Maternal Adherence Factors in the Treatment of Pediatric Atopic Dermatitis

Effective control of atopic dermatitis in children requires frequent use of treatment, but adherence to topical treatment in this population is abysmal.1 Caregiver involvement plays a crucial role in treatment. Mothers are frequently the primary caregivers and often control medication administration.

While much of the data on adherence to topical treatment regimens for chronic skin disease come from adult studies,2,3 adult impediments to adherence might also apply to mothers in the treatment of their children: inconvenience of use, time constraints, unclear or complex instructions, and fear of adverse effects. We sought to gain a better understanding of the poorly characterized maternal factors that affect medication use through a qualitative study to identify factors that influence mothers’ medication administration in the management of pediatric atopic disease.

See also page 231

Methods. Data for this study were collected as part of a larger investigation examining mothers’ willingness to participate in research studies. Data were initially collected from 20 mothers of children 5 years or younger in 5 counties across North Carolina through a site-based recruitment strategy with the goal of obtaining a representative, nonrandom sample that included a range of racial, ethnic, and income groups. We analyzed data from 12 participants whose children had a diagnosis of atopic dermatitis, asthma, or both. In-depth, semistructured interviews lasting approximately 1 to 2 hours were conducted, and subjects were asked open-ended questions regarding the effects of the atopic condition and attitudes towards treatment.

The transcribed interviews then underwent content analysis by at least 2 members of the research team assigning content using the qualitative software package ATLAS.ti, version 5.5.4 A coding dictionary was developed based on review of transcribed interviews. Coded categories relevant to adherence included (1) alternative treatments; (2) effect of disease on children; (3) effect of disease on mothers; (4) physician-patient relationship; (5) physician’s attitudes; (6) ideal treatments; (7) prescriptions; (8) reminders; and (9) treatment effect. The Wake Forest University Health Sciences institutional review board approved the study protocol.

Results. We identified 5 thematic domains affecting treatment adherence: (1) convenience of medication use; (2) effect of disease and medication use on the lives of patients and caregivers; (3) caregiver education; (4) parent-physician relationship; and (5) alternative treatments (Table 1). Ease of use was commonly mentioned as an important consideration (Table 2) and was determined by the number of doses required per day, route of administration, ability of the child to self-administer, and willingness of the child to participate in uncomfortable treatments. The importance of convenience was emphasized by participants’ perceptions of the ideal treatment: simple administration, infrequent dosing, and rapid results.

Four mothers expressed open concern about potential adverse effects of steroids and believed that steroids might pose a greater risk than the disease. Most denied that difficulty remembering to give medications was a factor in adherence, but tying administration to routine daily activities was identified as a key to routine administration. Understanding the disease and its management eased parental anxiety and reinforced the necessity of treatment.

Parent-physician interactions were critical in shaping mothers’ attitudes toward treatment; factors that contributed to a favorable experience were physician communication skills, length of time physicians spent with patients, and expediency of scheduling appointments and receiving treatment. When mothers perceived that physicians did not consider parental input in designing treatment plans, there was decreased motivation for adherence. Follow-up improved willingness to continue seeking treatment.

Most of the mothers denied seeking or accepting treatment recommendations from family, friends, and nonmedical sources, although many reported receiving unsolicited advice from family members and friends.

Comment. Making the diagnosis of atopic dermatitis and prescribing appropriate topical treatments are necessary but not sufficient for effective management of the disease. In addition, addressing the poor adherence that is common in this condition is critical. Because caregivers tend to be intimately involved in the treatment, the treatment plan should address caregivers’ concerns. Prescribing once-a-day treatments, providing adequate instructions (concerning the disease, its treatment, and why the treatment is needed), and tying the treatment
to an existing element of the family routine (such as bathing or brushing teeth) may be helpful.

While topical corticosteroids are the first-line treatment for atopic dermatitis, apprehension regarding adverse effects of steroid use is common.² Projecting a caring attitude, engendering trust, and building a strong caregiver-physician relationship may help overcome fear of adverse effects and promote better adherence. Close follow-up, at least until initial control of the disease is achieved, may further enhance adherence and outcomes.³

Sarah D. Fenerty, BS
Jenna L. O’Neill, MD
Cheryl J. Gustafson, MD
Steven R. Feldman, MD, PhD

Accepted for Publication: August 2, 2012.

Author Affiliations: Center for Dermatology Research, Departments of Dermatology (Ms Fenerty and Drs O’Neill, Gustafson, and Feldman), Pathology (Dr Feldman), and Public Health Sciences (Dr Feldman), Wake Forest University School of Medicine, Winston-Salem, North Carolina.

Correspondence: Dr Feldman, Department of Dermatology, Wake Forest University School of Medicine, Medical Center Blvd, Winston-Salem, NC 27157-1071 (sfeldman@wfubmc.edu).

Author Contributions: All authors had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis. Study concept and design: Feldman. Acquisition of data: O’Neill and Feldman. Analysis and interpretation of data: Fenerty, Gustafson, and Feldman. Drafting of the manuscript: Fenerty and O’Neill. Critical revision of the manuscript for important intellectual content: Fenerty, Gustafson, and Feldman. Administrative, technical, and material support: Feldman. Study supervision: Feldman.

Conflict of Interest Disclosures: The Center for Dermatology Research is supported by an unrestricted educational grant from Galderma Laboratories, LP. Dr Feldman has received research, speaking, and/or consulting support from Galderma, Abbott Labs, Warner Chilcott, Leo, Amgen, Astellas, Centocor, National Biological Corporation, and Stiefel/GSK; he also Feldman owns stock in the patient satisfaction website www.DrScore.com.

Funding/Support: This study was supported in part by National Institutes of Health grant R21 AI 70687.

Role of the Sponsors: The sponsors had no role in the design and conduct of the study; in the collection, analy-

### Table 1. Maternal Comments on Thematic Domains Affecting Treatment Adherence

<table>
<thead>
<tr>
<th>Interview Question</th>
<th>Coded Category</th>
<th>Thematic Domain</th>
<th>Interview Quotation</th>
</tr>
</thead>
<tbody>
<tr>
<td>In what ways is it difficult to use the medication?</td>
<td>Prescriptions</td>
<td>Convenience</td>
<td>“I think [the daycare providers are] limited on what they can and can’t do for a child with eczema during the day. . . That’s one of the most problems I have . . . to keep shine to her, you have to apply lubrication all day long because, of course, the environment. And she goes outside and plays, she comes home, she’s broke out because the dust and the sand and things like that.”</td>
</tr>
<tr>
<td>How does the disease affect your child’s life?</td>
<td>Effect of disease on children</td>
<td>Effect of disease vs medication use on lives of patients and caregivers</td>
<td>“It affects her life every single day, simply because I have to be cautious in the heat . . . in the bathtub . . . it can’t be too hot, because it will dry her skin out, make sure she’s rinsed off really well . . . if she eats anything with high acidic [content] . . . the salt burns her hands . . . if she has any type of peach juice or apple juice or orange juice, she can’t get it on her hands because it Burns really bad, it makes them red, and so I have to limit [what she eats]. And it’s hard to limit a . . . three-year-old in not picking up their food, trying to use a fork so it don’t have direct contact with her skin.”</td>
</tr>
<tr>
<td>How much do you trust your doctor’s atopic dermatitis treatment recommendations?</td>
<td>Physician-patient relationship</td>
<td>Parent-physician relationship</td>
<td>“[I trust the pediatrician] 100 percent, that’s why I take them . . . I’ve never been disappointed in their diagnosis. I don’t think my children have ever been misdiagnosed . . . I mean, I take them there because I don’t know. If I knew what was wrong with them then I wouldn’t take them there. So I’ve been very impressed with their doctors.”</td>
</tr>
<tr>
<td>Aside from treatments your doctor recommended, what else did you try?</td>
<td>Alternative</td>
<td>Use of alternative treatments</td>
<td>“I kind of did my own sampling in detergent and found out what was better . . . Other than just trying to see what works . . . I believe that the doctor knows what he’s talking about, as far as keeping her skin shiny, keeping moisture in her skin, so I’ve tried that with bathing and making sure I get her rinsed.”</td>
</tr>
</tbody>
</table>

### Table 2. Salient Maternal Comments Concerning Ease of Use

- “Who in the world puts lotion on six times a damn day? . . . I don’t want to stop her, she outside playing. . . I only put lotion on when she takes a bath. I’m just going to be honest.”
- “I would say a pill . . . or even if there was a better cream that maybe I’d only have to use once a week or once a month . . . instead of having to do it every day.”
- “. . . Having just one pill that circulated it all . . . just one thing.”
- “For me it would be take a pill and just be gone through with it.”

©2013 American Medical Association. All rights reserved.
Failing to Clarify Treatment Action Plans With Mom in Pediatric Atopic Dermatitis

The report by Fenerty et al highlights common difficulties in physician-patient interaction that can directly impact adherence to desired treatments, in this case for atopic dermatitis. This group and others have studied adherence to treatment regimens in the past. The gap highlighted in this publication is common in many areas.

Involvement of the caregiver is critical to successful treatment. The authors highlight that mothers are the usual caregivers for their children’s medical conditions. They appropriately highlight measures as discussing the disease process and administration of medication as being key to successful therapies. Families do not routinely feel comfortable with the overall management of their children’s skin disease. Taking time to engage the caregivers and (when feasible) the patients in these discussions is critical. Awareness of cultural and other family needs must be included. Demonstrating topical application methods or physically identifying specific areas for application may better clarify verbal or written instructions. Any concerns that the family or patient might have must be elicited and addressed by the physician, a process often requiring strong communication skills.

These practices are not new and have been used in the management of other diseases such as asthma, where identical measures have proven their efficacy. An additional adherence enhancement tool that I have used successfully in my practice for many years for pediatric patients with atopic dermatitis is a treatment action plan (eFigure; http://www.jamaderm.com) that outlines, in step-wise fashion, interventions for care. These plans can be used for some families with careful explanation in addition to each of the measures suggested by Fenerty et al.

As physicians, we must engage our patients and their caregivers in the care of all disorders, including atopic dermatitis. This requires additional time and training for some. The practice, however, has demonstrated efficacy. Spending the extra time initially might lead to less time needed in follow-up.

To close the communication gap between physicians and the caregivers for their pediatric patients requires that we, as practitioners, be willing to take the time and effort to do so. Engaging our staff in this effort is key, as well. This practice is key to the principle of shared decision making and can result in better overall clinical outcomes.

Moise L. Levy, MD

Author Affiliation: Dell Children’s Medical Center of Central Texas, Austin.

Correspondence: Dr Levy, Department of Pediatric/Adolescent Dermatology, Dell Children’s Medical Center of Central Texas, 4900 Mueller Blvd, Austin, TX 78723 (mlevy@sfcaustin.com).

Conflict of Interest Disclosures: None reported.

Online-Only Material: The eFigure is available at http://www.jamaderm.com.


Enhanced Skin Self-examination: A Novel Approach to Skin Cancer Monitoring and Follow-up

Advances in mobile telephone technology and available dermoscopic attachments for mobile telephones have created a unique opportunity for consumer-initiated mobile teledermoscopy. At least 2 companies market a dermoscope attachment for an iPhone (Apple), forming a mobile teledermoscope. These devices and the corresponding software applications (apps) enable (1) lesion magnification (at least X20) and visualization with polarized light; (2) photographic documentation using the telephone camera; (3) lesion measurement (ruler); (4) adding of image and lesion details; and (5) e-mail data to a teledermatologist for review. For lesion assessment, the asymmetry-color (AC) rule has 94% sensitivity and 62% specificity for melanoma identification by consumers. Thus, consumers can be edu-