



Letters

Bathing frequency recommendations for pediatric atopic dermatitis: are we adding to parental frustration?

Bathing is an activity of daily living frequently addressed by providers as part of a treatment plan for patients with atopic dermatitis (AD). However, studies evaluating bathing frequency in pediatric AD are limited.^{1–4} Consequently, the jury remains out on this topic. Hence, there is likely to be confusion when AD guidelines have not provided clear and consistent evidence-based advice in this area.^{5–8} Two recent practice guidelines from the United States⁵ and Europe⁶ fail to comment entirely on bathing frequency. Instead they focus on duration of bathing based on expert opinion: US guidelines recommend at least 10-minute soaking baths,⁵ and European guidelines recommend short, 5-minute baths.⁶ Our goal was to determine what parents of children with AD interpret from their providers concerning bathing frequency. Given the lack of clarity in AD guidelines, we hypothesized that advice received by parents concerning bathing frequency in AD would lack consistency and subsequently contribute to further confusion and frustration in this often difficult to manage disease.

In testing this hypothesis, an online institutional review board–approved 7-question survey was posted to the National Eczema Association (NEA) website, quarterly electronic newsletter, and Facebook page. The NEA is a nonprofit organization dedicated to AD research, education, and advocacy. Membership includes parents of pediatric patients with AD. The survey was posted for a period of 6 weeks in the spring of 2012, and members of the NEA were invited to participate voluntarily and anonymously by clicking a SurveyMonkey link (www.surveymonkey.com). Participation implied consent. The survey questions can be found in Table 1. Confidence intervals (CIs) were calculated using an online statistical computation tool available through Vassar Stats (<http://www.vassarstats.net/prop1.html>).

A total of 354 NEA members responded to the survey. Basic demographics were gathered on which health care providers parents see for their child's AD. The focus was on frequency, not method of bathing; showers vs soaking baths were not distinguished, although this too remains an area of uncertainty.⁹ With regard to moisturizing, there is general agreement within AD guidelines that emollients should serve as first-line therapy. We chose to focus on the area of bathing frequency, where the guidelines were lacking.

The results of the survey are found in Table 1. Most parents see a specialist for their child's AD. Of those, 82.7% had been referred to a dermatologist, and 49.8% to an allergist/immunologist. Parents reported that their primary care provider (PCP) recommended “frequent/daily bathing” less than 50% of the time, whereas they reported their specialist recommended “frequent/daily bathing” more than 50% of the time (with nonoverlapping CIs). Of those who

had seen a specialist or multiple providers, 45.6% had received conflicting advice about bathing, and of those, 76.4% felt this caused frustration and confusion.

This survey did not compare recommendations between specialists and PCPs; however, parent interpretation of provider recommendations is actually consistent with previous surveys of physicians done by the authors. For instance, in a survey of 904 American Academy of Allergy Asthma and Immunology members, 57.01% (95% CI 53.83%–60.27%) recommended “frequent/daily bathing,” which closely approximates parents' response to question 5.¹⁰ Likewise, in a pilot survey of 37 members of the society of pediatric dermatology, 62% (95% CI, 46.1%–75.9%) recommended “frequent/daily bathing” (author's unpublished data), demonstrating that frequent/daily bathing seems preferred by specialists who have experience in AD management. On the contrary, the opposite seems to be the case amongst PCPs. In a survey of 145 members of the Maine Chapters of the American Academy of Pediatrics and American Academy of Family Physicians, pediatricians and family physicians recommended frequent/daily bathing 28% (95% CI, 19%–41%) and 15% (95% CI, 9%–24%) of the time, respectively (2013 ACAAI abstract submission). The numbers are small but the trend is consistent with how parents answered question 4. Taken together, the difference of opinion that caused confusion in parents may have come from those who saw multiple providers, or saw a PCP then later saw a specialist (question 6).

Although we are confident in the validity of our results, one limitation of this study is that we did not ask families whether their provider tailored their bathing strategy specifically to their child. Possibly a proportion of the 54.4% who did not receive conflicting advice may have fallen into this category. In addition, we did not gather demographic information from the NEA population we surveyed, diminishing the generalizability of our findings. For instance, we do not know the eczema severity of the children with AD, although one might imagine it could be skewed toward a more severe phenotype, because most parents reported seeing a specialist for their child's AD. The parent of a child with severe AD may be more motivated to be involved with the NEA and thus could be more “eczema-savvy” than the average parent, potentially underestimating the percentage of parents who are confused by bathing instructions. Conversely, such a parent could also be more prone to frustration as well. Finally, we cannot be certain how many parents, of the 76.4% who reported being frustrated and confused, pursued providers that gave recommendations that reflected their own beliefs. Quantifying this via a survey would be difficult.

In summary, this survey of parents of children with AD, albeit of limited sample size and from a specific parent-patient population, has demonstrated that parents report disagreement between PCPs and specialists on bathing frequency, and this inconsistency

Disclosures: Authors have nothing to disclose.

Table 1

Parental responses to survey questions regarding bathing frequency in pediatric atopic dermatitis (N = 354)

Questions	Responses		
1. Which PCP does your child with eczema see (most often) for general medical care?	Family Practice 24.5% (76) [95% CI 20.1–29.6]	Pediatrician 75.5% (234) [95% CI 70.2–80.1]	
2. Is your PCP the principal person who manages your child's eczema?	Yes 31.1% (106) [95% CI 26.3–36.3]	No 68.9% (235) [95% CI 63.8–73.6]	
3. If you answered "no" to question 2, which specialist(s) have you been referred to and/or are currently seeing?	Allergy/Immunology 49.8% (115) [95% CI 43.4–56.2]	Dermatology 82.7% (191) [95% CI 77.3–87]	Other 4.8% (11) [95% CI 2.7–8.3]
4. What advice has your PCP given about bathing frequency?	Frequent/daily bathing 42.3% (142) [95% CI 37.1–47.6]	Limited/less than daily bathing 33% (111) [95% CI 28.2–38.2]	No advice has been given 24.7% (83) [95% CI 20.4–29.6]
5. If applicable, what advice has your specialist given about bathing frequency?	Frequent/daily bathing 55% (176) [95% CI 49.5–60.4]	Limited/less than daily bathing 27.2% (87) [95% CI 22.6–32.3]	No advice has been given 17.8% (57) [95% CI 14–22.4]
6. If you have seen a specialist and/or multiple providers, have you received conflicting advice on bathing frequency?	Yes 45.6% (145) [95% CI 40.2–51.1]	No 54.4% (173) [95% CI 48.9–59.8]	
7. If you answered "yes" to question 6, has this conflicting advice caused confusion or frustration?	Yes 76.4% (110) [95% CI 68.8–82.6]	No 23.6% (34) [95% CI 17.4–31.2]	

Abbreviations: AD, atopic dermatitis; CI, confidence interval; PCP, primary care provider.

contributes to a high degree of frustration and confusion among families. Although the variability among providers may have been expected thanks to silence from AD guidelines, to our knowledge this is the first report to highlight that we may be doing a disservice to families by not having a unified voice on the subject. Until further studies are done to identify whether frequent bathing or infrequent bathing is more effective, providers should consider an empirical approach tailored to each individual patient.

Erin Kempe, DO*

Neal Jain, MD†

Ivan Cardona, MD‡

*Maine Medical Center

†San Tan Allergy and Asthma

‡Allergy and Asthma Associates of Maine

Portland, Maine

icardona001@gmail.com

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Predictors of indoor exposure to mouse allergen in inner-city elementary schools

Mouse allergen exposure is prevalent in homes and schools.^{1–3} Although home mouse allergen and predictors of home exposure have been well characterized, little is known about school environments where children spend the majority of their day.^{4–6} The ongoing School Inner-City Asthma Study (SICAS; National Institutes of Health/National Institute of Allergy and Infectious Diseases)

seeks to evaluate the role of school-specific exposures and asthma morbidity in urban students with asthma. In this report, we examined predictors of school-specific mouse exposure for children with asthma.

The SICAS study design has previously been reported.⁷ Briefly, students with asthma were recruited from validated school screening surveys.⁸ Students who fulfilled established inclusion/exclusion criteria modeled from other urban asthma studies were enrolled.^{7,9}

Classrooms/caféterias were sampled (settled and airborne) twice during the academic year, approximately 6 months apart (designated as fall and spring, respectively) to assess seasonal differences. Home settled samples were also collected. School and home samples were linked to enrolled students and analyzed for indoor allergens using multiplex array technology (Indoor Biotechnologies, Charlottesville, Virginia). School/classroom and

Disclosures: This work was conducted with support from Harvard Catalyst/The Harvard Clinical and Translational Science Center (National Institutes of Health Award UL1 RR 025758) and financial contributions from Harvard University and its affiliated academic health care centers. The content is solely the responsibility of the authors and does not necessarily represent the official views of Harvard Catalyst, Harvard University and its affiliated academic health care centers, the National Center for Research Resources, or the National Institutes of Health.

Funding Sources: The School Inner-City Asthma Study is supported by grants R01 AI 073964, R01 AI 073964-02S1 and K24 AI 106822 (PI: W. Philipatanakul). This work was also supported in part by NIH grants K23AI106945 and U10HL098102.