

National clinical audit on the management of childhood eczema based on NICE guidelines CG57 and associated standards

Ali Al-Sharqi

BAD Health Informatics sub-committee and
British Society for Paediatric Dermatology

M. Firouz Mohd Mustapa

BAD Clinical Standards Manager

David de Berker

Chair
BAD Health Informatics sub-committee

1. Background and Introduction

In December 2007 NICE produced a guideline for the management of atopic eczema in children from birth up to the age of 12 years (CG57).¹

An audit tool was published to aid in implementing the guidelines and updated regularly.²

2. Aims and Purpose

The main objective of the audit was to determine current clinical practice amongst dermatologists in the UK, as measured against the NICE standards.

3. Methodology

The NICE audit tool was configured to resemble those of BAD audit proforma spreadsheets already in existence for other topics and standards, which are intended to facilitate the undertaking of local audits. An Excel spreadsheet that does not request for patient-identifiable data was produced and piloted by members of the Health Informatics Sub-committee and the British Society for Paediatric Dermatology and this led to finalising the audit spreadsheet.

The invitation to participate was circulated to the BAD membership by email (on 13th January 2015; email recipients = 1402), with weekly reminders circulated during the 8-week data-collection period.

We asked the membership to provide data on 10 consecutive children with atopic eczema, seen between 1st January and 31st December 2014, who have had at least one follow-up consultation and to use the notes to respond to the questions in the proforma.

4. Results

4.1. Responses

Total number of responses was 128 out of 1402 invitations with a response rate of 9.1%. Regional breakdown of respondents is shown in Fig 1.

4.2. Patient population

Data was collected on 1264 patients; the age distribution is shown in Fig 2. One hundred and fifty patients were aged 13-17 and were included in this audit as it was felt that managing those patients in a paediatric unit would be covered by the same guidelines.

Information on disease severity was available on 1137 patients, which was used for the basis of the calculations in this paragraph; 28.76% had mild eczema, 44.50% moderate, and 27.74% severe. The majority of patients were treated with a combination of emollients and topical steroids. Bandages were used in 2.5% of cases, phototherapy in 1.7% and immunosuppressive systemic agents in 7.4% of cases. The pooled frequency of use for these three treatment methods increased from 1.83% in mild disease, to 4.55% in moderate and 29.93% of severe eczema cases.

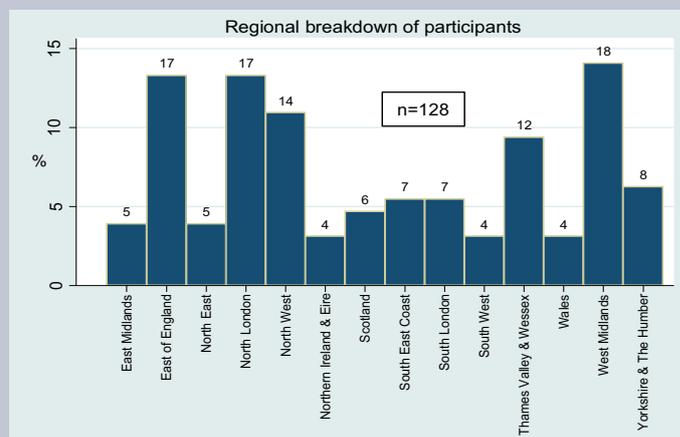


Fig 1. Regional breakdown of respondents; n=128

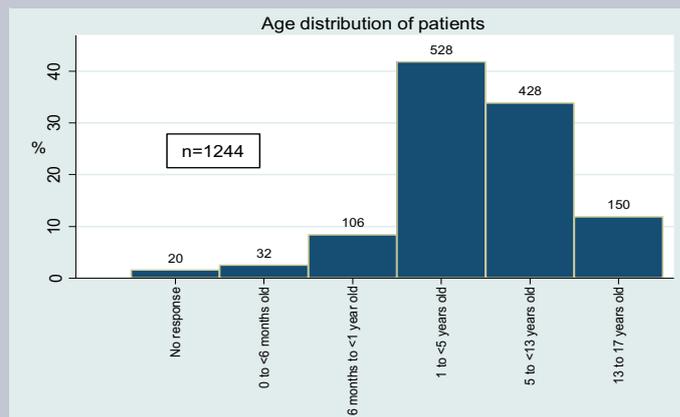


Fig 2. Age distribution; n=1244

KEY: in all boxplots, the national mean is denoted by the horizontal red line; regional sample medians are denoted by red dots; the lower and upper quartiles are denoted by 'whiskers'; outliers are denoted by blue dots; high median values indicate widespread alignment with the appropriate standards within the region whereas small interquartile ranges indicate little variation in practice.

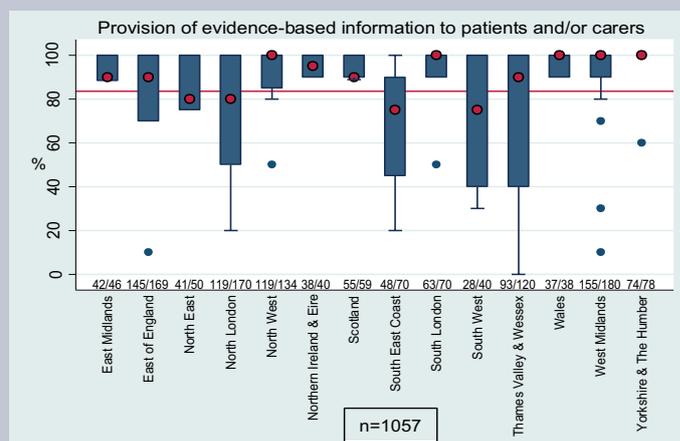


Fig 3. Boxplots showing the distributional mean percentage of "Yes" responses to having provided evidence-based information to each patient/carer, per hospital, in each region; n=1057

4.3. NICE standard: Provision of Patient Information Leaflets (PIL)

There was evidence that 83.62% of children and their parents or carers had been offered information to help them make informed decisions about their healthcare. In 28.24% of cases the PIL provided met the NICE standard fully, and 55.38% partially. Fig 3 shows the distributional regional mean percentages of PIL provision (both completely and partially meeting the standard) plotted with reference to the national average. The decision as to whether local forms achieved complete and partial compliance was made by local centres and could be subject to a degree of bias.

4.4. NICE standard: Holistic approach for the treatment of eczema with respect to documented severity, quality of life (QoL), and psychological impact of disease

Severity of disease was documented in 92.17% of patients, and in 64.64% of patients the assessment was documented at each visit. Assessment of impact on QoL was documented in 70.81% of cases, and in 29.43% the QoL was documented at each visit. Assessment of the psychological impact of the disease was documented in 62.34% of cases with 24.05% having an assessment at each visit. Figs 4, 5, and 6 show the distributional regional mean percentages of the above standards (both completely and partially meeting the standards) plotted with reference to the national average.

4.5. NICE standard: Consideration of trigger factors

Trigger factors were documented in 69.94% of cases and Fig 7 shows the distributional regional mean percentages plotted with reference to the national average.

4.6. NICE standard: Treatment should be according to a stepped approach

A stepped approach to management was documented in 92.8% of cases and Fig 8 shows the distributional regional mean percentages plotted with reference to the national average. Table 1 demonstrates the stepped approach as advised by the NICE guidance.

4.7. NICE Standard: 250-500g weekly leave on emollients prescribed

Leave-on emollients (non-wash off non-bath) were prescribed in accordance with the above guidance in 52.77% of cases and Fig 9 demonstrates the distributional regional mean percentages plotted with reference to the national average.

4.8. NICE Standard: Percentage of children with atopic eczema experiencing severe flares on the face or neck using moderate potency topical corticosteroids for longer than 5 days (the guideline recommends that moderate potency topical corticosteroids are only used on the face and neck for a period of 3 - 5 days)

In 8.07% of cases moderate potency topical steroids were needed for longer than 5 days on the above sites.

4.9. NICE Standard: Percentage of children with atopic eczema experiencing flares in vulnerable sites such as axillae and groin using moderate or potent topical corticosteroids for longer than 14 days (The guideline recommends that moderate or potent topical corticosteroids are only used in these areas for a period of 7 - 14 days)

In 3.24% of cases moderate or potent steroids were needed for more than 14 days on the above sites.

4.10. NICE Standard: The percentage of cases where specialist dermatological advice has been given for children with atopic eczema treated using very potent topical corticosteroids

In 95.17% of cases very potent steroids were used only in the presence of specialist care.

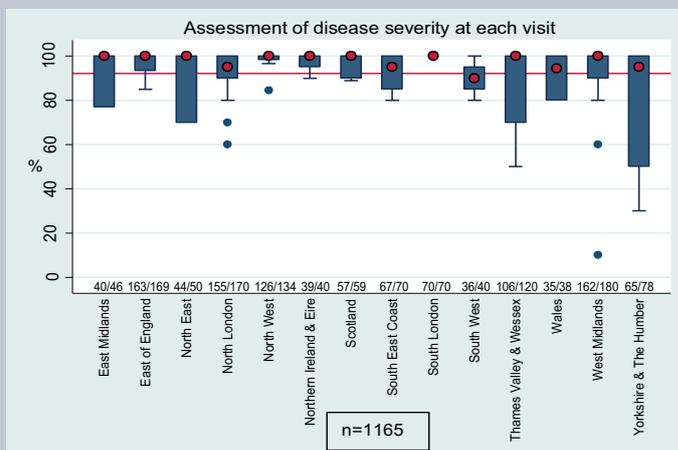


Fig 4. Boxplots showing the distributional mean percentage of "Yes" responses to having recorded assessment of disease severity for each patient at any visit, per hospital, in each region; n=1165

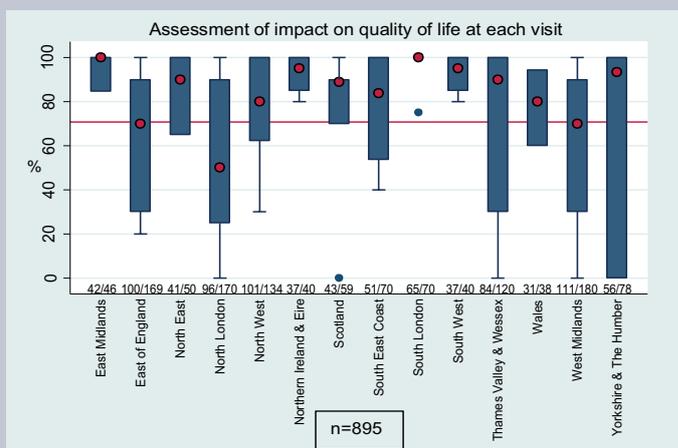


Fig 5. Boxplots showing the distributional mean percentage of "Yes" responses to having recorded assessment of impact on QoL for each patient at any visit, per hospital, in each region; n=895

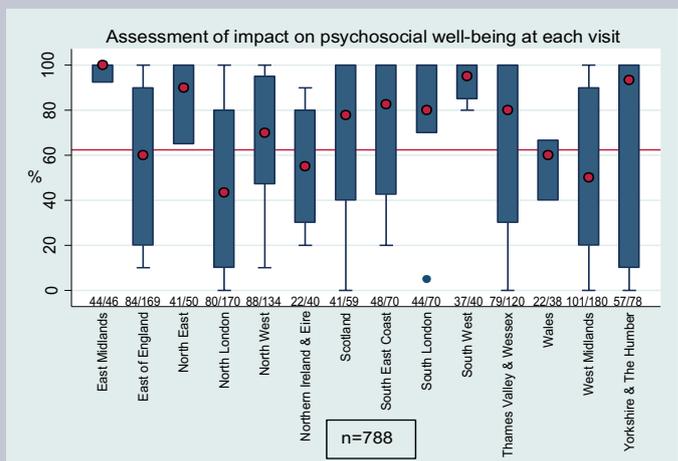


Fig 6. Boxplots showing the distributional mean percentage of "Yes" responses to having recorded assessment of impact on psychosocial well-being for each patient at any visit, per hospital, in each region; n=788

4.11 and 4.12. NICE Standard: Appropriate referral and evidence of late referral

In 92.41% of cases the referral was deemed appropriate and in 83.86% timely.

4.13. NICE Standard: Availability of a range of unperfumed emollients on prescription to meet preferences

In 96.97% of centres a range of unperfumed emollients were available on prescription.

5. Discussion

5.1. Responses

The response rate of 9.1% was lower than previous national audits; this largely reflects the fact the paediatric dermatology is a subspecialty.

5.2. Patient population

Atopic eczema affects 1 in 5 children in the UK.¹ The majority of patients attending secondary care have moderate to severe eczema. Although 28.76% of cases had mild eczema at the time of their last visit that might reflect adequate control with treatment available only in secondary care, e.g. systemics and phototherapy. The majority of the participating centres felt that patients with atopic eczema are referred appropriately and in a timely manner from primary care.

5.3 Adherence to NICE standards

There were good adherence rates to provision of information and educating patients on atopic eczema. Likewise, there was good documentation of disease severity. Documentation of disease impact on QoL and psychology was less robust but comparable to similar findings from the national psoriasis audit.³

A stepped approach for treatment was adopted in the majority of cases, with limited deviations from standard treatments by the use of moderately potent or potent steroids on sensitive sites for longer than the guidelines recommend. This may reflect the fact that some centres are tertiary centres where more severe cases are treated.

Prescription of leave-on emollients according to the guidelines was low. Comments from participants in the pilot audit mentioned that in their centres this is left to the primary care physician and therefore the exact quantity is difficult to ascertain.

6. Action Points

1. BAD to develop a standardized atopic eczema proforma that could be adapted into either a paper or an electronic-based health records system that captures all the audit points in the NICE guidance, with emphasis on areas of low adherence, e.g. capturing the QoL and the psychological impact.
2. Exploring the possibility of educational online material that could be sent to the patients or their carers, examples of which have already been developed in certain trusts.

References

1. <https://www.nice.org.uk/guidance/cg57/resources/guidance-atopic-eczema-in-children-pdf>
2. <https://www.nice.org.uk/guidance/.../atopic-eczema-in-children-audit-support>
3. The assessment and management of patients with psoriasis – where are we? A national clinical audit by the British Association of Dermatologists based on NICE clinical guidelines and audit standards, *BAD News!*, Autumn 2013: 22-5.

Table 1. Stepped management approach according to NICE guideline CG57

Mild atopic eczema	Moderate atopic eczema	Severe atopic eczema
Emollients	Emollients	Emollients
Mild-potency topical corticosteroids	Moderate-potency topical corticosteroids	Potent topical corticosteroids
	Topical calcineurin inhibitors	Topical calcineurin inhibitors
	Bandages	Bandages
		Phototherapy
		Systemic therapy

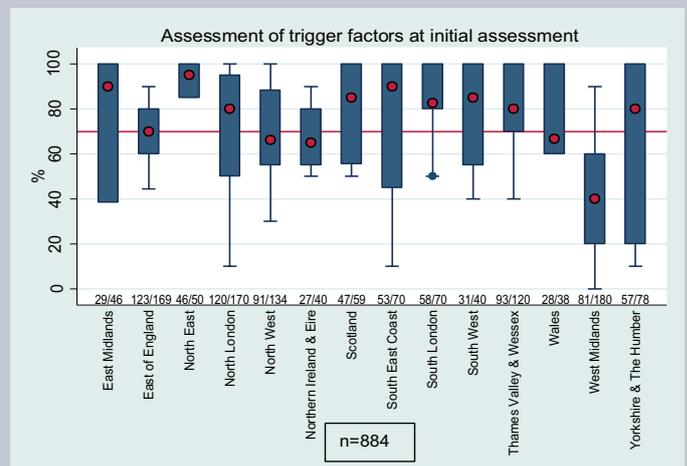


Fig 7. Boxplots showing the distributional mean percentage of "Yes" responses to having recorded assessment of trigger factors for each patient at initial visit, per hospital, in each region; n=884

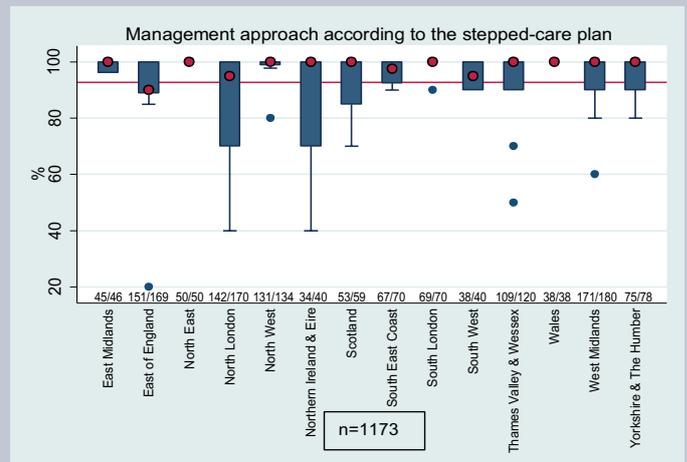


Fig 8. Boxplots showing the distributional mean percentage of "Yes" responses to having adopted a stepped-care plan for each patient, per hospital, in each region; n=1173

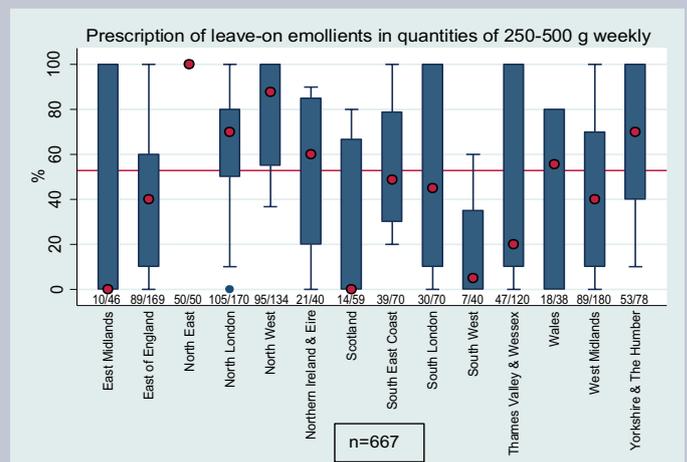


Fig 9. Boxplots showing the distributional mean percentage of "Yes" responses to having recorded prescription of leave-on emollient in quantities of 250-500 g weekly for each patient, per hospital, in each region; n=667