NHS
South Yorkshire
Integrated Care Board

Acne Clinical Guideline
Treatment guideline for primary care (Sheffield)

1. SUMMARY

This guideline has been developed to aid clinicians in primary care in management of acne. The guideline includes recognition, diagnosis, management, non-pharmacological support and referral to secondary care.

2. SPECIAL CONSIDERATION

This guideline has been developed in collaboration with primary and secondary care specialists as well as using most up to date clinical guidelines available to date. See reference list for sources used.

3. EPIDEMIOLOGY

Acne vulgaris is a cutaneous disorder characterised by chronic and recurrent papules, pustules and sometimes nodules forming primarily on the face, neck, and trunk. It mainly affects adolescents and young adults. The severity of acne varies from minimal involvement to disfiguration and high levels of inflammation. Hyperpigmentation, scarring and negative psychological effects are common. Clinical features comprise:

- Closed comedones – Non-inflammatory; <5 mm; dome-shaped; smooth; skin-coloured, whitish, or greyish papules
- Open comedones – Non-inflammatory, <5 mm lesions with a central, dilated, follicular orifice containing grey, brown, or black, keratotic material
- Papulopustular acne - Inflamed, relatively superficial papules and pustules, typically <5 mm in diameter
- Nodular acne - Deep-seated, inflamed, often tender, large papules (≥0.5 cm) or nodules (≥1 cm)

4. DIAGNOSIS

PCDS provides a primary care treatment pathway that summarises treatment options for acne and when to refer to dermatology consultant. This pathway should be used together with *Acne vulgaris* management guidelines by NICE and British Association of Dermatologists referral guidelines.
Images of various forms of acne can be found be found here and other dermatology pages.

Acne severity:

Mild to moderate – people with one or more of:

- Any number of non-inflammatory lesions (comedone)
- Up to 34 inflammatory lesions (with or without non-inflammatory lesions)
- Up to 2 nodules

Moderate to severe acne – people with one or more of:

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

5. NON-PHARMCOCOLOGICAL SUPPORT AND COUNSELLING

Counselling of patients in treatment of acne vulgaris should include discussion regarding treatment expectations and skin care. Patient information leaflets should be provided e.g. British Association of Dermatologists' leaflet. Discussing expectations should aid treatment adherence.
Consider discussing the following:

Counselling:

- Improvement time – to improve compliance, consider explaining to the patient that they should not expect to see improvement for 2-3 months
- Topical treatments should be used all over the affected areas and not just on the active lesions, as they are used to treat the cause (i.e. blocking of pores) as well as inflammation and their aim is partly to prevent further acne.
- Post inflammatory redness will take several months to settle after the acne has improved. Post inflammatory hyperpigmentation will take even longer.
- Treatment choice and adjustment – there are a wide selection of treatments available, which should be discussed with the patient. They can be changed or adjusted according to response and tolerability.
- Side effects – discuss the fact that patients react to treatments differently and some might experience side effects. Emphasise topical preparation side effects. If treatments irritate, use less often (e.g. twice weekly) and build up frequency at a later date. Alternatively, apply for 1-2 hours then wash off. Benzoyl peroxide bleaches clothing and they may need to use old towels or nightwear.
- Long-term maintenance – most acne treatments are suppressive not curative. Long-term maintenance may be needed to maintain improvement.

Skin care:

- Use of skin cleansers – Consider using gentle skin cleansers of pH 5.5 to 7, i.e. normal skin pH (synthetic detergents e.g. CeraVE, Cetaphil or Neutrogena clear and defend facial wash). Avoid using soaps or scrubs that usually contains higher pH and can irritate and dry your skin. This can promote development of new acne lesions.
- Scrubbing of the skin – Gentle massage with fingertips is sufficient for cleansing, but repetitive and aggressive scrubbing may cause mechanical trauma leading to aggravation of acne.
- Noncomedogenic skin care and cosmetics – avoid oil-based preparations on the skin. Products labelled ''noncomedogenic'' may be helpful as they reduce pore-blockage. However, these products are not strongly regulated and their claims may not always be accurate.
- Picking lesions – avoid picking lesions as this can exacerbate scarring and pigmentation.
- Peels are not available on the NHS. Superficial peels can be useful for comedonal and mild to moderate acne in both pigmented and non-pigmented skin. Patient should choose a reputable provider.

Diet:

- There is a difference in opinion and research regarding impact of milk, weight, stress in the acne severity and management. Advise the patient that there is not enough evidence to support dietary changes.

Information leaflet:

- Information can be found from British association of dermatologists.

6. MENTAL HEALTH SUPPORT

Acne vulgaris can contribute to a significant psychological burden. Lowered self-esteem, embarrassment, anxiety, and depression can lead to a reduced quality of life, social isolation and affected employment. Mental health support should be offered to address patient concerns. See below for mental health support services in Sheffield:

- IAPT (Health and Wellbeing Service | Sheffield IAPT (iaptsheffield.nhs.uk) – for patients with non-complex/severe mental health needs.

- Single Point of Access (SPA) - Single Point of Access (SPA) | Sheffield Mental Health Guide. For patients with severe/complex mental health needs requiring urgent attention.

7. REFERRAL TO SECONDARY CARE

When to refer to a consultant dermatologist led team:

N.B. 'appropriate topical treatments' means treatments should be anticomedonal and may be antibacterial and/or anti-inflammatory. Guidance on these is listed in section 8.

Acne fulminans	Extremely rare severe form of nodulo-cystic acne with sinuses and abscesses plus systemic symptoms of fever and malaise. Same day on-call hospital dermatology team must be contacted.
Nodulo-cystic acne or **acne conglobata**	Nodulo-cystic acne (large nodules and cysts that typically resolve with scarring) or acne conglobata (severe form of nodulo-cystic acne with sinuses and abscesses but systemically well). Ideally commence treatment with an antibiotic and appropriate topical treatment combination whilst awaiting appointment, or newer generation combined oral contraceptive in a female +/- topical treatment.
Mild to moderate acne	(See definition in section 4) which has not responded to 2 completed courses of treatment for at least 3 months, consisting of an oral antibiotic alongside an appropriate topical treatment, or one 3-month course of oral antibiotic and appropriate topical treatment plus one 6-month course of newer generation combined oral contraceptive in a female. Ideally commence treatment with a third line antibiotic (e.g Trimethoprim) and appropriate topical treatment combination whilst awaiting appointment, or newer generation combined oral contraceptive in a female +/- topical treatment.
Moderate to severe acne	(See definition in section 4) which has not responded to one 3 month completed course of treatment containing an oral antibiotic alongside appropriate topical treatment. A course of a different antibiotic and appropriate topical treatment or newer generation combined oral contraceptive in females (+/- topical treatment), should be commenced whilst awaiting review in secondary care.

Persistent pigmentary changes	From acne that have not responded to treatments for acne as above plus continued topical azelaic acid 20%. Please continue azelaic acid whilst awaiting referral.
Scarring in uncontrolled acne	(Shallow or deep depressions in the skin or hypertrophic/keloid lumpy scars) to consider isotretinoin earlier, due to the fact that scars are very difficult to treat. Please note post inflammatory flat erythema/ colour change is not scarring. Images of post inflammatory erythema acne can be seen at here.
Uncertainty about acne	There is a diagnostic uncertainty about acne.
Severe psychological distress	(Ensure mental health issues are addressed with appropriate psychiatric or psychological input whilst awaiting referral - see section 6). These disorders include: • suicidal ideation or self-harm • a severe depressive or anxiety disorder • body dysmorphic disorder. (*N.B. please also refer to psychiatry and psychology, specifically requesting cognitive restructuring from psychology*).

8. CLINICAL MANAGEMENT: TOPICAL AND ANTIBIOTIC OPTIONS

Offer 12-week course of 1 of the following listed in the table below, taking into the account severity, patient's preference, and pros/cons of the treatment.

It is essential to use a topical treatment in acne therapy, whether or not the patient is on oral treatment. Non-antibiotic topical preparations usually have a keratolytic/comedolytic/peeling effect and therefore unblock pores to prevent inflammatory lesions. This also has a bactericidal effect on *C.acnes* as it is an anaerobe and dies when the pore is unblocked. This prevents *C.acnes* bacterial resistance to the antibiotics used. Some topicals also have anti-inflammatory action and/or direct bactericidal action.

Severity	Treatment	Advantages	Disadvantages	How to apply and how much to issue
Any severity	Epiduo® 0.1%/2.5% Or 0.3%/2.5% gel Once daily in the evening	Topical Does not contain antibiotics Lower strength is available in case of sensitive skin Lower strength is available for use from 9 years and above	Not for use during pregnancy Use with caution during breastfeeding Can cause skin irritation, photosensitivity and bleaching of hair and fabrics Higher strength is for 12 year and above use	**Direction of use:** Apply a thin film of gel once daily in the evening using the fingertips, avoiding the eyes and lips. 2.5cm or 0.5g (one fingertip) is usually enough to cover entire facial area. If irritation occurs use a moisturiser prior the application or change to lower strength. **Supply:** Supply 45g tube for 3 months. (Quantity for facial use) *N.B. If used for chest and back additional quantity will be needed. Click here to see more information.*
Any severity	Treclin Gel 1%/0.025% Once daily in the evening	Topical For 12 years and above use	Not for use in pregnancy or breastfeeding Can cause irritation and photosensitivity	**Direction of use:** Apply a pea-sized by distributing a dot onto the chin, cheeks, nose, and forehead; then gently rub over the entire face 2.5cm or 0.5g (one fingertip) is usually enough to cover entire facial area. **Supply:** Supply 30g tube for 2 months. (Quantity for facial use) *N.B. If used for chest and back additional quantity will be needed. Click here to see more information.*
Mild to moderate	Duac gel 10mg/g + 30mg/g Or 10mg/g + 50mg/g Applied once daily in the evening	Topical For 12 years and above use Lower strength is available in case of sensitive skin	Can cause skin irritation, photosensitivity and bleaching of hair and fabrics. Needs careful risk/benefit assessment in pregnancy and breastfeeding	**Direction of use:** Apply gel in the evening (once daily). To be applied as a thin film after washing gently with a mild cleanser and fully drying. 2.5cm or 0.5g (one fingertip) is usually enough to cover entire facial area. **Supply:** Supply 30g tube for 2 months. (Quantity for facial use) *N.B. If used for chest and back additional quantity will be needed. Click here to see more information.*

Moderate to severe	Epiduo® 0.1%/2.5% Or 0.3%/2.5% gel Once daily in the evening + oral lymecycline 408 mg once daily or oral doxycycline 100 mg once daily	Oral treatment is useful to treat areas that are difficult to reach Lower strength of gel is available in case of sensitive skin Lower strength of gel is available for use from 9 years and above. Adequate courses of standard therapy area requirement from MHRA for subsequent oral isotretinoin therapy	Not for use in pregnancy Epiduo can cause skin irritation, photosensitivity and bleaching of hair and fabrics Oral antibiotics can cause increased antimicrobial resistance and systemic side-effects Oral tetracycline can cause photosensitivity Higher strength of gel is for 12 year and above use	**Direction of use (gel):** Apply a thin film of gel once daily in the evening using the fingertips, avoiding the eyes and lips. 2.5cm or 0.5g (one fingertip) is usually enough to cover entire facial area. If irritation occurs use a moisturiser prior the application or change to lower strength. **Supply (gel):** Supply 45g tube for 3 months. (Quantity for facial use) *N.B. If used for chest and back additional quantity will be needed. Click here to see more information.*
Moderate to severe'	Skinoren ®Cream – (20% azelaic acid) applied twice daily + oral lymecycline 408mg once daily or oral doxycycline 100mg once daily	Gel is or 12 years and above use Use azelaic acid especially when post-inflammatory hyperpigmentation or when other topical treatments too irritant Oral treatment is useful to treat areas that are difficult to reach Adequate courses of standard therapy are a requirement from MHRA for a subsequent oral isotretinoin therapy	Skinoren needs careful risk/ benefit assessment in pregnancy Tetracyclines are not for use in pregnancy or breastfeeding or under the age of 12 Tetracyclines may have increased antimicrobial resistance and systemic side-effects Oral tetracycline can cause photosensitivity	**Direction of use:** Apply in the morning and evening (twice daily). 2.5cm or 0.5g (one fingertip) is usually enough to cover entire facial area. Patients with sensitive skin should be advised to use once daily for the first week and then proceed to twice daily. **Supply:** Supply 30g tube for 1 month. (Quantity for facial use) *N.B. If used for chest and back additional quantity will be needed. Click here to see more information.*

Table adapted from NICE guideline NG198.with Sheffield Formulary choices included

If treatment in the above table is contraindicated or a person wishes to avoid a topical retinoid or an antibiotic, use the following as an alternative:
Topical 5% benzoyl peroxide - Acnecide® can be used as a monotherapy.

If the patient with moderate to severe acne cannot tolerate or has contraindications to oral lymecycline or doxycycline, consider replacing with the following:
Trimethoprim (unlicensed) 300mg Twice daily or
Erythromycin 500mg Twice daily.

Oral isotretinoin is Red on traffic light drug list. Used in severe forms of acne (such as nodular or conglobate acne or acne at risk of permanent scarring) resistant to adequate courses of standard therapy with systemic antibacterial and topical therapy. It should be prescribed under specialist supervision. The MHRA has adopted the recommendations of the European Medicines Agency with regard to prescribing isotretinoin for women, with the implementation of the Pregnancy Prevention Programme (PPP).

9. CLINICAL MANAGEMENT: HORMONAL TREATMENT

Androgens contribute to acne by promoting production of sebum via sebaceous glands of the skin. Increase in sebum contributes to obstruction of follicles and formation of comedones. Sebum is also a medium for *C.acnes* that contributes to inflammatory response.

The use of hormonal contraceptives is primarily targeted towards postmenarchal females with moderate to severe acne vulgaris. Both women with acne related to hyperandrogenism and women with acne and normal serum levels can benefit from hormonal treatment.

Hormonal therapy should be initiated with a view of continuing treatment long-term to maintain control. At least 3-6 months of therapy is required prior evaluation of efficacy.

First line	As per section 8 table above
Second line	If the chosen first-line treatment is not effective, consider adding ethinylestradiol with cyproterone acetate (co-cyprindiol) or an alternative newer generation combined oral contraceptive pill to their treatment. *(N.B. unopposed progestogens can exacerbate acne).*

For those using co-cyprindiol, review at 6 months and discuss continuation or alternative treatment options.

Due to higher incidence of venous thromboembolism, consider change to alternative contraception 3 to 4 menstrual cycles after acne is completely resolved. The MHRA review has confirmed that acne is a chronic condition that requires at least 3 months of treatment with co-cyprindiol to relieve symptoms, and that prolonged treatment might be needed. The need to continue treatment should be evaluated periodically by the treating physician. Co-cyprindiol has a 1.5–2 times statistically significant increase in VTE risk (deep vein thrombosis, or pulmonary embolism) compared with levonorgestrel-containing pills. Although more limited, the available evidence also suggests that the VTE risk with co-cyprindiol is likely to be similar to that with contraceptives that contain desogestrel, gestodene, or drospirenone.

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

10. FOLLOW UP & RELAPSE

12-week review:

- Assess patient for side-effects and decide whether acne has improved.
- If acne has cleared completely at 12 weeks and treatment contains an oral antibiotic, consider stopping the antibiotic, but continuing the topical treatment to prevent flare up.
- If acne has improved but not fully cleared, consider continuing oral antibiotic alongside the topical treatment for up to 12 more weeks.

Relapse and failure of treatment:

- If patient responds adequately to treatment from the table above (section 8) but then relapses, consider another 12-week treatment of the same combination or choose a different treatment from the table (can consider hormonal treatment in a female).

- Review at 3-months and consider stopping the antibiotic as soon as appropriate.

- If moderate to severe acne fails to respond to antibiotic-containing treatment after 12 weeks – consider referring to consultant dermatologist. A course of a different antibiotic and approved anticomedonal preparation or newer generation combined oral contraceptive in females (+/- topical treatment), should be commenced whilst awaiting review in secondary care.

- If mild to moderate acne fails to respond to 2 different 12-week courses, consider referring to consultant dermatologist. Ideally commence treatment with a third line antibiotic (e.g. Trimethoprim) and approved anticomedonal combination whilst awaiting appointment, or newer generation combined oral contraceptive in a female +/- topical treatment.

11. ACNE IN CHILDREN AND PREGNANCY

Above sections will contain some information about pregnancy and use in children. Additionally, BNF and EMC can be used to support decision making and choose doses.

DermNet provides additional information on acne in children and acne in pregnancy information can be found on AAD website.

Decision on treatment should be made on case-by-case basis and doses adjusted accordingly for children, especially when choosing oral antibiotics.

12. REFERENCES

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13. DOCUMENTATION CONTROLS

Documentation controls
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