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Routine infant skincare advice in the UK: A cross-sectional survey

To the Editor,

Eczema has the highest burden of all skin disease, affecting 15% of infants and 6% of older children worldwide.¹ Gene–environment interactions are implicated in eczema development. Impaired skin barrier function is observed in infants preceding the development of clinical eczema, suggesting that preventing skin barrier function impairment may support primary prevention of eczema.² In infancy, the skin undergoes a maturation process including changes in the lipid lamellae structure and stratum corneum. The stratum corneum becomes less permeable, reflected in reduced transepidermal water loss rates as maturation occurs. The impact of infant skincare routines on short- or long-term skin barrier function and skin health is unknown.

A systematic review published in 2018 sought to identify what skin practices are important for the protection of baby skin in healthy term babies (0–6 months) and generate evidence-based conclusions to inform health professionals and parents.³ The review divided infant skincare into five facets: baby skin care for bathing and cleansing, nappy care, hair and scalp care, management of dry skin and baby massage. The review noted that there had been few studies with a follow-up time point to assess any correlation between skin products used from birth and the development of atopic eczema.

Skincare studies tend to compare an intervention with routine advice. However, routine skincare advice varies between settings. The World Health Organization (WHO) recommends delaying bathing for 24 h after birth and that if this is not possible for cultural reasons, bathing should be delayed for at least 6 h. The WHO makes no specific recommendations for infant skincare beyond this point.⁴ In the UK, National Institute for Health and Care Excellence (NICE) guidelines recommend that healthcare providers provide parents with information about how to bathe their baby and care for their skin, but do not state what this information should be.⁵

No systematic assessment of what constitutes routine skincare advice in antenatal and postnatal services has been undertaken. To ascertain the infant skincare advice given to the UK general public, we made a freedom of information (FOI) request to the 149 NHS providers of maternity services in England, Scotland, Wales and Northern Ireland. The two questions asked were as follows: ‘What antenatal advice does the trust routinely give to mothers about infant skincare including the bathing of babies?’ and ‘What postpartum

advice does the trust routinely give to mothers about infant skincare including the bathing of babies?’ The survey was conducted between 27/07/22 and 01/12/22.

The results are summarised in [Table 1](#) divided into the five facets of skincare identified in the systematic review and [Figure 1](#). One hundred and twenty-nine (86.6%) healthcare providers completed the survey. Of the responding providers, 18 (14.0%) gave no routine advice; 1 (0.8%) only gave antenatal advice; 30 (23.3%) only gave postpartum advice; and 80 (62.0%) gave antenatal and postpartum advice. One hundred and-seventeen of 129 (90.7%) made time-limited recommendations about skincare ([Table 1](#) Section A). Thirty-six (27.9%) recommended delaying the first bath. Ten (7.8%) advised delaying the first bath for 24 h (aligned with WHO guidelines). Of these, four advised a 24-h delay for thermoregulation and six did not supply a reason. Five (3.9%) advised not to bathe for the first ‘few’, 2 or 3 days. Of these, one stated that the delay was for thermoregulation and development of the acid mantle; four did not state why. Two (1.6%) advised to delay bathing for 5–7 days—one did not state a reason and the other stated that high levels of limescale in the area could increase risk of eczema and psoriasis. Six (4.7%) advised to delay bathing for seven days. Of these, two did not supply a rationale, one cited thermoregulation, one cited both thermoregulation and to support build-up of the acid mantle, one cited umbilical cord care and one cited cord care, addition to the skin flora and vernix preservation. Two (1.6%) advised not bathing for 7–10 days; one did not give a reason, the other stated that this was to establish the microbiome. Two (1.6%) providers recommended delaying the first bath for 1–2 weeks; one stated this was to help establish the microbiome and the other gave no reason. Six (4.7%) advised to delay bathing until the umbilical cord falls off. A further three providers gave more ambiguous advice about the delay. Sixty-two (48.1%) providers recommended that the use of cleansing products should be delayed—the most frequently stated delay was for 4 weeks (33 [25.6%] providers) and proposed delays ranged from 2 weeks to 3 months. Three (2.3%) advised to use a comb rather than shampoo in the first few weeks. Twenty-three (17.8%) providers recommended not removing the vernix.

Around a third of providers (50, 38.8%) made recommendations about bathing frequency ([Table 1](#) Section B). Suggested bathing frequencies ranged from daily to once per week. Regarding the use of products, 104 (80.5%) advised bathing babies in

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plain water only—no soap, bubble bath or wash product and 65 (50.4%) recommended not using skincare products. Eleven (8.5%) advised that if wishing to use a cleansing agent (e.g. soap), then to use mild, nonperfumed soap. Seventeen (13.2%) advised using baby shampoo, and four (3.1%) advised using baby bath liquid. Sixty-two (48.1%) advised using cotton wool, a sponge or wash cloth. Thirty (23.3%) provided more specific recommendations, often conflicting between providers, about which skincare products to use or what to avoid (Table 1). Many product categories that were suggested included baby oil and 'natural' oils. Aqueous cream, scented products and olive oil-based products were most frequently suggested to be avoided. Notably, sunflower oil is recommended by two providers but recommended against by another provider; two recommend olive oil and five recommend against it. Vegetable oil is recommended by three providers and advised against by one.

In summary, UK health providers' routine advice about infant skincare varies considerably; often conflicting between providers. This reflects the lack of research about the optimum skincare regimen, leading to a lack of clear and consistent guidelines from UK and international bodies.

One specific area of infant skincare for which there is a paucity of evidence is the optimal frequency of bathing. Frequent bathing is dissociated from our evolutionary history⁶ and negatively impacts on skin physiology (even when bathing in water alone), may reduce skin barrier function and could potentially predispose infants to skin conditions such as eczema. Tap water (pH 7.9–8.2) increases naturally acidic skin pH by 0.19, decreases skin fat content by 0.93 µg/cm² and changes enzymatic activity in the upper epidermis.⁷

Key messages

- We surveyed over 85% of UK public health system maternity care providers in 2022.
- Routine UK infant skincare advice is very heterogeneous, often conflicting and not evidence based.

The UK National Health Service (NHS) recommends bathing in plain water, not using oils or lotions for the first month, and advises that there is no reason to not bathe the baby daily if the baby enjoys it.⁸ The UK Royal College of Midwives (RCM) Website previously reported an expert recommendation from the systematic review³ within the 'Bathing and cleansing' domain that an infant only be bathed 2–3 times per week up to 6 months of age. However, this page was removed, and the only document on the RCM Website pertaining to bathing is a Johnson's document 'Science of the Senses – Making the most of bath time (Johnson's)'. The document does not include the word 'frequency' or the term 'per week' but states that a 'regular multisensory stimulation has been shown to have a number of benefits for babies', with the clear inference that doing this daily is optimal. It finishes with a link to a webpage on the Johnson's Website itself, if readers require more information.

There has been no high-quality clinical trial examining the impact of infant bathing on the development of eczema.⁹ Bathing is a complex multifactorial behaviour, involving multiple potential aspects including water temperature, water hardness, bathing duration, use of wash products and associated potential application of moisturisers



FIGURE 1 Word cloud showing current UK healthcare provider recommendations for newborn infant skincare.

TABLE 1 Results of a survey of UK healthcare providers regarding antenatal and postnatal recommendations for routine infant skincare.

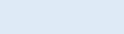

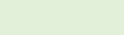

	Healthcare providers n = 129; (%)
A. Time-limited advice	
Advice about the vernix	
Preserve the vernix (do not wipe it off)	23 (17.8)
Recommended delay for the first bath	
24 h	10 (7.8)
'We recommend that babies aren't bathed straight away to avoid the skin drying out' ^a	1 (0.8)
First 'few', 2 or 3 days	5 (3.9)
'Bathe as little as possible in the early days' ^a	1 (0.8)
'Do not bathe the baby for several days to help the microbiome to establish' ^a	1 (0.8)
5–7 days	2 (1.6)
7 days ^a	6 (4.7)
7–10 days ^a	2 (1.6)
1–2 weeks ^a	2 (1.6)
Delay until chord falls off	6 (4.7)
Any delay	36 (27.9)
Recommendations for delayed use of soap or cleansing product	
Plain water for 2–4 weeks	6 (4.7)
Plain water for 4 weeks ^a	33 (25.6)
Plain water for 4–6 weeks ^a	13 (10.1)
Plain water for 6 weeks ^a	8 (6.2)
Plain water for 8 weeks	1 (0.8)
Plain water for 3 months	1 (0.8)
Delayed use of soap or cleansing product	62 (48.1)
Other time-limited recommendations involving bathing	
Bathe approximately 1–2 times per week in first few weeks	1 (0.8)
Recommendations about nappy care	
No baby wipes for 2–4 weeks	3 (2.3)
No baby wipes for 4 weeks	1 (0.8)
Recommendations for delayed introduction of products for dry skin or baby massage	
No skincare products (e.g. lotions) for 2 or 'few' weeks	4 (3.1)
No skincare products (e.g. lotions) for 4 weeks	20 (15.5)
No oils for 4 weeks	10 (7.8)
No creams or lotions for 4–6 weeks	1 (0.8)
No products (e.g. lotions) for 6 weeks	5 (3.9)
Avoid commercial products for 3 months	1 (0.8)

TABLE 1 (Continued)

	Healthcare providers n = 129; (%)
Any delayed introduction of other products^b	33 (25.6)
Recommendations about hair and scalp care	
No soap or shampoo for 3 months	1 (0.8)
Use a comb rather than shampoo in the first few weeks	3 (2.3)
B. Nontime-limited advice	
Recommended bathing frequency	
Daily	2 (1.6)
Every day is unnecessary but fine if your baby enjoys it	11 (8.5)
2–3 times per week, but every day is fine if they enjoy it	5 (3.9)
Babies do not require bathing daily ^a	19 (14.7)
2–3 times/week	4 (3.1)
1–2 times/week ^a	5 (3.9)
Once per week ^a	1 (0.8)
Keep baths to a minimum ^a	3 (2.3)
Any recommendation about bathing frequency	50 (38.8)
Recommendations about bathing and cleansing	
Bathe babies in plain water only ^a	104 (80.5)
Avoid using skincare products ^a	65 (50.4)
Use mild, nonperfumed soap if you wish to use soap	11 (8.5)
Do use baby bath liquid	4 (3.1)
Use cotton wool, a sponge or a wash cloth	62 (48.1)
Recommendations about nappy care	
Barrier cream to prevent nappy rash	1
Metanium cream for nappy rash	1
Recommendations about hair and scalp care	
Do use baby shampoo	17 (13.2)
Recommended skincare products to use^c	
Emollient based cream free from sodium dodecyl sulphate	1
Emollient based cream free from alcohol, colour and perfume	2
Childs farm	1
Baby cream	1
Baby oil	5
Vegetable oil	3
Rapeseed oil	2
Coconut oil	1
Almond oil	1
Natural oil	4
Grapeseed oil	1

(Continues)

TABLE 1 (Continued)

	Healthcare providers n = 129; (%)
Food grade oil	1
Safflower oil	1
Sunflower oil	2
Grape seed oil	1
Vaseline	1
Olive oil is recommended	2
Oil (unspecified)	1
Oil, but ask midwife first	1
Vegetable (not nut) based and free from mineral oils, perfume and colours	1
Unperfumed products	1
Breastmilk for skin soreness	1
Oil or cream (no specific oil or cream suggested)	3
Perfume free oils	1
Cream (unspecified type) only for dry/ cracked skin; not for dry flaky skin	1
Lanolin—if skin appears cracked	1
Recommendations for skincare products to avoid^c	
Aqueous cream	5
Olive oil	5
Vegetable oils	1
Oils, especially nut based oils	1
Sunflower oil	1
Peanut oil	3
Scented products	9
Key	
Colour	Skincare advice facet
	Advice about bathing and cleansing
	Nappy care
	Hair and scalp care
	Recommendations for management of dry skin or baby massage

^aQuantification of responses is based on the verbatim response; some of these categories overlap.

^bThe same providers often advise about both delayed introduction of wipes and moisturiser/oil so the box total is not the algebraic sum of the preceding categories.

^cSome healthcare providers recommend multiple products to use and/or avoid; percentages not supplied for these categories as the raw numbers are low.

after the bath. A UK National Institute for Health Research (NIHR) Research for Patient Benefit (RfPB)-funded randomised controlled feasibility trial (BabyBathe) has designed a simple intervention based

on asking intervention families to reduce the frequency of bathing their infant and is now testing this in a feasibility trial (NIHR Research for Patient Benefit programme (NIHR203170)).

KEYWORDS

bathing, eczema, pediatrics, prevention

AUTHOR CONTRIBUTIONS

MRP contributed the original idea. LG, MU, BB, MRP and AR contributed to the study design. LG conducted the survey, analysed the data, prepared study results and drafted the manuscript. All co-authors contributed to revising the manuscript and approved the final version.

FUNDING INFORMATION

No funding was received for this survey.

CONFLICT OF INTEREST STATEMENT

The authors are undertaking an NIHR RfPB feasibility trial of reducing potentially harmful bathing practices in infants for the prevention of eczema.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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