NHS
Camden

Prescribing advice for the management and treatment of acne

This guidance applies to practitioners and clinicians involved in the management of dermatology patients in primary care and community services (GPs, practice nurses, community nursing) and to specialist dermatology nurse practitioners. It will also be relevant to community pharmacists both as assisting with patient education and suitable treatments for pharmacists to recommend or sale.

The guidance contains suggested advice and medication choices for the management and treatment of patients presenting with acne. It should be used in conjunction with the locally agreed patient pathways for dermatological conditions.

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Update approved by: NHS Camden Medicines Management Committee on 25/11/2010
Amendment approved by CMMC on 08/07/11

Comments on this guidance should be directed to the Medicines Management Team, NHS Camden by email to mmt.camdenpct@nhs.net

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Policy check list for use by management groups

Name of guidance: **Prescribing advice for the management and treatment of acne**

Management Group and date of Meeting: NHS **Camden Medicines Management Committee Meeting of 25th November 2010**
Guidance approved? **Yes**

Name & Signature of chair: **Judith Dixon**

Key area	Yes/no	Comment
1. Is it clear to which service/staff members the policy applies?	**Yes**	
2. Does the policy have a start and review date?	**Yes**	
3. Does the policy state the names of its author/s and are they sufficiently expert in the topic area?	**Yes**	
4. Does the policy indicate those who were consulted about its content and where comments about it should be sent?	**Yes**	
5. Does the policy contain elements which discriminate against users in relation to gender, ethnic group, age, disability or sexuality?	**No**	
6. Is the policy clear and unambiguous in its advice?	**Yes**	
7. Is the policy is based on research evidence or best national practice and are references or sources of advice stated?	**Yes**	
8. If there are legal aspects of the policy are references or source of advice stated?	**N/A**	
9. Are learning and development objectives and audit topics identified?	**N/A**	
10. Is an implementation and dissemination plan included. Is this sufficiently robust and are resource implications identified and agreed?	**Yes**	**Via Prescribing matters and will be available on the intranet.**
11. If appropriate have user views been incorporated?		
12. Does the policy indicate who staff should contact if they have a query relating to the policy?	**Yes**	

Acne - Prescribing Advice

Introduction
Acne vulgaris is a chronic skin condition in which blockage or inflammation of the hair follicles and accompanying sebaceous glands occurs. It principally effects the face, back and chest.
Acne is characterised by the presence of non-inflammatory lesions (comedones – blackheads and whiteheads) and/or inflammatory lesions (papules, pustules and nodules).

Initial assessment
Initial assessment and diagnosis should include investigation/enquiry about the following:

- The duration of acne, time of onset, whether acne is worsening
- Family history – a strong family history is a poor prognostic factor
- In women, consider if acne is secondary to a hormonal cause e.g. hyperandrogenism
- Previous treatments used and their effects (including those bought over-the counter)
- Compliance
- Atypical presentation – consider possibility of a severe form or clinical variant of acne
- Any psychological difficulties or effects of the disease
- Overall acne severity at all sites
- Predominant type of lesions: comedonal, inflammatory or both
- Presence of scarring and pigmentation
- Patient's expectations regarding treatment.
- Consider drugs or chemicals that may cause acne including oral contraceptives, exposure to tars, polyvinyl chloride, corticosteroids, and androgens (sometimes used illegally by body-builders).
- Examine the areas of skin affected by acne, in particular the face, back and chest.

Note if the acne is mostly inflammatory or non-inflammatory and grade it as mild, moderate or severe:

- Mild acne — mainly open and closed non-inflammatory comedones and some papules and pustules.
- Moderate acne — more inflamed lesions with frequent papules and pustules, sometimes with mild scarring. If signs of scarring exist the patient should be referred to secondary care.
- Severe acne — characterized by nodular abscesses and cysts, also a predominance of inflammatory papules and pustules which and leads to more extensive scarring. Refer to secondary care.

What general advice should I give?

- For mild acne, provide reassurance about the natural course of the condition.
- Dispel common myths — acne is not caused by bad hygiene, poor diet, or lack of exercise, and is not infectious.
- Use a mild soap or cleanser and lukewarm water (as very hot or cold water may worsen acne)
- Do not wash more than twice daily
- Abrasive cleansers and vigorous scrubbing should be avoided as they can aggravate acne.
- Oil free and fragrance free non-comedogenic moisturising products and make-up are recommended for patients with acne. Water based emollients can be used if dry skin is a problem
- Complementary or alternative medicines are not usually harmful but there is a lack of evidence to support their use.

Treatments

	Mild Acne	Moderate acne	Severe acne
First line	For mild comedonal acne Topical retinoid once daily at night For mild papular/pustular (inflammatory) acne or acne not managed on topical retinoid alone: Benzoyl peroxide in the morning plus topical retinoid at night. Azelaic acid can be considered if topical retinoids or benzoyl peroxide are not tolerated	Combination treatment should be considered in all patients Benzoyl peroxide in the morning or topical retinoid at night and consider adding oral doxycycline (see notes below*) If inadequate response: Continue oral antibiotic plus Topical benzoyl peroxide in the morning plus topical retinoid at night. If scarring present, refer to secondary care.	As for moderate acne but refer to dermatologist in secondary care
Hormonal treatment in women	In female patients if response to antibiotics not effective consider hormonal treatments-see advice overleaf		

Oral antibiotics should be considered

- When topical therapy has failed, is unacceptable or poorly tolerated
- For people with involvement of the shoulders, chest or back (applying topical treatment may be difficult)
- For people with a high potential for scarring or pigmentary changes.
- Oral tetracyclines are recommended first line. Oral erythromycin should be reserved for use when tetracyclines are contraindicated.
- When there is inadequate response to one course of oral antibiotics, another course of a different oral antibiotic should be tried e.g. erythromycin. Each should be prescribed for a minimum of 3 months before it is considered there has been an inadequate response.

How long should treatment continue?

- Treatments need to be used for up to 3 months (review after 6 weeks) before assuming treatment failure. Advise patient that treatment starts to work at about 4 weeks and continue to improve over successive months.
- If there is an adequate response to treatment, oral antibiotics are usually continued for 4 to 6 months and then stopped completely. If there are significant relapses or flares, consider restarting oral treatment.
- Treatment with non-antibiotic topical preparations may need to continue for several years.

Application of topical treatments

- Wash face and pat dry before application. Allow skin to dry for 20 minutes before application
- Topical treatments should be applied to all areas of skin where acne occurs, not just active lesions.
- Apply sparingly. A pea-sized amount of cream is enough to cover the face generally avoiding eyes, mouth & nasal folds.
- Suggest to patient that they start by applying treatments slowly to minimise side effects, e.g. applying for 15 minutes at a time and then wash off. Then gradually increase the amount of time left on skin by increments of 15 minutes until it is left on for the prescribed duration.
- If two topical treatments are to be used in a day:
    - Start by getting used to one treatment first, before introducing the second.
    - Alternate products by using one at night and one in the morning. The most irritant product should be used at night when it will be less bothersome. Topical retinoids should generally be applied at night so that they/the skin is not exposed to sunlight.

When to refer

- Severe acne – refer early
- Moderate acne only partially responding to treatment and starting to scar
- Inadequate response to at least two systemic antibiotics PLUS topical treatments, each given for a minimum of 3 months
- Patients with associated and severe psychological symptoms, regardless of the physical signs
- Patients with features that make the diagnosis uncertain
- Women suspected of having an underlying endocrinological cause of acne (such as polycystic ovary syndrome) that needs assessment and has not responded to treatment.

Benzoyl Peroxide	
Gel 2.5%, 5%, 10% Cream 5% Wash 10%	• Benzoyl peroxide may cause skin irritation which tends to diminish with time as tolerance develops. Introducing the product gradually can help minimise irritation (see above) • In people with sensitive or fair skin, benzoyl peroxide can be applied once a day. It can be washed off the skin as necessary until tolerance develops • People should be advised that using benzoyl peroxide may cause bleaching of hair, clothing, towels, and bed linen. • Benzoyl peroxide is available over-the-counter and it may be cheaper for some patients to buy from a pharmacy.
Topical antibacterials for acne	
1st line: clindamycin	• Best reserved for patients who wish to avoid oral antibacterials or who can't tolerate them • Concurrent use of a topical antibiotic with benzoyl peroxide may help prevent the spread of bacterial resistance. Benzoyl peroxide should not be used concomitantly with alcoholic formulations of antibiotics because of increased irritation, but can be used with *aqueous* formulations* • Oral & topical antibiotics should not be used concurrently. • Clindamycin is available as an aqueous lotion but is more expensive than the solution containing alcohol • Topical erythromycin is **not** recommended to be prescribed in primary care by local microbiologists
Topical retinoids	
1st line Tretinoin gel 0.01% & 0.025%, **2nd line** Adapalene cream/gel 0.1% (retinoid derivative)	• Start with 0.01 % tretinoin to minimize local adverse effects, applying initially every 2–3 nights, increasing to nightly once tolerated as retinoids may increase sensitivity to the sun (avoid strong sunlight as necessary) • People prescribed a topical retinoid should be advised that redness and peeling may occur for several days but usually settles with time. • Retinoids are teratogenic and are contraindicated during pregnancy. Although systemic absorption of topical retinoids is generally thought to be low, they should be avoided in women who are pregnant or who are considering pregnancy. Women of childbearing age should be advised on the use of effective contraception.
Oral antibiotics for acne	
1st line Doxycycline capsules 100mg a day **2nd line** Oxytetracycline 500mg twice daily Lymecycline 408mg capsules daily (if contraindication to tetracycline then erythromycin is first line) **3rd line** **Trimethoprim (unlicensed and under specialist advice only)** Erythromycin tablets 500mg twice a day (resistance common) Children under 12-use erythromycin	Both Lymecycline and doxycycline can be taken with food. Oxytetracycline must be taken an hour before food or on an empty stomach. Erythromycin is suitable as an alternative to tetracycline if these are contraindicated (e.g. in pregnancy) Where acne has not responded to a course of antibiotics, a second course of antibiotics of a different type should be tried. If tetracyclines have been used first line and acne has not responded a second course of a different antibiotic can be prescribed e.g. erythromycin.
Hormonal treatment in women	
Co-cyprindiol 2000/35 tablets (age 14-50 only) (this is **not** recommended for long term use. For those requiring a contraceptive a COC may be more appropriate) A monophasic COC containing 30 micrograms of ethinylestradiol with norethisterone or levonorgestrel	•Can be considered in moderate to severe acne which has not responded to oral antibiotics. • However some experts recommend as an option to try before oral antibiotics are tried **(off label)** • Discontinue 3 to 4 menstrual cycles after androgen related condition i.e. acne has resolved. •Co-cyprindiol has an increased risk of VTE compared to second generation oral contraceptives. • If contraceptive is required a COC is preferred.

The guidance has been updated in November 2010 and July 2011 by a prescribing adviser and sessional pharmacist

Comments on this guidance should be directed to:-
NHS Camden Medicines Management Team, Tel: 020 3317 2748 or email mmt.camdenpct@nhs.net

References and further reading:

1. Arowojolu, A.O., Gallo, M.F., Grimes, D.A. and Garner, S.E. (2004) *Combined oral contraceptive pills for treatment of acne (Cochrane Review).* The Cochrane Library. Issue 3. Chichester, UK: John Wiley & Sons, Ltd. www.nelm.nhs.uk/cochrane.asp [Accessed: 16/10/2006]. [Free Full-text]
2. BNF 60 (September 2010) *British National Formulary.* 60th edn. London: British Medical Association and Royal Pharmaceutical Society of Great Britain.
3. Bowman, S., Gold, M., Nasir, A. and Vamvakias, G. (2005) Comparison of clindamycin/benzoyl peroxide, tretinoin plus clindamycin, and the combination of clindamycin/benzoyl peroxide and tretinoin plus clindamycin in the treatment of acne vulgaris: a randomized, blinded study. *Journal of Drugs in Dermatology* **4**(5), 611-618.
4. Brown, S.K. and Shalita, A.R. (1998) Acne vulgaris. *Lancet* **351**(9119), 1871-1876.
5. CSM (2002) Cyproterone acetate (Dianette): risk of venous thromboembolism (VTE). *Current Problems in Pharmacovigilance* **28**(Oct), 9-10. [Free Full-text]
6. Cunliffe, W.J. (1996) Minocycline for acne. Doctors should not change the way they prescribe for acne. *British Medical Journal* **312**(7038), 1101. [Free Full-text]
7. Ferner, R.E. and Moss, C. (1996) Minocycline for acne. *British Medical Journal* **312**(7024), 138. [Free Full-text]
8. FFPRHC Clinical Effectiveness Unit (2003) FFPRHC guidance (October 2003) first prescription of combined oral contraception. *Journal of Family Planning and Reproductive Health Care* **29**(4), 209-223.
9. Garner, S.E., Eady, E.A., Popescu, C. et al (2003) *Minocycline for acne vulgaris: efficacy and safety (Cochrane Review).* The Cochrane Library. Issue 1. Chichester, UK: John Wiley & Sons, Ltd. www.nelh.nhs.uk/cochrane.asp [Accessed: 26/01/2006]. [Free Full-text]
10. Gough, A., Chapman, S., Wagstaff, K. et al (1996) Minocycline induced autoimmune hepatitis and systemic lupus erythematosus-like syndrome. *British Medical Journal* **312**(7024), 169-172. [Free Full-text]
11. Purdy , S and de Berker D (2006) Acne *British Medical Journal* **333**, 949-953
12. Magin, P., Pond, D., Smith, W. and Watson, A. (2005a) A systematic review of the evidence for 'myths and misconceptions' in acne management: diet, face-washing and sunlight. *Family Practice* **22**(1), 1-9.
13. MeReC (1999) The treatment of acne vulgaris: an update. *MeReC Bulletin* **10**(8), 29-32. [Free Full-text]
14. NICE (2001) *Referral advice - a guide to appropriate referral from general to specialist services.* National Institute for Health and Clinical Excellence. www.nice.org.uk . [Free Full-text]
15. Ozolins, M., Eady, E.A., Avery, A. et al (2005) Randomised controlled multiple treatment comparison to provide a cost-effectiveness rationale for the selection of antimicrobial therapy in acne. *Health Technology Assessment* **9**(1), 1-218. [Free Full-text]
16. Purdy, S. (2005) *Acne vulgaris.* Clinical Evidence. Volume 14. www.clinicalevidence.com [Accessed: 26/01/2006].
17. Purdy, S., Langston, J. and Tait, L. (2003) Presentation and management of acne in primary care: a retrospective cohort study. *British Journal of General Practice* **53**(492), 525-529. [Free Full-text]
18. Schachner, L., Pestana, A. and Kittles, C. (1990) A clinical trial comparing the safety and efficacy of a topical erythromycin-zinc formulation with a topical clindamycin formulation. *Journal of the American Academy of Dermatology* **22**(3), 489-495.
19. Thiboutot, D., Pariser, D.M., Egan, N. et al (2006) Adapalene gel 0.3% for the treatment of acne vulgaris: a multicenter, randomized, double-blind, controlled, phase III trial. *Journal of the American Academy of Dermatology* **54**(2), 242-250.
20. Vasilakis-Scaramozza, C. and Jick, H. (2001) Risk of venous thromboembolism with cyproterone or levonorgestrel contraceptives. *Lancet* **358**(9291), 1427-1429.
21. Webster, G.F. (2002) Acne vulgaris. *British Medical Journal* **325**(7362), 475-479. [Free Full-text]
22. CKS guidance: http://www.cks.nhs.uk/acne_vulgaris. June 2009
23. Primary Care Dermatology Society. Clinical Guideline. Acne vulgaris. Last updated 16th October 2010 www.pcds.org.uk Accessed 15th November 2010

Appendix 1 – Medication costs for treatment of acne

Costs correct at time of writing. Costs may fluctuate. Check current Drug tariff for up to date prices

Benzoyl Peroxide		
Drug and Preparation	**Pack size**	**Cost (£) based on November 2010 Drug Tariff or *BNF September 2010* prices**
Benzoyl Peroxide Gel 2.5%	40g	1.76
Benzoyl Peroxide Gel 5%	40g	*1.51*
Benzoyl Peroxide Gel 10%	40g	2.13
Benzoyl Peroxide Cream 5%	40g	*1.89*

Topical Antibacterials		
Drug and Preparation	**Pack size**	**Cost (£) based on November 2010 Drug Tariff or *BNF September 2010* prices**
Clindamycin topical solution 1% (aqueous)	30ml	5.08
Clindamycin topical solution 1% (alcohol)	30ml	4.34
Erythromycin 2% topical solution	50ml	7.69

Topical Retinoids		
Drug and Preparation	**Pack size**	**Cost (£) based on November 2010 Drug Tariff or *BNF September 2010* prices**
Tretinoin gel 0.01%	60g	5.28
Tretinoin gel 0.025%	60g	5.28
Adapalene gel 0.1%	45g	11.40
Adapalene cream 0.1%	45g	11.40
Isotretinoin 0.05% gel	30g	5.94
Epiduo® (adapalene 0.1% and benzoyl peroxide 2.5%)	45g	17.91

Oral antibiotics		
Drug and Preparation	**Quantity for 28 days treatment**	**Cost (£) based on November 2010 Drug Tariff or *BNF September 2010* prices**
Oxytetracycline 250mg tablets	112	5.04
Doxycycline 50mg capsules	56	3.58 (Cat M)
Doxycycline 100mg capsules	28	1.80 (Cat M)
Lymecycline 408mg capsules	28	7.77
Trimethoprim 200mg tablets	28	1.82
Erythromycin 250mg capsules	56	11.07 (Cat M)

Hormonal treatment		
Drug and Preparation	**Quantity**	**Cost (£) based on November 2010 Drug Tariff or *BNF September 2010* prices**
Co-cyprindiol 2000/35 tablets	63 tabs	4.70 (Cat M)