracy of determining chorionicity.

## 12 NICE pathway on fertility, pregnancy and childbirth

[See Fertility, pregnancy and childbirth](#)

## 13 NICE pathway on patient experience

[See Patient experience in adult NHS services](#)

<sup>1</sup> [Multiple pregnancy / Multiple pregnancy overview / When to refer to tertiary level fetal medicine centre \[See page 7\]](#)

## Schedule of specialist antenatal appointments

Type of pregnancy (uncomplicated)	Minimum contacts with core multidisciplinary team	Timing of appointments PLUS scans	Additional appointments (WITHOUT scans)
Monochorionic diamniotic twins	9 (including 2 with specialist obstetrician)	Appt + early scan (approximately 11 <sup>+0</sup> to 13 <sup>+6</sup> weeks, when crown–rump length measures from 45 mm to 84 mm)  <b>and</b> 16, 18, 20, 22, 24, 28, 32 and 34 weeks	–
Dichorionic twins	8 (including 2 with specialist obstetrician)	Appt + early scan (approximately 11 <sup>+0</sup> to 13 <sup>+6</sup> weeks, when crown–rump length measures from 45 mm to 84 mm)  <b>and</b> 20, 24, 28, 32 and 36 weeks	16 and 34 weeks
Monochorionic triamniotic triplets and dichorionic triamniotic triplets	11 (including 2 with specialist obstetrician)	Appt + early scan (approximately 11 <sup>+0</sup> to 13 <sup>+6</sup> weeks, when crown–rump length measures from 45 mm to 84 mm)  <b>and</b> 16, 18, 20, 22, 24, 26, 28, 30, 32 and 34 weeks	–

Trichorionic triamniotic triplets	7 (including 2 with specialist obstetrician)	Appt + early scan (approximately 11 <sup>+0</sup> to 13 <sup>+6</sup> weeks)  <b>and 20, 24, 28, 32 and 34 weeks</b>	16 weeks
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**Glossary**

**amnion**

the inner membrane that surrounds the baby – pregnancies with one amnion (so that all babies share an amniotic sac) are monoamniotic; pregnancies with two amnions are diamniotic; and pregnancies with three amnions are triamniotic

**biophysical profile assessments**

antenatal ultrasound evaluation of fetal wellbeing based on fetal movement, fetal tone, fetal breathing, amniotic fluid volume, and the nonstress test of the fetal heart rate (or cardiotocography)

**chorionicity**

the number of chorionic (outer) membranes surrounding babies in a multiple pregnancy, indicating whether babies share a placenta – in monochorionic pregnancies babies share one placenta; in dichorionic pregnancies there are two placentas; in trichorionic triplet pregnancies each baby has a separate placenta

**dichorionic diamniotic triplet pregnancies**

one baby has a separate placenta and amniotic sac and two of the babies share a placenta and amniotic sac

**dichorionic triamniotic triplets**

in dichorionic triplets one of the babies has a separate placenta and two of the babies share one placenta; all three babies have separate amniotic sacs

**dichorionic twins**

dichorionic twins each have a separate placenta

**feto–fetal transfusion syndrome**

feto–fetal transfusion syndrome occurs when blood moves from one baby to another – it is a complication of monochorionic multiple pregnancies arising from shared placental circulation (also referred to as twin-to-twin transfusion syndrome in twin pregnancies)

**monochorionic diamniotic twins**

monochorionic diamniotic twins share a placenta but have separate amniotic sacs

**monochorionic monoamniotic**

twin or triplet pregnancies in which all babies share a placenta and amniotic sac

**monochorionic diamniotic triplet pregnancies**

all three babies share one placenta. One baby has a separate amniotic sac and two babies share one sac

**monochorionic triamniotic triplets**

in monochorionic triamniotic triplets all three babies share one placenta but each has its own amniotic sac

**specialist obstetricians**

obstetricians with a special interest, experience and knowledge of managing multiple pregnancies, who work regularly with women with multiple pregnancies

**trichorionic triamniotic triplets**

in trichorionic triplets all three babies have separate placentas and amniotic sacs

**tertiary level fetal medicine centre**

a regionally commissioned centre with the experience and expertise for managing complicated

twin and triplet pregnancies

### **twin-to-twin transfusion syndrome**

see feto–fetal transfusion syndrome

### **zygosity**

pregnancies are either monozygous (arising from one fertilised egg) or dizygous (arising from two separate fertilised eggs). Monozygous twins are identical; dizygous twins are non-identical

### **Sources**

Multiple pregnancy: antenatal care for twin and triplet pregnancies (2011) NICE guideline CG129

### **Your responsibility**

#### **Guidelines**

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable

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health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

### **Technology appraisals**

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, health professionals are expected to take these recommendations fully into account, alongside the individual needs, preferences and values of their patients. The application of the recommendations in this interactive flowchart is at the discretion of health professionals and their individual patients and do not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

Commissioners and/or providers have a responsibility to provide the funding required to enable the recommendations to be applied when individual health professionals and their patients wish to use it, in accordance with the NHS Constitution. They should do so in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

### **Medical technologies guidance, diagnostics guidance and interventional procedures guidance**

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take these recommendations fully into account. However, the interactive flowchart does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Commissioners and/or providers have a responsibility to implement the recommendations, in their local context, in light of their duties to have due regard to the need to eliminate unlawful

discrimination, advance equality of opportunity, and foster good relations. Nothing in this interactive flowchart should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.