

Acne overview

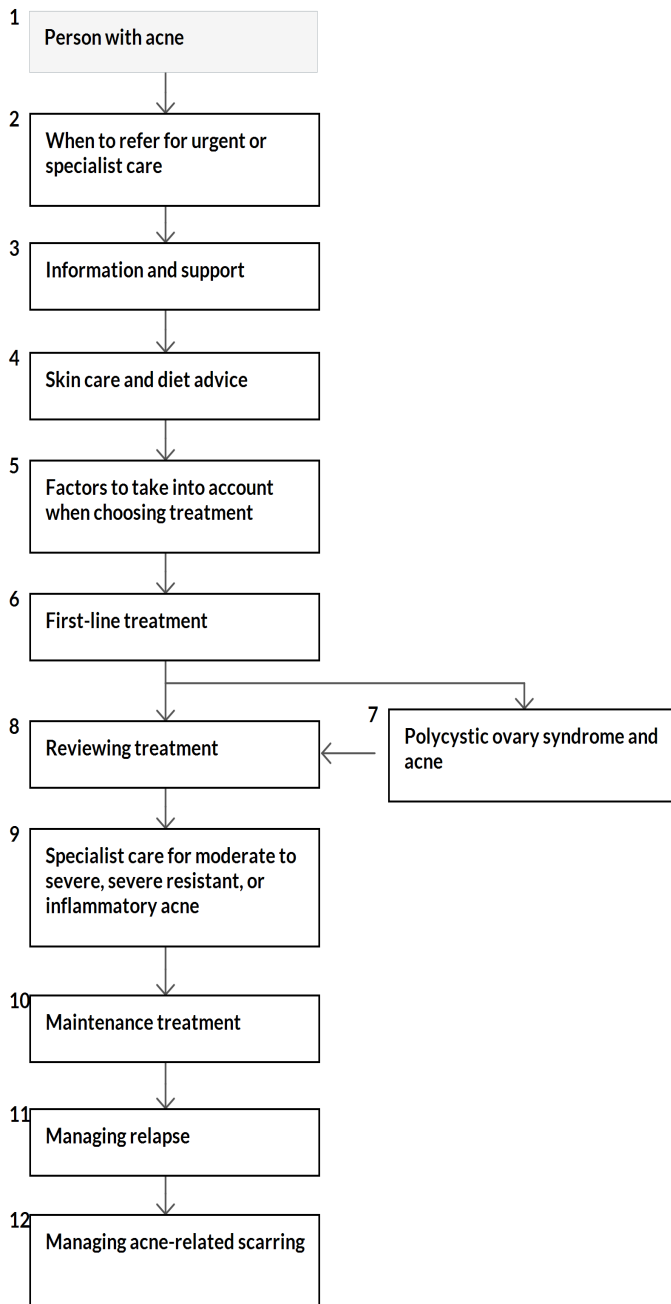
NICE Pathways bring together everything NICE says on a topic in an interactive flowchart. NICE Pathways are interactive and designed to be used online.

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/acne>

NICE Pathway last updated: 25 June 2021

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



1 Person with acne

No additional information

2 When to refer for urgent or specialist care

Acne fulminans

Urgently refer people with acne fulminans on the same day to the on-call hospital dermatology team, to be assessed within 24 hours.

Consultant dermatologist-led team

Refer people to a consultant dermatologist-led team [See page 18] if any of the following apply:

- there is diagnostic uncertainty about their acne
- they have acne conglobata
- they have nodulo-cystic acne.

Consider referring people to a consultant dermatologist-led team if they have:

- mild to moderate acne [See page 18] that has not responded to 2 completed courses of treatment (see table on treatment choices for mild to moderate and moderate to severe acne vulgaris [See page 15])
- moderate to severe acne [See page 19] which has not responded to previous treatment which contains an oral antibiotic (see table on treatment choices for mild to moderate and moderate to severe acne vulgaris [See page 15])
- acne with scarring
- Acne with persistent pigmentary changes.

Consider referring people to a consultant dermatologist-led team if their acne, of any severity, or acne-related scarring, is causing or contributing to persistent psychological distress or a mental health disorder.

See also if acne fails to respond in the recommendations on reviewing treatment [See page 8].

For recommendations on specialist care treatments, see specialist care for moderate to severe, severe resistant or inflammatory acne [See page 10].

Mental health services

Consider referral to mental health services if a person with acne experiences significant psychological distress or a mental health disorder, including those with a current or past history of:

- suicidal ideation or self-harm
- a severe depressive or anxiety disorder
- body dysmorphic disorder.

When considering referral, take into account the person's potential treatment options (for example, oral isotretinoin).

Also see [the NICE Pathway on depression in children and young people](#) for advice on recognition, [the NICE Pathway on depression in adults](#) for advice on recognition and assessment, and [the NICE Pathway on self-harm](#).

Other specialists or condition-specific management

Consider condition-specific management or referral to a specialist (for example a reproductive endocrinologist), if a medical disorder or medication (including self-administered anabolic steroids) is likely to be contributing to a person's acne.

Rationale and impact

See the NICE guideline to find out [why we made these recommendations and how they might affect practice](#).

3 Information and support

Give people with acne clear information tailored to their needs and concerns. Topics to cover include:

- the possible reasons for their acne
- treatment options, including over the counter treatments if appropriate
- the benefits and drawbacks associated with treatments
- the potential impact of acne
- the importance of adhering to treatment (see also [providing information in the NICE Pathway on medicines optimisation](#))

- relapses during or after treatment, including:
 - when and how to obtain further advice
 - treatment options should a relapse occur.

See also the sections on [information and communication in the NICE Pathway on patient experience in adult NHS services](#).

Include parents and carers in discussions if the person with acne would like them to be involved, or when support is needed (for example, for a person with cognitive impairment).

See the NICE guideline to find out [why we made these recommendations and how they might affect practice](#).

NICE has written [information for the public on acne](#).

4 Skin care and diet advice

Skin care

Advise people with acne to use a non-alkaline (skin pH-neutral or slightly acidic) synthetic detergent (syndet) cleansing product twice daily on acne-prone skin.

Advise people with acne who use skincare products (for example, moisturisers) and sunscreens to avoid oil-based and comedogenic preparations.

Advise people with acne who use make-up to avoid oil-based and comedogenic products, and to remove make-up at the end of the day.

Advise people that persistent picking or scratching of acne lesions can increase the risk of scarring.

See the NICE guideline to find out [why we made these recommendations and how they might affect practice](#).

Diet

Advise people that there is not enough evidence to support specific diets for treating acne.

For general advice about a balanced diet and how it could contribute to wellbeing, see the

[Eatwell Guide on the UK Government website.](#)

See the NICE guideline to find out [why we made this recommendation and how it might affect practice](#).

5 Factors to take into account when choosing treatment

Take into account that acne of any severity can cause psychological distress and mental health disorders.

Discuss the importance of completing the course of treatment, because positive effects can take 6 to 8 weeks to become noticeable (see also [supporting adherence in the NICE Pathway on medicines optimisation](#)).

See the NICE guideline to find out [why we made these recommendations and how they might affect practice](#).

Take into account that the risk of scarring increases with the severity and duration of acne.

To reduce the risk of skin irritation associated with topical treatments, such as benzoyl peroxide or retinoids, start with alternate-day or short-contact application (for example washing off after an hour). If tolerated, progress to using a standard application.

When discussing treatment choices with a person with childbearing potential, cover:

- that topical retinoids and oral tetracyclines are contraindicated during pregnancy and when planning a pregnancy, **and**
- that they will need to use effective contraception, or choose an alternative treatment to these options.

If a person receiving treatment for acne wishes to use hormonal contraception, consider using the combined oral contraceptive pill in preference to the progestogen-only pill (if oral isotretinoin treatment is likely to be used, also see [the recommendation on oral isotretinoin for a person with the potential to become pregnant, in the section on specialist care \[See page 10\]](#)).

If clinical judgement indicates a person may need treatment with oral isotretinoin for their acne in future:

- be aware that oral isotretinoin should not be used unless adequate courses of standard therapy with systemic antibiotics and topical therapy have been tried, in line with the [MHRA guidance on isotretinoin for severe acne: uses and effects](#), and

- take this into account when choosing any initial treatment option.

Do not use the following to treat acne:

- monotherapy with a topical antibiotic
- monotherapy with an oral antibiotic
- a combination of a topical antibiotic and an oral antibiotic.

Also see [the NICE Pathways on medicines optimisation](#) and [contraception](#).

See the NICE guideline to find out [why we made these recommendations and how they might affect practice](#).

6 First-line treatment

Offer people with acne a 12-week course of 1 of the following first-line treatment options, taking account of the severity of their acne and the person's preferences, and after a discussion of the advantages and disadvantages of each option (see the table on [treatment choices for mild to moderate and moderate to severe acne vulgaris](#) [See page 15]):

- a [fixed combination of topical adapalene with topical benzoyl peroxide](#) [See page 18] for any acne severity
- a fixed combination of topical tretinoin with topical clindamycin for any acne severity
- a [fixed combination of topical benzoyl peroxide with topical clindamycin](#) [See page 18] for mild to moderate acne [See page 18]
- a [fixed combination of topical adapalene with topical benzoyl peroxide](#) [See page 18], together with either [oral lymecycline](#) or [oral doxycycline](#) [See page 19] for moderate to severe acne [See page 19]
- [topical azelaic acid](#) [See page 19] with either [oral lymecycline](#) or [oral doxycycline](#) [See page 19] for moderate to severe acne.

Consider topical benzoyl peroxide monotherapy as an alternative treatment to the options in the table on [treatment choices for mild to moderate and moderate to severe acne vulgaris](#) [See page 15], if:

- these treatments are contraindicated, **or**
- the person wishes to avoid using a topical retinoid, or an antibiotic (topical or oral).

For people with moderate to severe acne who cannot tolerate or have contraindications to oral lymecycline or oral doxycycline, consider replacing these medicines in combination treatments

(see the table on [treatment choices for mild to moderate and moderate to severe acne vulgaris](#) [See page 15]) with trimethoprim or with an oral macrolide (for example, erythromycin).

See also [physical treatments for moderate to severe acne if other treatments are unsuitable in the section on specialist care](#) [See page 10].

Rationale and impact

See the NICE guideline to find out [why we made these recommendations and how they might affect practice](#).

7 Polycystic ovary syndrome and acne

For people with polycystic ovary syndrome and acne:

- treat their acne using a first-line treatment option (see [first-line treatment](#) [See page 7] and the table on [treatment choices for mild to moderate and moderate to severe acne vulgaris](#) [See page 15])
- if the chosen first-line treatment is not effective, consider adding ethinylestradiol with cyproterone acetate (co-cyprindiol) or an alternative combined oral contraceptive pill to their treatment.
- for those using co-cyprindiol review at 6 months and discuss continuation or alternative treatment options.

Consider referring people with acne and polycystic ovary syndrome with additional features of hyperandrogenism to an appropriate specialist (for example, a reproductive endocrinologist).

Rationale and impact

See the NICE guideline to find out [why we made these recommendations and how they might affect practice](#).

8 Reviewing treatment

Review first-line treatment at 12 weeks and:

- assess whether the person's acne has improved, and whether they have any side effects
- in people whose treatment includes an oral antibiotic, if their acne has completely cleared consider stopping the antibiotic but continuing the topical treatment

- in people whose treatment includes an oral antibiotic, if their acne has improved but not completely cleared, consider continuing the oral antibiotic, alongside the topical treatment, for up to 12 more weeks.

Only continue a treatment option that includes an antibiotic (topical or oral) for more than 6 months in exceptional circumstances. Review at 3-monthly intervals, and stop the antibiotic as soon as possible.

Be aware that the use of antibiotic treatments is associated with a risk of antimicrobial resistance (see [the NICE Pathway on antimicrobial stewardship](#)).

If a person's acne has cleared, consider maintenance options (also see [maintenance treatment](#) [See page 12]).

If acne fails to respond

If acne fails to respond adequately to a 12-week course of a first-line treatment option and at review the severity is:

- [mild to moderate](#) [See page 18]: offer another option from the (table on [treatment choices for mild to moderate and moderate to severe acne vulgaris](#) [See page 15])
- [moderate to severe](#) [See page 19], and the treatment did not include an oral antibiotic: offer another option which includes an oral antibiotic from the (table on [treatment choices for mild to moderate and moderate to severe acne vulgaris](#) [See page 15])
- moderate to severe, and the treatment included an oral antibiotic: consider referral to a [consultant dermatologist-led team](#) [See page 18].

If mild to moderate acne fails to respond adequately to 2 different 12-week courses of treatment options, consider referral to a consultant dermatologist-led team.

See also [factors to take into account when choosing treatment](#) [See page 6] and [when to refer for urgent or specialist care](#) [See page 3].

Rationale and impact

See the NICE guideline to find out [why we made these recommendations and how they might affect practice](#).

9 Specialist care for moderate to severe, severe resistant, or inflammatory acne

Oral isotretinoin for severe resistant acne

Consider oral isotretinoin for people older than 12 years who have a severe form of acne that is resistant to adequate courses of standard therapy with systemic antibiotics and topical therapy (see the table on [treatment choices for mild to moderate and moderate to severe acne vulgaris](#) [See page 15]). For example:

- nodulo-cystic acne
- acne conglobata
- acne fulminans
- acne at risk of permanent scarring.

When considering oral isotretinoin for acne take into account the person's psychological wellbeing (see the recommendation on referral to mental health services in [when to refer for urgent or specialist care](#) [See page 3]) and refer them to mental health services before starting treatment if appropriate.

If a person with acne is likely to benefit from oral isotretinoin treatment, follow the [MHRA's guidance on isotretinoin for severe acne: uses and effects](#) and the [drug safety update on isotretinoin](#). If the person has the potential to become pregnant:

- explain that isotretinoin can cause serious harm to a developing baby if taken during pregnancy
- inform them that they will need to follow the [MHRA pregnancy prevention programme](#).

Prescribe oral isotretinoin for acne treatment (see first recommendation in this section) at a standard daily dose of 0.5 mg/kg to 1 mg/kg.

Consider a reduced daily dose of isotretinoin (less than 0.5 mg/kg) for people at increased risk of, or experiencing, significant adverse effects.

When giving isotretinoin as a course of treatment for acne:

- continue until a total cumulative dose of 120 mg/kg to 150 mg/kg is reached, but
- if there has been an adequate response and no new acne lesions for 4 to 8 weeks, consider discontinuing treatment sooner.

If a person is taking oral isotretinoin for acne:

- review their psychological wellbeing during treatment, and monitor them for symptoms or signs of depression
- advise them on the importance of seeking help if they feel their mental health is affected or is worsening.

See the NICE guideline to find out [why we made these recommendations and how they might affect practice](#).

Adding oral prednisolone to prevent or reduce acne flare

If an acne flare occurs after starting oral isotretinoin, consider adding a course of oral prednisolone.

When a person with acne fulminans is started on oral isotretinoin, consider adding a course of oral prednisolone to prevent an acne flare.

See the NICE guideline to find out [why we made these recommendations and how they might affect practice](#).

Adding intralesional corticosteroids for severe inflammatory cysts

Consider treating severe inflammatory cysts with intralesional injection of triamcinolone acetonide (0.1ml of triamcinolone acetonide per cm of cyst diameter, at 0.6 mg/ml diluted in 0.9% sodium chloride). This should be done by a member of a [consultant dermatologist-led team](#) [See page 18].

In June 2021 this was an off-label use for triamcinolone acetonide. See [NICE's information on prescribing medicines](#) for more information.

See the NICE guideline to find out [why we made these recommendations and how they might affect practice](#).

Physical treatments for moderate to severe acne if other treatments are unsuitable

Consider photodynamic therapy for people aged 18 and over with moderate to severe acne if other treatments are ineffective, not tolerated or contraindicated.

See the NICE guideline to find out [why we made this recommendation and how it might affect practice](#).

10 Maintenance treatment

Encourage continued appropriate skin care (see the [recommendations on skin care in skin care and diet advice \[See page 5\]](#)).

Explain to the person with acne that, after completion of treatment, maintenance treatment is not always necessary.

Consider maintenance treatment in people with a history of frequent relapse after treatment.

Consider a [fixed combination of topical adapalene with topical benzoyl peroxide \[See page 18\]](#) as maintenance treatment for acne. If this is not tolerated, or if 1 component of the combination is contraindicated, consider topical monotherapy with adapalene, [azelaic acid \[See page 17\]](#), or benzoyl peroxide (see also the recommendation on starting topical treatment in [factors to take into account when choosing treatment \[See page 6\]](#)).

Review maintenance treatments for acne after 12 weeks to decide if they should continue.

Rationale and impact

See the NICE guideline to find out [why we made these recommendations and how they might affect practice](#).

11 Managing relapse

After first-line treatment

If acne responds adequately to a course of an appropriate first-line treatment (see [first-line treatment \[See page 7\]](#) and the table on [treatment choices for mild to moderate and moderate to severe acne vulgaris \[See page 15\]](#)) but then relapses, consider either

- another 12-week course of the same treatment, or
- an alternative 12-week treatment (see the table on [treatment choices for mild to moderate and moderate to severe acne vulgaris \[See page 15\]](#)).

After oral isotretinoin

If acne relapses after an adequate response to oral isotretinoin and is currently [mild to moderate \[See page 18\]](#), offer an appropriate treatment option (see the table on [treatment](#)

choices for mild to moderate and moderate to severe acne vulgaris [See page 15].

If acne relapses after an adequate response to oral isotretinoin and is currently moderate to severe [See page 19], offer either:

- a 12-week course of an appropriate treatment option (see the table on treatment choices for mild to moderate and moderate to severe acne vulgaris [See page 15]), or
- re-referral, if the person is no longer under the care of the consultant dermatologist-led team [See page 18].

If acne relapses after a second course of oral isotretinoin and is currently moderate to severe, further care should be decided by the consultant dermatologist-led team. If the person is no longer under the care of the consultant dermatologist-led team, offer re-referral.

Also see factors to take into account when choosing treatment [See page 6].

Rationale and impact

See the NICE guideline to find out why we made these recommendations and how they might affect practice.

12 Managing acne-related scarring

If a person has acne-related scarring, discuss their concerns and provide information in a way that suits their needs. Topics to cover include:

- possible reasons for their scars
- treatment of ongoing acne to help prevent further scarring (see first line treatment [See page 7] and the first recommendation in specialist care for moderate to severe, severe resistant or inflammatory acne [See page 10])
- possible treatment options for acne-related scarring
- the way their acne scars may change over time
- psychological distress.

If a person's acne-related scarring is severe and persists a year after their acne has cleared:

- refer the person to a consultant dermatologist-led team [See page 18] with expertise in scarring management
- in a consultant dermatologist-led team setting, consider CO₂ laser treatment (alone or after a session of punch elevation) or glycolic acid peel.

Rationale and impact

See the NICE guideline to find out [why we made these recommendations and how they might affect practice](#).

Treatment choices for mild to moderate and moderate to severe acne vulgaris

Acne severity	Treatment	Advantages	Disadvantages
Any severity	Fixed combination of topical adapalene with topical benzoyl peroxide, applied once daily in the evening	<ul style="list-style-type: none"> • Topical • Does not contain antibiotics 	<ul style="list-style-type: none"> • Not for use during pregnancy • Use with caution during breastfeeding¹ • Can cause skin irritation², photosensitivity, and bleaching of hair and fabrics
Any severity	Fixed combination of topical tretinoin with topical clindamycin, applied once daily in the evening	<ul style="list-style-type: none"> • Topical 	<ul style="list-style-type: none"> • Not for use during pregnancy or breastfeeding • Can cause skin irritation and photosensitivity
Mild to moderate	Fixed combination of topical benzoyl peroxide with topical clindamycin, applied once daily in the evening	<ul style="list-style-type: none"> • Topical • Can be used with caution during pregnancy and breastfeeding 	<ul style="list-style-type: none"> • Can cause skin irritation, photosensitivity, and bleaching of hair and fabrics
Moderate to severe	Fixed combination of topical adapalene with topical benzoyl peroxide,	<ul style="list-style-type: none"> • Oral component may be effective in treating affected areas that are difficult to reach with topical treatment 	<ul style="list-style-type: none"> • Not for use in pregnancy, during breastfeeding,

¹ When discussing treatment choices with a person with childbearing potential, cover that topical retinoids and oral tetracyclines are contraindicated during pregnancy and when planning a pregnancy, **and** that they will need to use effective contraception, or choose an alternative treatment to these options.

² To reduce the risk of skin irritation associated with topical treatments, such as benzoyl peroxide or retinoids, start with alternate-day or short-contact application (for example washing off after an hour). If tolerated, progress to using a standard application.

	applied once daily in the evening, plus either oral lymecycline or oral doxycycline taken once daily	<ul style="list-style-type: none"> • (such as the back) • Treatment with adequate courses of standard therapy with systemic antibiotics and topical therapy is a Medicines and Healthcare products Regulatory Agency (MHRA) requirement for subsequent oral isotretinoin,¹ 	<ul style="list-style-type: none"> • or under the age of 12 • Topical adapalene and topical benzoyl peroxide can cause skin irritation, photosensitivity, and bleaching of hair and fabrics • Oral antibiotics may cause systemic side effects and antimicrobial resistance • Oral tetracyclines can cause photosensitivity
Moderate to severe	Topical azelaic acid applied twice daily, plus either oral lymecycline or oral doxycycline taken once daily	<ul style="list-style-type: none"> • Oral component may be effective in treating affected areas that are difficult to reach with topical treatment (such as the back) • Treatment with adequate courses of standard therapy with systemic antibiotics and topical therapy is an MHRA requirement for subsequent oral isotretinoin , 	<ul style="list-style-type: none"> • Not for use in pregnancy, during breastfeeding, or under the age of 12 • Oral antibiotics may cause systemic side effects and resistance • Oral tetracyclines can cause photosensitivity

Azelaic acid

¹ See the [MHRA guidance on isotretinoin for severe acne: uses and effects](#).

Formulation with either of these 2 concentrations:

- 15% azelaic acid
- 20% azelaic acid

Consultant dermatologist-led team

This team may include associate specialists and healthcare professionals accredited for extended roles for dermatology under consultant supervision.

Fixed combination of topical adapalene with topical benzoyl peroxide

Formulation with either of these 2 concentrations:

- 0.1% adapalene with 2.5% benzoyl peroxide
- 0.3% adapalene with 2.5% benzoyl peroxide

Fixed combination of topical benzoyl peroxide with topical clindamycin

Formulation with either of these 2 concentrations:

- 3% benzoyl peroxide with 1% clindamycin
- 5% benzoyl peroxide with 1% clindamycin

Mild to moderate acne

Acne severity varies along a continuum. For mild to moderate acne, this includes people who have 1 or more of:

- any number of non-inflammatory lesions (comedones)
- up to 34 inflammatory lesions (with or without non-inflammatory lesions)
- up to 2 nodules.

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- up to 2 nodules.

Moderate to severe acne

Acne severity varies along a continuum. For moderate to severe acne this includes people who have either or both of:

- 35 or more inflammatory lesions (with or without non-inflammatory lesions)
- 3 or more nodules.

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- 35 or more inflammatory lesions (with or without non-inflammatory lesions)
- 3 or more nodules.

Oral lymecycline or oral doxycycline

- 408mg lymecycline daily
- 100mg doxycycline daily

Topical azelaic acid

Formulation with either of these 2 concentrations:

- 15% azelaic acid
- 20% azelaic acid

Glossary

acne

(‘acne’ in recommendations refers to ‘acne vulgaris’ unless otherwise stated)

acne conglobata

(a severe form of nodulo-cystic acne with interconnecting sinuses and abscesses)

acne flare

(acute significant worsening of acne)

acne fulminans

(a very serious form of acne conglobata associated with systemic symptoms)

adapalene

(0.1% adapalene)

benzoyl peroxide

(5% benzoyl peroxide)

comedogenic

(an ingredient that is likely to block skin pores)

Fixed combination of topical tretinoin with topical clindamycin

(0.025% tretinoin with 1% clindamycin)

Synthetic detergent (syndet)

(a blend of synthetic surfactants that is formulated to have neutral to slightly acidic pH similar to the skin, it is widely available in both solid and liquid forms as a skin cleansing product)

Topical benzoyl peroxide

(5% benzoyl peroxide)

Sources

[Acne vulgaris: management \(2021\) NICE guideline NG198](#)

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 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.