Is it ever OK to deceive?

Moral Balance

Contemporary PEDIATRICS
Expert Clinical Advice for Today’s Pediatrician

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THE ETHICS ISSUE

Ethics in real life
Expert counsel on issues you face

Pharmacologist’s Notebook
Probiotics in children
Riddle Me This! Probiotics Quiz

Practice Improvement
Adolescent privacy and the EHR

Dispatches
Pennsylvania’s war on childhood obesity

DECEPTION FLOWCHART
Amid the dearth in the literature on situational ethics mitigating clinicians’ deception, Sokol’s flowchart proposes one moral framework. SEE PAGE 25

PUZZLER
Punctate opacities in a child’s colon

ContemporaryPediatrics.com
How does managing food allergies affect the lives of patients and their families?

Some patients and their families face daily challenges that can negatively affect their quality of life as they work to avoid food allergens. They may also struggle to understand the symptoms, severity, and management of food-induced allergic reactions.

“I’m always nervous, always vigilant. I can’t let him be by himself.”
—Caregiver

*Data from a study of 38,408 children.*

REFERENCES

Evaluation, treatment, and prevention of obesity in community settings

A unique program addresses the crisis of pediatric and adolescent obesity and its effects on child and family health in the state of Pennsylvania.

It is not easy to establish and maintain good dietary, physical activity, sleep, screen time, mental health, and the other habits that promote ideal weight and waist circumference. Even though patients and families cannot always do the “right” things all the time, small improvements can make a difference in body mass index (BMI). In addition, success in one area can be a boon to success in others, leading to a healthier lifestyle overall.

The Pennsylvania Chapter, American Academy of Pediatrics (PA AAP), developed a unique program to address the many facets of pediatric and adolescent obesity. Through the “EPIC: Pediatric Obesity: Evaluation, Treatment, and Prevention in Community Settings” program, locally based, physician-registered dietitian/nutritionist (RDN) teams bring a live, interactive update on pediatric overweight and obesity to community-based healthcare providers. The program links together a wide array of treatment options to best help patients and families. The program model offers a unique opportunity to foster a team approach to address a complex health issue.

Obesity crisis nationally and in Pennsylvania

Obesity is a significant health problem for Pennsylvania and the nation. In Pennsylvania in 2017, 31.6% of adults had obesity (BMI, >30), a steady increase since 1990 when the rate was 13.7%. Child and adolescent obesity data mirror the adult outlook, with one-third of children having overweight or obesity (Table 1).

Nationally, in 2001, the US Surgeon General released a “Call to Action” that labeled obesity an epidemic. It pointed out that the nation did not meet the Healthy People 2010 goals for obesity and that “the statistics on overweight and obesity have steadily headed in the wrong direction.” In 2010, the US Surgeon General revisited obesity with the report “The Surgeon General’s Vision for a Healthy and Fit Nation.” This report included a call to look beyond BMI numbers to promote “an optimal level of health and well-being.”

People 2010 goals for obesity and that “the statistics on overweight and obesity have steadily headed in the wrong direction.” In 2010, the US Surgeon General revisited obesity with the report “The Surgeon General’s Vision for a Healthy and Fit Nation.” This report included a call to look beyond BMI numbers to promote “an optimal level of health and well-being.”

23%–28%

Percentage of new cases of asthma in children aged 2 to 17 years attributable to obesity.

Pediatric practices are an essential community structure to which parents turn for guidance in establishing healthy habits and combating obesity for their children. Research continues to find that provider understanding of appropriate clinical care for obesity is not current with evidence-based recommendations such as the AAP treatment algorithm.

CONTINUED ON PAGE 4
With the incidence of Lyme disease on the rise and children among those most commonly affected, parents want answers — fast. It doesn’t help that current testing options may take hours or days for results. Not anymore! Sofia 2 Lyme FIA uses a finger-stick whole blood sample to provide accurate, objective and automated results in as few as 3 minutes, getting doctor and patient on a path to treatment much sooner.

Sofia 2 Lyme FIA is the only rapid, near-patient testing solution that provides IgM and IgG differentiated results in a single test. It has demonstrated accuracy comparable to laboratory testing — all with less than 1 minute hands-on-time. And with the power of Virena, you will have near real time prevalence data and incidence mapping for your area providing greater information and allowing for better healthcare decisions.

To find out how to get ready for Lyme Season with our CLIA-waived Sofia 2 Lyme FIA, contact Quidel Inside Sales at 858.431.5814
Partners for addressing pediatric obesity

The PA AAP and the Pennsylvania Department of Health (PA DOH) have a history of working together to promote child and family health. An educational model for practice-based change was cooperatively utilized going back to 1996. This model, "Educating Physicians In their Communities (EPIC)," was developed by the PA AAP in 1996 to bring live, free, continuing medical education (CME) to the entire practice team in primary care sites. Educational sessions are presented by a 2-person team of a pediatrician or family medicine physician and a subject matter expert. The first EPIC program, EPIC: Immunization, paired a physician with a PA DOH immunization nurse. This program was successfully presented across Pennsylvania from 1996 to 2014. It established an effective PA AAP/PA DOH vehicle to pool resources to address a key health topic. EPIC programs on child abuse, early hearing screening, breastfeeding, oral health, and other topics have followed.

In considering additional ways that Pennsylvania could address obesity, the PA AAP and the PA DOH agreed that an EPIC: Pediatric Obesity program should be developed. The 2-person presenter team consists of a physician and an RDN. Two additional partners were enlisted: the PA Academy of Nutrition and Dietetics and the PA Academy of Family Physicians and Foundation. Funding for EPIC: Pediatric Obesity has been almost entirely provided by the PA DOH as part of the Centers for Disease Control and Prevention (CDC) Preventive Health and Health Services Block Grant. The National Network of Libraries of Medicine provided a small grant for a follow-up webinar for sites that hosted the EPIC: Pediatric Obesity program.

Plan of action

EPIC: Pediatric Obesity brings comprehensive education on obesity directly to physicians and the entire staff at practices, Grand Rounds, residency training, school nurses, professional conferences, and other sites. Presenters are professionals in practice in the local area, familiar with the demographics and needs of the community, helping them to make a connection with the program host sites. Presenters are recognized as experts in the community. They are also a statewide sentinel network alert to emerging problems and reimbursement concerns.

From 2011 to 2018, EPIC: Pediatric Obesity provided 363 events, reaching 980 sites, with 8034 participants, in 61 of Pennsylvania’s 67 counties. The program is ongoing. Programs are typically 1 hour in length, free for participants, and are accredited to provide American Medical Association (AMA) Category 1 credits.

### TABLE 1

**PREVALENCE OF OVERWEIGHT*a AND OBESITY*b AMONG PENNSYLVANIA CHILDREN BY GRADE AND SCHOOL YEAR**

<table>
<thead>
<tr>
<th></th>
<th>Grades K-6</th>
<th>Grades 7-12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOTAL</strong></td>
<td>31%</td>
<td>32%</td>
</tr>
<tr>
<td><strong>OVERWEIGHT</strong></td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td><strong>OBESITY</strong></td>
<td>16%</td>
<td>17%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>33%</td>
<td>35%</td>
</tr>
<tr>
<td><strong>OVERWEIGHT</strong></td>
<td>16%</td>
<td>16%</td>
</tr>
<tr>
<td><strong>OBESITY</strong></td>
<td>17%</td>
<td>19%</td>
</tr>
</tbody>
</table>

*aOverweight is defined as having a body mass index (BMI) in the 85th to <95th percentile.

*bObesity is defined as having a BMI ≥95th percentile.

Source: Pennsylvania Department of Health.
Programs are characteristically live but occasionally are held through webinars to expand reach. Presenters receive an honorarium for each program.

Obesity-related topics such as effectively introducing new foods and treating patients with severe obesity were presented in detail on 11 continuing education webinars as part of the PA AAP’s “Let’s Talk” webinar series. The free, CME/CEU “Let’s Talk” webinars are offered to sites that hosted an EPIC: Pediatric Obesity or other PA AAP EPIC program, PA AAP members, members of the PA Academy of Nutrition and Dietetics, Pennsylvania’s regional Health Alliances, nurses, and others. The webinars sustain quality improvement engagement with the practices, as well as keep them up to date with the latest research.

**Obesity assessment and interventions**

Numerous factors contribute to individuals’ overweight and obesity. Despite complex causes, clear evidence-based interventions have been identified to treat and reduce childhood obesity. EPIC: Pediatric Obesity is based on the 2007 AAP Expert Committee Guidelines and subsequent treatment algorithm published in 2015. For an individual patient, this includes assessment and consideration of intervention regarding food, diet, beverages, sleep, mental health, screen time, physical activity, and food insecurity.

EPIC: Pediatric Obesity educates audiences about how to assess these components, provides tools to assist, and identifies possible interventions. Presenters demonstrate motivational interviewing to develop goals with an individual patient and family. Programs share coding and reimbursement tips. Sites are encouraged to identify a wellness champion who can be the site’s “information center” for local resources on food insecurity, summer feeding programs, physical activity programs, and other obesity-prevention and treatment services.

Parents are the role models and the family is the treatment unit. Parents benefit from education about lifelong implications of early habits that lead to healthy lifestyles and the importance of “starting off right.” Parent knowledge cannot be taken for granted. Education is needed regarding portion sizes especially for toddlers, alternatives to food for reward and punishment, and understanding food labels. Healthcare providers should not assume parents know how to select and prepare many vegetables and fruits, or that they have been taught how to cook. The RDNs are invaluable partners. These RDN presenters share tips healthcare providers can use immediately and discuss the impact RDNs can have on patient outcomes.
Constant evolution

To stay current and useful, EPIC: Pediatric Obesity continually integrates feedback and new material.

Additions have included:

- The impact of sleep on weight and mental health with a “Let’s Talk” webinar and community advocacy regarding later school start times for adolescents in accordance with AAP6 and CDC7 policy recommendations;
- Food insecurity screening and resources including the AAP’s toolkit8;
- “Person-first” language regarding children with obesity;
- Weight bias and stigmatization including a “Let’s Talk” webinar, aligned with AAP policy9;
- Incorporation of cultural background and habits; and
- Promoting physical activity for children who have obesity and are deconditioned, including a “Let’s Talk” webinar.

See Tables 2 through 4 for more information and helpful resources.

Evaluation

Program participants completed pre-surveys and post-surveys at the time of each live and webinar program. Pretest and posttest data show that EPIC: Pediatric Obesity succeeded in providing relevant interventions to physicians and other healthcare professionals. Participants developed a broader awareness of community-based resources, increased knowledge and skills regarding identifying childhood obesity comorbidities, and broadened their ability to provide anticipatory guidance for families on nutrition and physical activity (Figures 1 and 2.)

Limitations of the EPIC: Pediatric Obesity evaluation include working statewide and

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**TABLE 2**

<table>
<thead>
<tr>
<th>EPIC: PEDIATRIC OBESITY TIPS FOR PRACTICES</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Track BMI—early intervention.</td>
</tr>
<tr>
<td>▪ Incorporate motivational interviewing to help set goals and support patient and family.</td>
</tr>
</tbody>
</table>
  ▪ Change Talk: Childhood Obesity app (free)  
    “Excellent tool for every clinician. If there is just one action you take to learn talk techniques for change, it is this app.” —BONNIE OFFIT, MD, FAAP (EPIC: Pediatric Obesity presenter) |
| ▪ Utilize RDNs—www.eatright.org.           |
  (Local supermarkets may employ an RDN to interact with the public.) |
| ▪ Consider RDN hours at your site.         |
| ▪ Link with schools and community.         |
| ▪ Identify and use a “wellness champion.”  |
| ▪ Institute protocols and policies.        |
  ▪ “Healthy Habits Questionnaire” (ages 2-9 y, ages 10+ y) |
  ▪ “Medical Screening” with reference values |
  ▪ “15-Minute Obesity Prevention Protocol” with sample language |

Abbreviations: BMI, body mass index; EPIC, Educating Physicians In their Communities; RDN, registered dietitian/nutritionist. Source: EPIC: Pediatric Obesity program.

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**TABLE 3**

<table>
<thead>
<tr>
<th>RESOURCES TO SHARE WITH PARENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ AAP’s parent resources on healthy living: <a href="http://www.healthychildren.org">www.healthychildren.org</a></td>
</tr>
<tr>
<td>▪ Every Kid in a Park: <a href="http://www.everykidinapark.gov">www.everykidinapark.gov</a></td>
</tr>
<tr>
<td>▪ Start School Later: <a href="http://www.startschoollater.net">www.startschoollater.net</a></td>
</tr>
<tr>
<td>▪ Snack ideas: eattogetherpa.org</td>
</tr>
<tr>
<td>▪ Healthy food and beverages including &quot;10 Tips&quot; series: <a href="http://www.choosemyplate.gov">www.choosemyplate.gov</a></td>
</tr>
<tr>
<td>▪ Let’s Move!: letsmove.obamawhitehouse.archives.gov</td>
</tr>
</tbody>
</table>

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without access to patient data. Obesity interrelates with social and economic factors beyond the program’s control. Also, the program cannot realistically expect dramatic, immediate transformation of patients, families, or communities resulting from the 1-hour EPIC program.

An important impact of the program is its effect on the 64 physicians and 72 RDNs who presented at least 1 EPIC: Pediatric Obesity program. Presenters work with this program because they are passionate about child health. They appreciate the training and updates, and benefit from online networking and discussion. They learn about their community by visiting different sites and interacting with audiences. Presenters also enjoy involvement with their local AAP chapter and collaboration with the PA DOH.

Key takeaways

EPIC: Pediatric Obesity is a unique, innovative approach to the prevention and treatment of pediatric obesity. The program has existed in Pennsylvania since 2011 and could be replicated in other areas. It has positively influenced primary care, residency training, school nurses, and other professional groups with practical, current obesity information tailored to each site’s specific needs. It communicates the benefits of partnering with RDNs.

Obesity is a complex disease with many factors to assess and transform. With an individual patient or family, any one aspect of diet, beverages, sleep, mental health, activity, screen time, or food insecurity may be the most fruitful avenue for intervention. The program finds motivational interviewing to be a productive and efficient way to set goals and track progress.

Funding for the program is slated to end in June 2019 as the PA DOH pursues other obesity initiatives. The PA AAP hopes to find avenues to maintain obesity prevention and treatment work.

Additionally, the PA AAP is interested in furthering work on food insecurity and its connection with obesity.

Acknowledgements: Assistance with evaluation: Ann Kanof, MS. Developers of EPIC model: Jerold Aronson, MD, MPH, FAAP; Alan Kohrt, MD, FAAP; Lois Kohrt. PA DOH: Tiffany Bransteitter, MSW; Amy Flaherty, MA; Serina Gaston, MED, CHES. Physician and RDN EPIC: Pediatric Obesity presenters, with exceptional contributions from William Cochran, MD, FAAP; Mark Diamond, MD, FAAP; Laura Frank, MPH, MED, PHD, RD, LDN, CRC; Anna Marie Kuchera, MS, MA, RD, LPC; Marsha Novick, MD; Mary Ann Rigas, MD, FAAP; Margaret Maher Rowe, MS, RD, LDN, FADA, FAND; Denise Salerno, MD, FAAP. PA Academy of Nutrition and Dietetics, especially Lisa Ann Jones, MA, RD, LDN. PA AAP: Kristin Haegel-Hill, MS; Aleksandra McDonnell, MSN, RN, CRNP; Annette Myarick; Dottie Schell, BS, RN, CLC, CCE; Sharon Shepherd; Libby Ungvary, MED; Suzanne Yunghans, MB MGT.

### TABLE 4: EASY MESSAGES FOR PATIENT VISITS

<table>
<thead>
<tr>
<th>Easy Messages for Patient Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Half the meal plate is vegetables and fruits.</strong></td>
</tr>
<tr>
<td><strong>Proportion, variety, and moderation.</strong></td>
</tr>
<tr>
<td><strong>Add a variety of color to each plate.</strong></td>
</tr>
<tr>
<td><strong>Less junk food is better for the whole family.</strong></td>
</tr>
<tr>
<td><strong>Make healthy foods easiest, most accessible choices.</strong></td>
</tr>
<tr>
<td><strong>Involve children: selecting, cooking, and growing food.</strong></td>
</tr>
</tbody>
</table>

Source: EPIC: Pediatric Obesity program.
Ms Wishner is Director, EPIC Pediatric Obesity, Pennsylvania Chapter, American Academy of Pediatrics (PA AAP), Media, Pennsylvania.

Dr Antonucci is adjunct faculty, Drexel University College of Medicine, Philadelphia, Pennsylvania.

Ms Latortue is Executive Director, Family Food, Philadelphia, Pennsylvania.

Ms Mehaffey is Public Health Program Administrator, PA Department of Health, Harrisburg, Pennsylvania.

Ms Pierpoint is Program Administrator, PA AAP, Media, Pennsylvania.

The authors have nothing to disclose in regard to affiliations with or financial interests in any organizations that may have an interest in any part of this article.

For references, go to ContemporaryPediatrics.com/EPIC-Pediatric-Obesity

FIGURE 1 EXAMPLE OF THE PRE-PROGRAM SURVEY

The need persists for education about issues RDNs can address, leading to increased referrals. “Tell us how frequently you . . . ”

Refer obese patients to a Registered Dietitian?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Always</td>
<td>47%</td>
</tr>
<tr>
<td>Sometimes</td>
<td>34%</td>
</tr>
<tr>
<td>Never</td>
<td>13%</td>
</tr>
<tr>
<td>N/A</td>
<td>2%</td>
</tr>
<tr>
<td>Blank</td>
<td>4%</td>
</tr>
</tbody>
</table>

Abbreviation: RDN, registered dietician/nutritionist.

Source: Pre-program survey from 5001 participants who completed a pretest June 2011 through December 2018, EPIC: Pediatric Obesity program.

FIGURE 2 POST-PROGRAM SURVEY

ON RELEVANCY Continuous quality improvement and presenter updates keep content relevant.

To what extent was the content of the program relevant to your practice?

<table>
<thead>
<tr>
<th>Relevance</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very High</td>
<td>47%</td>
</tr>
<tr>
<td>High</td>
<td>34%</td>
</tr>
<tr>
<td>Moderate</td>
<td>13%</td>
</tr>
<tr>
<td>Low</td>
<td>2%</td>
</tr>
<tr>
<td>Very Low</td>
<td>1%</td>
</tr>
<tr>
<td>Blank</td>
<td>3%</td>
</tr>
</tbody>
</table>

ON PRACTICALITY Program succeeds in providing practical help for pediatric practice.

As a result of participation in this activity, I am able to improve anticipatory guidance to families on nutrition and physical activities.

<table>
<thead>
<tr>
<th>Practicality</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very High</td>
<td>28%</td>
</tr>
<tr>
<td>High</td>
<td>37%</td>
</tr>
<tr>
<td>Moderate</td>
<td>17%</td>
</tr>
<tr>
<td>Low</td>
<td>2%</td>
</tr>
<tr>
<td>Very Low</td>
<td>1%</td>
</tr>
<tr>
<td>Blank</td>
<td>15%</td>
</tr>
</tbody>
</table>

Source: Post-program survey from 5246 participants from 324 onsite events and 8 webinars from June 2011 through December 2018, EPIC: Pediatric Obesity program.
Today’s parents want convenience for everything. The generation often referred to as “millennials” are well connected, intelligent consumers accustomed to finding the most convenient way to limit the stressors in life and offer “uber” efficiency.

For these same parents, access for their child’s healthcare is similar and they will choose convenience first. Faced with even minor barriers to engaging the pediatrician, these parents will often drive to the local urgent care, minute clinic, or even utilize a random provider online via direct-to-consumer telemedicine. Unfortunately, although these offerings are “quick,” their child doesn’t always get the pediatric expertise they need.

Primary care pediatricians and pediatric urgent cares often believe they are working in competition with each other rather than cooperating. Pediatricians are being financially hurt by the explosion of “convenient” care clinics and rightfully need to be concerned.

Pediatric urgent cares, which make up a very small percentage of these offerings, argue that children need after-hours care that is frequently not available from the pediatrician or that millennial parents are demanding this convenience.

Collaborate for services
Ironically, we think all pediatricians would unanimously agree that children should be seen by a trained pediatric provider. Pediatricians generally believe that parents should first choose to reach out to their pediatrician for guidance and, if not available, then seek the care of trained pediatric expertise when needed outside the medical home.1-4

So why don’t we foster greater collaboration across the landscape of pediatrics? What are the keys to supporting the local pediatric network and keeping kids in the medical home or the pediatric medical neighborhood?

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Primary care pediatricians and pediatric urgent cares often believe they are working in competition with each other rather than cooperating.

Pediatricians must adapt. Phone trees, long delays, front-desk barriers, and lack of after-hours access still limit many practices.5 The millennial parent sees any minor barrier as a major issue when reaching out to the office. These parents seek online or electronic means to reach their physician and often use Dr. Google before they...
call. Extended hours will help, but more hours must be balanced with physician burnout and overhead cost to the practice.

Asking more and more of your pediatricians may not be the answer. Pediatricians need to explore simplifying answering services, same-day scheduling, and improving triage access and the benefits of virtual care. Telemedicine can offer improved efficiency and access to manage triage, simple visits, and behavioral or developmental follow-up appointments. Access to the trusted pediatrician is vital for the medical home to survive.

Be partners in quality care
Pediatricians must also seek local partners. Demand for immediate care and the need for urgent and emergency care cannot be universally handled by the primary care office. Parents should seek their pediatrician’s advice on where to take their child when office care is unavailable. The guidance of a trusted pediatrician will enable parents to drive past the closest “care” to reach the best pediatric care.

Parents need guidance on when and where to take their child when they are ill or injured.

Dr. Google and Alexa are woefully inadequate.

Pediatric urgent cares can and should be a crucial partner for the primary care pediatrician. The urgent care is able to accept referrals, discuss cases, offer advice, provide expert pediatric care, and ensure the medical home receives communication about the care.

This is crucial. The same is true of the local pediatric emergency department (ED).

Parents need guidance on when and where to take their child when they are ill or injured. Dr. Google and Alexa are woefully inadequate. Pediatricians have limits to the care they can offer in person, on the phone, or via telemedicine. Pediatric urgent and emergent care should be collaborative.

No pediatrician is eager to see a patient go to a retail clinic or random provider, or refers the family to the Internet to seek care. Collectively, pediatricians must collaborate to meet the needs of parents, children, and the field of pediatrics. We should foster local networks of pediatric care that are built upon cooperation and not competition. Ensuring that children get the best care from a trained pediatric provider will enable us all to meet the mission we embarked upon when we chose pediatrics.

Dr. Connors is a pediatric emergency physician, and founder and CEO of Anytime Pediatrics PLLC, Knoxville, Tennessee, a mobile and web application that seeks to connect patients with their local pediatrician via telemedicine.

Dr. Tuddenham retired from the United States Navy and the Division of Emergency Medicine, Cincinnati Children’s Hospital Medical Center, Cincinnati, Ohio, and is the immediate past president of the Society for Pediatric Urgent Care. She has nothing to disclose in regard to affiliations with or financial interests in any organizations that may have an interest in any part of this article.

For references, go to ContemporaryPediatrics.com/ urgent-care-vs-medical-home
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- Streamline workflow

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Moderate aerobic exercise seems to be an effective treatment for adolescents after sport-related concussion, according to results of a randomized trial conducted in 103 athletes aged 13 to 18 years who entered the study within 10 days of being injured.

The investigation was conducted at 4 university-based, outpatient concussion-management clinics. Participants first were evaluated by a sports medicine physician who diagnosed the concussion based on history, standard physical examination, and an exercise-tolerance assessment. Patients then were randomly assigned to an aerobic-exercise group (52 participants) or a stretching group (51 participants).

Teenagers in the aerobic-exercise group were instructed to perform aerobic exercise each day on a stationary bike or treadmill at a prescribed target heart rate (HR), calculated as 80% of the HR achieved at symptom exacerbation at the first visit. They were asked to stop their exercise session if symptoms increased by 2 or more points from their pre-exercise symptom level (on a 10-point visual analog scale) or at 20 minutes, whichever came first. Investigators determined a new target HR at weekly clinic visits.

Participants in the stretching group followed a prescribed stretching program for 20 minutes a day. They received a booklet describing a gentle, whole-body, progressive-stretching program that would not elevate HR much. Both groups were told to rest when not engaging in their prescribed program, used HR monitors during each session, reported daily symptoms, and were assessed for exercise tolerance at weekly clinic visits.

Participants in the aerobic-exercise group recovered significantly more rapidly than those in the stretching group: a median of 13 versus 17 days, respectively. After adjusting for age, sex, time from injury to enrollment, and prior history of concussion (Leddy JJ, et al. JAMA Pediatr. February 4, 2019. Epub ahead of print).

THOUGHTS FROM DR. BURKE

The pendulum continues to swing when it comes to when to return to activity after sport-related concussion. We’ve learned the downside of both extremes, a cavalier early return to play and prolonged inactive rest in a dark room. The current approach takes the middle ground: a stepwise return to activity guided by symptoms of the individual patient. For a helpful, comprehensive update on sport-related concussion, see this recent American Academy of Pediatrics Clinical Report: “Sport-related concussion in children and adolescents.” Pediatrics. 2018;142(6):e20183074.

Michael G Burke, MD is Chairman, Department of Pediatrics, Saint Agnes Hospital, Baltimore, Maryland.
PUBLISHED IN JAMA PEDIATRICS

Excessive screen time hinders optimum development

Children aged 24 and 36 months who spend a lot of time in front of screens do less well on standardized developmental screening tests than other children, a longitudinal group study conducted in Canada showed.

When their children were aged 24, 36, and 60 months, mothers of the 2441 children in the study completed a developmental screening questionnaire to identify progress with regard to gross and fine motor skills, problem solving, and personal-social development. Mothers also indicated how much time their child spent watching television, movies, videos, or stories, and using computers, gaming systems, and other screen-based devices. On average, children aged 24, 36, and 60 months were in front of a screen for 2.4, 3.6, and 1.6 hours per day, respectively.

Analysis showed that higher levels of screen time at age 24 months were significantly associated with poorer performance on developmental screening tests at age 36 months and, similarly, higher screen time exposure at age 36 months was associated with lower scores on the developmental screening tests at age 60 months.

Investigators noted that both screen time and performance on developmental screening tests were associated with factors such as family income, maternal depression, and the child being read to regularly (Madjigan S, et al. JAMA Pediatr. January 28, 2019. Epub ahead of print).

THOUGHTS FROM DR. BURKE

This study may justify e-cigarette use in a select group of adults addicted to combustible cigarettes, although these adults were still addicted to nicotine at the end of the study. However, this is not adequate justification for making e-cigarettes available to children, nor is it reason enough for marketing flavored solutions to young people. We need to maintain focus on the rapidly increasing threat to children of vaping/juuling/e-cigarette use.

E-cigarettes beat out nicotine replacement to quit smoking

A 1-year randomized trial in 886 adults living in the United Kingdom showed that electronic cigarettes (e-cigarettes) are more effective for smoking cessation than nicotine-replacement therapy.

Participants in the nicotine-replacement group selected from a range of products—patch, gum, lozenge, nasal spray, inhalator, mouth spray, mouth strip, and microtabs—and were encouraged to use combinations. Those in the refillable e-cigarette group were given a starter pack along with a bottle of e-liquid containing nicotine at a concentration of 18 mg per milliliter. Investigators encouraged participants to experiment with e-liquids of different strengths and flavors. They provided limited supplies to both groups at the start of the trial; participants were then expected to purchase their own for the remainder of the 1-year trial.

Participants in both groups received weekly one-on-one support sessions with clinicians, who also monitored expired carbon monoxide levels for at least 4 weeks after the participant quit smoking regular cigarettes. Participants also were contacted at both 26 and 52 weeks to confirm if they had remained abstinent, which was validated biochemically at the final visit.

The 1-year abstinence rate was 18% in the e-cigarette group compared with 9.9% in the nicotine-replacement group. E-cigarette use also was associated with less throat or mouth irritation and nausea, and greater declines in cough and phlegm production (Hajek P, et al. N Engl J Med. 2019;380(7):629-637).

THOUGHTS FROM DR. BURKE

This study may justify e-cigarette use in a select group of adults addicted to combustible cigarettes, although these adults were still addicted to nicotine at the end of the study. However, this is not adequate justification for making e-cigarettes available to children, nor is it reason enough for marketing flavored solutions to young people. We need to maintain focus on the rapidly increasing threat to children of vaping/juuling/e-cigarette use.
Child with punctate opacities in the colon

LUKE J PASICK, BS, MS3; ELIZABETH M IMBODEN, MD, FAAP

An 11-year-old male presents to the emergency department (ED) with complaint of 2 days of focal, crampy, periumbilical abdominal pain associated with anorexia, fever, and 1 episode of emesis. The patient denies diarrhea, cough, and testicular pain. He does report decreased oral intake along with decreased urination accompanied by mild suprapubic pain and no bowel movement for 3 days. The remaining review of systems is negative. Parents of the patient deny attempts of using laxatives or any other medications to alleviate the symptoms.

Evaluation and testing

On physical exam, the patient was afebrile. The abdomen was soft and nondistended but had diffuse lower abdominal tenderness, rebound tenderness, and a positive Rovsing sign. Digital rectal examination was deferred.

Labs showed white blood cells at a level of 11.6 K/mcL; absolute neutrophil count, 7.37 K/mcL; C-reactive protein, 2.97 mg/dL; hemoglobin, 12.8 g/dL; hematocrit, 36.5%; platelets, 244 K/mcL; creatinine, 0.6 mg/dL; and sodium, 132 mmol/L. All other electrolytes were normal. Urinalysis was normal. On abdominal ultrasound, no fluid collection or abscess was identified, and the appendix was not visualized. An x-ray of the chest looking for pneumonia showed no acute findings.

The patient was admitted for observation because of concern for early/possible retrocecal appendicitis. The following day, abdominal single-view x-ray was performed to evaluate constipation (Figure) and revealed punctate opacities equally distributed throughout the colon suggestive of ingested material, a moderate amount of stool in the rectosigmoid colon, and a nonobstructive bowel gas pattern.

Differential diagnosis

The abdominal radiograph observed in this patient was novel to the Radiology Department and concerning for possible ingestion of lead, antacids, bismuth medication, or heavy metal. Differential diagnosis ranged from ingestion of a radiopaque substance to chronic inflammation (Table).

It is important to consider ingestion of heavy metals, such as lead, when punctate opacities in the bowels are observed. Lead ingestion can occur from a number of household objects including paint, fishing sinkers, jewelry, curtain weights, and traditional medicines. Depending on the source ingested, abdominal radiographs may appear punctate and similar to this case or vastly different in distribution. Absorption of lead is increased relative to
Retention time in the stomach and intestine, so early detection of this heavy metal ingestion is imperative for best outcomes.3

In addition to lead, mercury is an accessible agent that can be readily ingested by a child. However, these radiopacities may appear more amorphous because of the liquid state of this metal at body temperature.4 Fortunately, ingestion of elemental mercury is benign and absorption by the gastrointestinal tract is unlikely in healthy patients. There is an exception in patients with diverticulosis and other disease states in which ingested mercury remains in the gut for longer periods of time, leading to possible systemic absorption secondary to bacterial metabolism to organic mercury. Conversely, ingestion of organic mercury compounds may be readily absorbed.3

Also common in the pediatric population is ingestion of potentially toxic amounts of iron supplements. Ferrous sulfate tablets are notoriously found as round radiopacities on plain film x-ray, often mistaken for pathologies such as gallstones.6,7 Chewable, iron-containing multivitamins are radiopaque in vitro, but clinical radiographic visualization of this material has been found to be unreliable.8

An additional potential etiology of these radiographic findings, albeit rare in the pediatric population, is colonic diverticulosis with calcifications. The literature identifies a few cases of pediatric colonic diverticular disease secondary to total colonic Hirschsprung disease, connective tissue disease, cystic fibrosis, chronic renal failure, and other genetic syndromes.9-11

**Discussion**

Through further history elicited from the parents, it was revealed that the patient was given bismuth subsalicylate chewable tablets, colloquially known as Pepto-Bismol (Procter & Gamble; Cincinnati, Ohio) for the 2 days leading up to admission. This history was not disclosed until the parents were specifically questioned about the use of Pepto-Bismol.

The heavy metal bismuth appears sufficiently radiopaque on plain film and can be visualized in the gastrointestinal tract after Pepto-Bismol ingestion.12 The discoloration effects of Pepto-Bismol on stool and the tongue are well known and described on the medication’s drug facts. However, the possibility of bismuth appearing incidentally on abdominal radiograph is not well known. As many patients do not recognize that disclosing over-the-counter medications is important, it is imperative that specific questioning is utilized when there is suspicion for ingestion or poisoning.

The literature describes 1 case of a 45-year-old male presenting with disorientation, tinnitus, and tachypnea after consumption of 16 ounces of Pepto-Bismol daily to self-medicate unrelenting abdominal pain.13 This patient exceeded the daily dosage by more than 4 times the rec-

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**Pepto-Bismol ingestion is a possible etiology of punctate radiopacities found in the colon that can lead to salicylate toxicity.**
ommended amount at 4160 mg of salicylate and 8383 mg of bismuth daily, which began to accumulate in chronic stores. The patient was found to have similar abdominal radiograph findings as the patient in this case, acute salicylate toxicity, and profound acidosis, and was treated with forced alkalinized diuresis and hemodialysis. One should note that overuse of bismuth subsalicylate can present as chronic or acute salicylate toxicity.14-16

The clinicians managing the patient in this current case had low suspicion of acute case salicylate toxicity based on the dosages disclosed by the parents and absence of tinnitus, tachypnea, and disorientation. However, if clinical evidence of toxicity had been present, a serum salicylate and urine bismuth level would have been obtained.

**Patient follow-up**

The diagnosis of constipation was made with incidental radiographic evidence of bismuth ingestion. The patient was given polyethylene glycol 3350 daily for 7 days and was discharged home, as no specific treatment is required for bismuth ingestion. He had resolution of his constipation and no follow-up radiography was indicated.

**Conclusion**

The ability to differentiate radiographic findings in the pediatric population as incidental versus disease-related will aid clinicians by preventing further unnecessary evaluation and testing. Radiologists and pediatricians should recognize that Pepto-Bismol ingestion is a possible etiology of punctate radiopacities found in the colon that can lead to acute or toxic salicylate toxicity. Additionally, ingestion of other foreign bodies must always be considered.

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**For references,** go to ContemporaryPediatrics.com/puzzler-0419
The Food and Agriculture Organization (FAO) of the United Nations and the World Health Organization (WHO) define probiotics as "live microorganisms that, when administered in adequate amounts, confer a health benefit on the host." Probiotics usually include members of the bacteria genera *Lactobacillus*, *Bifidobacterium*, *Saccharomyces*, and *Streptococcus*. The evidence supporting the use of probiotics in pediatrics is variable, with no fully comprehensive guidelines for probiotic use available.

As there is no regulatory framework for the manufacturing of probiotics, preparations differ in the types of bacteria, numbers of strains, and colony-forming units (CFUs) of microorganisms that they contain. Additionally, prescriptions are not needed to obtain probiotics and appropriate dosing recommendations are not well defined for children or adults, illustrating the need for more well-designed clinical studies to support their routine use.

**Uses of probiotics**

Probiotics have been used for many indications, ranging from prevention of antibiotic-associated diarrhea (AAD) to the treatment of inflammatory bowel disease. Based on reviews and guidelines from several key working groups, including the North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition (NASPGHAN), the European Society for Gastroenterology, Hepatology, and Nutrition (ESPGHAN), and the Latin American Expert Group, the efficacy of probiotics is shown in preventing AAD, severe recurrent *Clostridium difficile*-associated diarrhea (CDAD), and mild-to-moderate acute diarrhea, mainly with *Lactobacillus rhamnosus* GG (LGG) and *Saccharomyces boulardii* (Table).

Although a recent meta-analysis of 17 randomized controlled trials (RCTs; n=3953) demonstrated that children receiving probiotics (majority of studies evaluated *Lactobacillus* and *Bifidobacterium* spp. at ≥10⁸ cfu/mL) had a 29% risk reduction (95% confidence interval [CI]: 0.54-0.94) of being prescribed antibiotics compared with those who received placebo, additional studies are needed to substantiate these findings.

Some other uses of probiotics in children include the treatment of travelers’ diarrhea and acute infectious diarrhea; irritable bowel syndrome (IBS); constipation; infantile colic; nec-
**Summary of meta-analyses and select studies for probiotic use in pediatrics**

<table>
<thead>
<tr>
<th>Reference and Brief Summary of Study</th>
<th>Probiotics Studied</th>
<th>Dosing Range (CFU/DAY unless indicated)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Antibiotic-associated diarrhea (AAD)</strong></td>
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<tr>
<td>Szajewska (2016)²: Meta-analyses of 21 RCTs (n=3255) showed a 52% risk reduction (RR) (95% CI: 0.37-0.61) of AAD when probiotics (compared to placebo or no intervention) were given to children on antibiotics.</td>
<td>LGG</td>
<td>$10^8 - 10^{10}$</td>
<td>LGG and <em>S. boulardii</em> have been studied in &gt;1 RCT, with low to moderate evidence suggesting its efficacy in preventing AAD. There is either insufficient or lack of studies of other strains to draw a conclusion. Studies are small and should be interpreted with caution.</td>
</tr>
<tr>
<td>Saccharomyces boulardii</td>
<td>$0.5 - 1 \times 10^{10}$ (250 – 500 mg)</td>
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<tr>
<td>Bacillus clausii, Streptococcus thermophilus, other Lactobacillus, and Bifidobacterium spp.</td>
<td>$1 \times 10^8 - 10^{10}$</td>
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<tr>
<td><strong>Clostridium difficile-associated diarrhea (CDAD)</strong></td>
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<tr>
<td>Goldenberg (2017)¹⁴: Meta-analyses of 31 RCTs (n=8672) including children and adults suggested that probiotics decreased the risk of CDAD by 60% (95% CI: 0.30-0.52).</td>
<td><em>S. boulardii</em></td>
<td>$1 \times 10^8 - 10^{10}$</td>
<td>There is moderate-quality evidence supporting a protective effect for probiotics (<em>S. boulardii</em>, <em>L. acidophilus</em>, plus <em>L. casei</em>) to prevent CDAD. Probiotics may be more effective in people with higher risk for CDAD.</td>
</tr>
<tr>
<td>LGG, L reuteri DSM 17938, L acidophilus, Bifidobacterium bifidum</td>
<td>$1 \times 10^9 - 10^{10}$</td>
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<tr>
<td>Kotowska (2005)¹⁵: RCT (n=269) in Polish children found that <em>S. boulardii</em> reduced the risk of CDAD and otherwise unexplained diarrhea compared with placebo (RR, 0.2; 95% CI: 0.07-0.5).</td>
<td><em>S. boulardii</em></td>
<td>250 mg BID</td>
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<tr>
<td><strong>Acute gastroenteritis</strong></td>
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<tr>
<td>Allen (2010)¹⁶: Meta-analyses of 29 RCTs (n=2853) including adults and children, found a 59% risk reduction (95 CI%: 0.32-0.53) for diarrhea lasting ≥4 days. 35 RCTs (n=4555) showed that probiotics reduced the duration of diarrhea (by ~25 h). The most commonly studied probiotics were LGG (13 RCTs) and <em>S. boulardii</em> (10 RCTs).</td>
<td>LGG</td>
<td>$1 \times 10^8 - 10^{12}$</td>
<td>The RCTs tested either a single probiotic or a combination of 2-8 probiotics. A recent RCT¹⁷ does not support the use of probiotics therapy in acute, infectious diarrhea. More research is needed to study the safety and efficacy of probiotics in various subgroups of patients.</td>
</tr>
<tr>
<td><em>S. boulardii</em></td>
<td>250 – 750 mg/d</td>
<td></td>
<td></td>
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<tr>
<td>L reuteri DSM 17938</td>
<td>$1 – 4 \times 10^8$</td>
<td></td>
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<tr>
<td>Enterococcus lactic acid bacteria SF68, <em>S. thermophilus</em>, other Lactobacillus and Bifidobacterium spp., combination of Bacillus mesentericus, <em>E. faecalis</em>, and Clostridium butyricum</td>
<td>≥$1 \times 10^7$</td>
<td></td>
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<tr>
<td>Schnadower (2018)¹⁷: RCT of children (n=971) showed that children with acute gastroenteritis who received a 5-day course of LGG did not have better outcomes (ie, duration of diarrhea, vomiting) compared with placebo.</td>
<td>LGG</td>
<td>$1 \times 10^{10}$ BID for 5 d</td>
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*CONTINUED ON PAGE 20*
0 lbs., 14 oz., and made for EVERY INCH

RECOMMEND AQUAPHOR FOR BABY’S SKINCARE NEEDS

Beiersdorf
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### Summary of meta-analyses

<table>
<thead>
<tr>
<th>Reference and Brief Summary of Study</th>
<th>Probiotics Studied</th>
<th>Dosing Range (CFU/day unless indicated)</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td><strong>Irritable bowel syndrome (IBS)</strong></td>
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<tr>
<td>Korterink (2014)16: Meta-analysis of 5 RCTs showed that LGG, L reuteri DSM 17938, and VSL#3 significantly decreased abdominal pain in children with IBS. There was no evidence for improved stool pattern in these children.</td>
<td>LGG</td>
<td>1 x 10⁹ – 10¹⁰ daily for 4-8 wk</td>
<td>Probiotics may improve symptoms of IBS. However, there are few pediatric RCTs evaluating the use of probiotics in IBS, and only for a short duration. More evidence is needed.</td>
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<td></td>
<td>VSL #3 (S thermophilus, B breve, B longum, B infantis, L acidophilus, L plantarum, L paracasei, L delbrueckii subsp. bulgaricus), L reuteri DSM 17938, L casei DN, B lactis DN, B longum</td>
<td>1 x 10⁸ – 10⁹ for 3-5 wk</td>
<td></td>
</tr>
<tr>
<td>Guidalini (2010)19: RCT in children and teenagers with IBS (n=59) found that VSL#3 was safe and superior to placebo for relief of abdominal pain/discomfort (P&lt;0.05), abdominal bloating/gassiness (P&lt;0.05), and family assessment of life disruption (P&lt;0.01).</td>
<td>VSL #3</td>
<td>4.5 x 10¹¹ cfu/day or BID for 6 wk</td>
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<tr>
<td><strong>Constipation</strong></td>
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<tr>
<td>Wojtyniak (2017)20: Meta-analyses of 7 RCTs (n=515) with children. Pooled results from 2 RCTs showed no difference between Lactobacillus casei Lcr35 and placebo. Other probiotics studied showed no benefits on frequency of fecal incontinence or abdominal pain.</td>
<td>L rhamnosus casei Lcr35, LGG, L reuteri DSM 17938, B lactis, B longum, mixture of 7 strains with Lactobacillus spp, S thermophilus, and Bifidobacterium spp.</td>
<td>1 x 10⁷ – 8.4 x 10⁸</td>
<td>No evidence for use to date.</td>
</tr>
<tr>
<td>Russo (2017)21: RCT of Italian children (n=55) with constipation showed that receipt of oral polyethylene glycol (PEG) with a probiotic mixture was equally effective as PEG alone in treating constipation.</td>
<td>Mixture of B breve M-16, B infantis M-63, B longum BB536</td>
<td>3 g/d</td>
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<tr>
<td><strong>Infantile colic</strong></td>
<td></td>
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<tr>
<td>Dryl (2018)22: 7 RCTs (n=471). Daily L reuteri DSM 17938 compared with placebo had a 67% risk reduction of infantile colic and reduced crying times by 49 min (95% CI: -62 to 60). This was seen only in exclusively breastfed infants.</td>
<td>L reuteri DSM 17938</td>
<td>1 x 10⁹ for 21-28 d</td>
<td>The use of L reuteri DSM 17938 in breastfed infants likely reduces infantile colic. More studies are needed in formula-fed and mixed-fed infants.</td>
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<tr>
<td></td>
<td>LGG</td>
<td>4.5 x 10⁹</td>
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<tr>
<td>Savino (2018)23: RCT of Italian children (n=60) receiving probiotic compared with placebo had significantly shorter crying time by 56 min (P=0.001).</td>
<td>L reuteri DSM 17938</td>
<td>1 x 10⁸ for 30 d</td>
<td></td>
</tr>
</tbody>
</table>

Routining enterocolitis (NEC); and Helicobacter pylori infection. Probiotics may be beneficial in maintaining remission in ulcerative colitis (UC), reducing the risk of NEC in premature infants, and improving symptoms of IBS.

Lately, the use of probiotics also has extended beyond that of preventing or treating gastrointestinal conditions. With growing studies that show possible associations of the gut microbiome with immune development, vaccine responses, and other conditions such as asthma, eczema, diabetes, and autism spectrum disorder, the use of probiotics has been raised by patients, researchers, and health professionals to attempt to improve nongastrointestinal-related health outcomes. Patients supplemented with prebiotics or probiotics have enhanced influenza antibody titers after vaccination.12
showing promise for the possible use of such products to improve vaccine efficacy. Whereas there is potential for probiotics to play a role in therapy, further investigations including RCTs should be pursued.

The Table provides a summary of selected meta-analyses and individual studies for probiotic use in various conditions in pediatrics.

### Safety and adverse effects

There are limited data on the safety of probiotics in pediatric patients. Cases of serious infections attributed to organisms that may be contaminants of the probiotic product,32 or by breakthrough bacterial infections from the probiotics themselves, have been reported in the literature.33,34 Some experts have proposed major risk factors for infection including prematurity and immunocompromised states, and minor risk factors including the presence of a central venous catheter, impaired intestinal epithelial barrier, administration through jejunostomy tubes, and cardiac valvular disease (*Lactobacillus* spp. only).32-35 Caution is advised for patients with a single major risk fac-

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**TABLE CONTINUED Summary of meta-analyses**

<table>
<thead>
<tr>
<th>Reference and Brief Summary of Study</th>
<th>Probiotics Studied</th>
<th>Dosing Range (CFU/DAY UNLESS INDICATED)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Necrotizing enterocolitis (NEC)</strong></td>
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<tr>
<td>Sawh (2016)24: 42 RCTs using different strains and doses of probiotics showed a reduction in the incidence of severe NEC (RR, 0.53; 95% CI: 0.42-0.66) and all-cause mortality (RR, 0.79; 95% CI: 0.68-0.93).</td>
<td><em>B. breve</em></td>
<td>$1 \times 10^4$ – $10^9$</td>
<td>Probiotic use to prevent NEC remains controversial, mostly due to the lack of safety data.</td>
</tr>
<tr>
<td></td>
<td>LGG</td>
<td>$1 \times 10^4$ – $10^9$</td>
<td></td>
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<tr>
<td></td>
<td>Other <em>Lactobacillus</em> and <em>Bifidobacterium</em> spp., <em>S. boulardii</em>, <em>E. faecalis</em>, <em>B. clausii</em>, VSL#3</td>
<td>$1 \times 10^4$ – $10^{10}$</td>
<td></td>
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<tr>
<td>Güney-Varal (2017)25: RCT in premature infants (n=110) in Turkey administered a probiotic mixture found a significant reduction of mortality and NEC when given probiotics compared with placebo.</td>
<td>Mixture included: <em>L. rhamnosus</em>, <em>L. casei</em>, <em>L. plantorum</em>, <em>B. animalis</em>, prebiotics</td>
<td>$2 \times 10^9$</td>
<td></td>
</tr>
<tr>
<td><strong>Helicobacter pylori (H pylori)</strong></td>
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<tr>
<td>Fang HR (2018)26: 5 pooled RCTs (N=484) showed an increase in eradication rates in the <em>Lactobacillus</em> group vs control group (RR, 1.19; 95% CI: 1.07-1.33).</td>
<td><em>Lactobacillus</em> spp</td>
<td>$1 \times 10^5$ – $10^{10}$ (1 RCT did not provide dose)</td>
<td><em>Lactobacillus</em> may increase eradication rates of <em>H pylori</em> when supplemented with standard treatment, but more studies are required.</td>
</tr>
<tr>
<td>Akcam (2015)27: RCT in children (n=61) comparing standard <em>H pylori</em> treatment vs standard treatment plus probiotic mixture found no difference in <em>H pylori</em> eradication between groups.</td>
<td>Mixture: <em>L. casei</em>, <em>L. acidophilus</em>, <em>B. lactis</em></td>
<td>$7 \times 10^6$ CFU BID for 14 d</td>
<td></td>
</tr>
<tr>
<td><strong>Ulcerative colitis (UC)</strong></td>
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<tr>
<td>Miele (2009)28: RCT in children with newly diagnosed UC (n=29). Probiotics given with steroids and mesalamine resulted in remission in 13 (92.8%) patients vs 4 (36.4%) who received placebo (P&lt;0.001). Treatment groups were less likely to relapse within 1 year of follow-up and had lower histological scores at follow-up.</td>
<td>VSL#3</td>
<td>4.5 – $1.8 \times 10^{11}$</td>
<td>Evidence to date shows likely benefits of VSL#3 as an adjuvant in adult patients with UC. However, there is insufficient pediatric data to recommend routine use of probiotics in UC patients. More research is needed.</td>
</tr>
</tbody>
</table>
### Vaccine response

**Yeh (2018)**: Meta-analysis of 12 RCTs (n=688) found that supplementation with prebiotics/probiotics in adults receiving influenza vaccination enhances influenza hemagglutination inhibition antibody titers (A/H1N1, A/H3N2, B strains).

- **Probiotics Studied:** L fermentum, L casei, L casei Shirola, B longum, LGG, L plantarum, L paracasei Molac
- **Dosing Range:** 1 x 10^9 – 10^11
- **Comments:** More data needed.

**Kukkonen (2006)**: RCT (n=87) of Finnish infants found that a daily probiotic mixture was associated with higher seroconversion rates for Hib IgG at 6 months.

- **Probiotics Studied:** Mixture: LGG, L rhamnosus LC705, B breve Bbi99, Propionibacterium freudenreichii ssp.
- **Dosing Range:** 1.2 x 10^10 daily for 6 mo

### Asthma

**Szajewska (2018)**: Meta-analysis of 5 RCTs (n=889) showed that LGG, when administered during pregnancy or infancy, had no effect on wheezing/asthma.

- **Probiotics Studied:** LGG
- **Dosing Range:** 1 x 10^9 – 1.8 x 10^10
- **Comments:** No evidence for use to date.

### Eczema

**Szajewska (2018)**: Meta-analysis of 5 RCTs (n=889) showed that LGG, when administered during pregnancy or infancy, did not reduce the risk of eczema.

- **Probiotics Studied:** LGG
- **Dosing Range:** 1 x 10^9 – 1.8 x 10^10
- **Comments:** No evidence for use to date.

### Autistic spectrum disorder (ASD)

**Shaaban (2018)**: Prospective, open-label study in autistic children (n=30) showed significant improvements in severity of autism after treatment with probiotics.

- **Probiotics Studied:** L acidophilus, L rhamnosus, B longum
- **Dosing Range:** 5 x 10^8 for 3 mo
- **Comments:** More evidence needed.

### Abbreviations
- CFU, colony-forming unit; CI, Confidence Interval; Hib, Haemophilus influenzae type b; IgG, immunoglobulin G; LGG, Lactobacillus rhamnosus GG; RCT, randomized controlled trial.

### Additional Notes

- Probiotics are dietary supplements not subject to FDA review, and providers wishing to use these products as drugs (eg, to treat, mitigate, cure, or prevent a disease or condition) should submit an Investigational New Drug (IND) application for review.
- Infant formulas with added probiotics are under FDA regulation and must be made in compliance with good manufacturing practices, although probiotics’ proven benefit is unclear with a paucity of robust evidence.
- Several studies showing that probiotic use has been safe in certain patient populations, such as LGG use in very-low-birth-weight preterm infants, interpreting the data on efficacy and safety of probiotics is complicated, especially because of the heterogeneity of probiotic formulations and the wide variety of diseases in which they have been used. Because of the lack of studies evaluating the safety and efficacy of probiotic use in immunocompromised children, current recommendations do not recommend the use.

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Several studies have demonstrated the potential benefits of probiotics in various conditions such as vaccine response, asthma, eczema, and autistic spectrum disorder (ASD). For instance, a meta-analysis by Yeh in 2018 involving 12 randomized controlled trials (RCTs) found that supplementation with prebiotics/probiotics in adults receiving influenza vaccination enhanced influenza hemagglutination inhibition antibody titers. Similarly, a study by Kukkonen in 2006 showed that a daily probiotic mixture was associated with higher seroconversion rates for Haemophilus influenzae type b (Hib) IgG at 6 months in Finnish infants. However, further research is needed to confirm these findings.

In the case of asthma, a meta-analysis by Szajewska in 2018 revealed that LGG, when administered during pregnancy or infancy, had no effect on wheezing or asthma. For eczema, another meta-analysis by Szajewska also showed that LGG did not reduce the risk of eczema during pregnancy or infancy.

In terms of ASD, a study by Shaaban in 2018 reported significant improvements in severity of autism after treatment with probiotics, specifically strains like L acidophilus, L rhamnosus, and B longum. However, more evidence is needed to confirm these findings.

Despite these promising results, it is important to note that probiotics are dietary supplements and not subject to FDA review for use as drugs. Providers who wish to use probiotics should consider submitting an Investigational New Drug (IND) application for review. Additionally, infant formulas with added probiotics are under FDA regulation and must comply with good manufacturing practices. However, the proven benefit of probiotics remains unclear due to a lack of robust evidence.

In December 2014, the US Food and Drug Administration (FDA) issued a warning to healthcare providers about the risk of probiotic use in immunocompromised patients, citing an example involving a premature infant who developed fatal gastrointestinal mucormycosis from Rhizopus oryzae. The infection was attributed to a contaminant in an unopened container of probiotic powder with active ingredients listed as Bifidobacterium lactis and L rhamnosus. This is a reminder that probiotics are dietary supplements and not subject to FDA review, and providers wishing to use these products as drugs (eg, to treat, mitigate, cure, or prevent a disease or condition) should submit an IND application for review. On the other hand, infant formulas with added probiotics are under FDA regulation and must be made in compliance with good manufacturing practices, although probiotics’ proven benefit is unclear with a paucity of robust evidence. Because of the lack of studies evaluating the safety and efficacy of probiotic use in immunocompromised children, current recommendations do not recommend the use.
of probiotics for the prevention of *C difficile* infection in pediatric patients with cancer or hematopoietic stem cell transplants.38

**Conclusion**
Several studies suggest the beneficial use of probiotics in some circumstances. However, there is insufficient evidence for recommendations on the routine use of probiotics in children.3 As the probiotics industry continues to grow, consistent global regulations, more well-designed human studies, and better safety data are needed to clarify the benefits of probiotics.39

The authors have nothing to disclose in regard to affiliations with or financial interests in any organizations that may have an interest in any part of this article.

For references, go to [ContemporaryPediatrics.com/probiotics-for-kids](http://ContemporaryPediatrics.com/probiotics-for-kids)

**NOTE FROM DR LEE**
Are probiotics a medication, dietary supplement, or food additive? Until the US Food and Drug Administration (FDA) provides us with specific guidance and definitions, probiotics continue to be prescribed and self-initiated by physicians and consumers, respectively.

—Carlton Lee, PHARMD, MPH, FASHP, FPPAG

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Among the most common questions parents and caregivers ask pediatricians when gastro issues arise may be about the use of probiotics.

In a world where advertising messaging to concerned parents is both well funded and ubiquitous, they turn to you for the best counsel in a field with few clinical practice guidelines, and a paucity of regulations, but an abundance of health claims. Worse, there seems a pervading sense that such supplements, because they are available over the counter, are innocuous and harmless.

**Are you a probiotics pro?**
How’s your grasp of fact and fiction in probiotics? Is there a role for them in the treatment or prevention of irritable bowel syndrome, constipation, diarrhea—even autism? Are there legitimate concerns about their use in a patient population with immature immune systems?

By definition, a probiotic is a microorganism that when consumed maintains or restores beneficial bacteria to the digestive tract. Probiotics can be supplied through foods, beverages, and dietary supplements.

**Trading spaces**
Ilya Ilyich Mechnikov, a Ukrainian and Russian zoologist perhaps best known for his Nobel Prize-winning research in immunology, is regarded as the father of probiotics. In 1907, he hypothesized that replacing or diminishing the number of “putrefactive” bacteria in the gut with lactic acid bacteria could normalize bowel health and prolong life.

Today, although there are data pointing to the microbiome and the role it plays in systemic health and illness from eczema to autism, the wide variance of the efficacy of probiotic therapy appears to be both strain and disease specific—quite effective in some disease processes, not useful in others. So, then, thumbs up on *Lactobacillus* over *Saccharomyces boulardii* for infectious diarrhea? (Spoiler alert: 3 meta-analyses found one worked better in adults than in children.)

**Ready for a gut check on probiotics?**
At the link below, you’ll test your probiotics knowledge against your peers via an online quiz on the [Contemporary Pediatrics](http://ContemporaryPediatrics.com) website. We’ll ask you 5 key tenets about Probiotics in Newborns and Children, deliver your score on each question versus your peers, then provide some perspective on the correct answers. There you’ll also find a treasure trove of further reading and resources to take your probiotics know-how to, well, the pro level.

All set to “play” for gut flora glory? [Riddle Me This!](http://ContemporaryPediatrics.com/quiz-0419) is ready online now!
If honesty underlies trust and trust is the basis of the doctor-patient relationship, then honesty between doctor and patient is a necessity. However, as in all areas of medicine, and life, nothing is so clear cut.

Omitting to tell a patient a potential rare adverse effect of a medication to spare the patient undue anxiety, telling a patient he or she will be fine when the prognosis is more ambiguous, or telling an outright lie to payors to ensure a patient gets the medication or treatment needed—these all occur in clinical practice.

Surveys show that not telling the truth, either by omission or active deception, is done by physicians for a myriad of reasons. For most, if not all, these situations in which physicians are less than truthful in their encounters with patients, the impetus is for the good of the patient. Yet it is not easy to know when a deception remains within the realm of the acceptable and when it may blur into the difficult to justify.

When it comes to talking to children and adolescents, things get even murkier. The wishes of caregivers must be weighed into any conversation a pediatrician has with his or her patient. Difficult questions may arise for the pediatrician if the caregivers’ wishes go against the best judgement of the physician in relaying or not relaying information to the patient.

In this interview, Contemporary Pediatrics spoke with Daniel K. Sokol, PHD, MSC, a medical ethicist and lawyer in London, England, who has written and spoken extensively on this issue. In 2006, as part of his doctoral thesis on truth-telling in the doctor-patient relationship, he developed an algorithm for physicians that he called a “deception flowchart” to help doctors decide whether a proposed deceptive action or omission is morally justified.

Contemporary Pediatrics also spoke with Angira Patel, MD, MPH, a pediatric cardiologist at the Ann and Robert H. Lurie Children’s Hospital of Chicago, Illinois, who recently co-authored an article on this issue in which she provides the perspective of a pediatrician on when lying to patients may or may not be justified. (See “More references for basics of pediatric ethics,” page 31, for additional sources cited by Patel as the “basics” of medical bioethics that are used when thinking about this issue in pediatrics.)
Here is Dr. Daniel Sokol’s sequential checklist of considerations to help physicians decide whether a proposed deceptive action or omission is morally justified.

**DECEPTION FLOWCHART**

Is your proposed action (or omission) deceptive?

- Yes
- No

What are your justifications for the proposed deception?

- To prevent great physical or psychological harm to patient (including death)
- To preserve or enhance hope
- Temporary deception to prevent potential great distress (for example, postponing disclosure)
- Compassionate deception (for example, to reduce great stress or anxiety)
- Patient is reliably believed or known not to want information
- Patient is not emotionally or cognitively equipped to decide or to cope with the truth
- Deception will enhance autonomy in the long run (for example, by preventing life-threatening heart attack)

Can the objectives be met without recourse to deception?

- Yes
- No

Use non-deceptive means to achieve objectives.

Will non-lying deception meet the objectives?

- Yes
- No

Consider lying.

Consider objections to lying and non-lying deception.

- Violation of prima facie norm of honesty and codes of ethics
- If discovered, possible loss of trust by patient (greater in lying?) and possible loss of public trust in medical profession (greater in lying?)
- Possible emotional distress if lie/deception is discovered
- Failure to respect or enhance patient’s immediate autonomy
- Violation of patient’s right to know or right not to be lied to/deceived
- Difficulty of balancing potential harms and benefits of lying/deception
- Biased perspective/self-deception may affect evaluation of lying/deception
- Greater tendency to lie/deceive in the future, including possible need to “shore up” present lie/deception with further lies/deception

Do the justifications outweigh the objections?

- Yes
- No

Would you be prepared to defend your lie/deception at a hearing of your professional body or a court of law?

- Yes
- No

If aware of the facts, would the patient consent to the lie/deception in advance? (If patient’s views are not known, substitute the patient for “a reasonable patient.”)

- Yes
- No

Proposed deception is morally permissible.

Reject proposed deception.

From: Sokol D. Available at: https://www.bmj.com/content/334/7601/984. Used with permission. ©2019 The BMJ

CONTINUED ON PAGE 30
Q. You developed a flowchart to help physicians consider when not telling the truth in the clinical setting is morally justified. Can you describe how you developed it?

Daniel Sokol, PHD, MSC:
The flowchart was created to help doctors decide whether a proposed deceptive action or omission is morally justified. It’s a 1-page decision-making guide (Figure).5

The flowchart asks clinicians to consider the justifications for a proposed deceptive act and provides a list of possible justifications. It then asks the clinician to consider, at a practical level, whether the deception is likely to succeed in “fooling” the patient and achieve the aims. The flowchart also encourages clinicians to reflect on the possible objections to deception and again provides a list of objections, and asks them to weigh the pros and cons.

Finally, if the scales still tip in favour of deception, the flowchart introduces 2 safety checks:

1. Would the clinician be prepared to defend the deception at a formal hearing of his or her professional body or even a court of law?

2. If so, would the patient—or a reasonable person—probably have agreed to the deception if he or she had known about this situation in advance?

Q. Can deceiving patients be morally acceptable? If so, when, in the setting of pediatrics?

Sokol: Yes, it can. The answer lies in the flowchart. Imagine a scenario when telling something to a child (perhaps a grim diagnosis or prognosis), who has previously indicated that he does not wish to know the details of his situation, would likely cause significant psychologic, even physical, harm, and would be positively cruel, however skilfully that truth was communicated. Further, you may have good reason to believe that the child may not be emotionally able to deal with the information.

In that situation, a lie could be morally acceptable, assuming the prospects of detection were sufficiently low.

I suspect most of your readers will be able to think of actual situations where a benevolent lie, or a deceptive omission, proved the ethnically and medically better approach than disclosure. In each case, however, the deception has to be in the best interests of the child. It cannot be simply to appease the parents, or to dodge a difficult or time-consuming conversation.

Angira Patel, MD: The short answer is that lying or deceiving patients is not morally acceptable. The patient-physician relationship is built on trust and the ethical duty of a physician is to be honest. This imperative is even more important because the patient is vulnerable, sometimes fearful, and relying on the expertise of a physician to obtain accurate information and recommendations to make informed decisions. In the United States, we especially value respect for personal autonomy and this necessarily demands truth-telling from the physician.

However, I think it is important to recognize that physicians sometimes tell “white lies” when they feel it may be for the patients’ benefit (such as compassion, avoiding immediate harm, or giving hope) and some have argued that this sort of narrowly defined deception may be morally acceptable.

Q. Do you think the “deception flowchart” could be used in the pediatric setting? Any alterations or limitations?

Sokol: Absolutely. Some elements may be more relevant than others in the pediatric setting.
context, especially with younger children. For example, in thinking about a possible justification for deception in younger children, paediatricians will need to consider that the “patient is not emotionally or cognitively equipped to decide or to cope with the truth.”

Also, the flowchart is focused on the patient (ie, the child). The parents and relatives do not feature explicitly, although, of course, this does not mean that a clinician cannot, or should not, seek the assistance of those persons to inform his or her decision-making. For example, a parent may be better placed than a clinician to predict how [his/her] child will react to receiving a piece of information.

If readers feel the flowchart needs alteration to reflect the realities of their practice, they are most welcome to adapt it.

**Patel:** I think it’s difficult to rely on any flowchart exclusively. The Sokol flowchart is helpful in understanding the ethical tension and lays out the specific situations where deception may be morally acceptable. A physician considering deception should be a rare occurrence and lead her to pause and ask, “Is this really best for my patient?” The subsequent analysis by the physician should be nuanced and [she should] deeply think about the motive of telling a deception.

**Q.** What thoughts can inform the “type of deception” a pediatrician may employ in the pediatric setting? There seems to be a wide spectrum from white lie to active deception (perhaps to insurers for medication or treatment approval) to in the middle (omission or timing of truth).

**Sokol:** Deception is a complex notion, with no universal definition. What you might consider deception may differ from what I deem to be deception.

Is the doctor who, over the phone, tells the parents of a child who has just died “Please come now, your child is very ill,” to allow the parents to know the truth in person and minimise the risk of an accident in transit to the hospital, engaging in deception? Is the doctor who fails to tell an 8-year-old child on the waiting list for a heart transplant that there is a high likelihood of dying whilst on the list engaging in deception by omission?

Deception takes many forms, from the old-fashioned lie to the clever use of words (“You won’t believe how many of these I’ve done!”) says the junior doctor with no experience to the concerned.

“The pediatrician has a duty to consider the developing maturity of the child (respect for developing autonomy) and [his or her] right to participate in [his/her] own medical care.”

—ANGIRA PATEL, MD, MPH

MORE REFERENCES FOR BASICS OF PEDIATRIC ETHICS


Additional sources provided by Angira Patel, MD, MPH.
parent who asks how many times he or she has performed that procedure) to misleading gestures to deceiving by keeping silent.

Does it matter morally which sort of deception you use? I doubt it in most cases, but scholars differ on that.

What matters, in the end, is not so much whether an action or omission is “deception.” It’s whether or not it’s morally permissible.

**Patel:** A physician should start from a place of no deception, whether it is withholding information or providing misinformation to insurers for medication or treatment approval. Sometimes, the timing and how information is given may be dependent upon needing more data to understand the disease process, not being able to prognosticate or accurately predict, or allowing the family to process difficult circumstances. However, the end goal should always be information sharing.

**Q. Finally, what are the particularly ethical challenges of truth-telling in the pediatric setting where the patient is not yet an adult and under the care of a parent/caregiver?** Are there situations in which the pediatrician could withhold information from the patient at the request of the caregiver? Any situations in which the pediatrician could withhold information from the caregiver?

**Sokol:** In England and Wales, which is the jurisdiction I know best, the guiding star, both in law and in ethics, is the “best interests of the child.”

So, is telling the truth always in the best interests of the child? Who decides? When views conflict, whose should take priority? Generally, the more autonomy a child possesses, the greater the prima facie obligation to tell the truth. Lying to a 3-year-old (reduced autonomy) is generally more acceptable than lying to a 17-year-old (full autonomy), whether in medicine or in everyday life.

Of course, “best interest” decisions also arise with medical treatment generally, and I explore many of these in my new book *Tough Choices: Stories from the Front Line of Medical Ethics.*

There are chapters on 2 paediatric cases—Charlie Gard and Alfie Evans—that gripped the UK in the last 2 years. In both cases, there was intractable disagreement between the clinicians and the parents over what was in the child’s best interests. What was remarkable about these cases was the use of what I called “guerrilla tactics” by the families, namely social media, the support of high-profile figures such as the Pope, presidents, and celebrities, and verbal threats and intimidation of healthcare workers.

In the book, I concluded that “These guerrilla tactics do shed blood. The consequences, often, are that the children at the centre of the dispute receive burdensome treatment for longer than they should, treating hospital staff feel victimised and demoralised, and hospitals in the future will think twice about taking cases to court for fear of damage to their reputation even when continued treatment is contrary to the child’s best interests.”

One important difference is that doctors are usually best placed to appreciate the medical aspects of treatment. With truth-telling, however, we’re dealing also with a child’s personality, emotions, actions, and reactions, and here parents, relatives, and caregivers may be (although not always) better placed to predict how a child will react to a truth or untruth. Arguably, the weight to be placed on the views of parents in truth-telling dilemmas should be greater than with questions of medical treatment.

So, yes, there may be situations in which a paediatrician will be satisfied that the caregivers are correct and that withholding information from a child, although deceptive, would be in
that child’s best interests.

There is a separate, fascinating ethical area of whether clinicians can deceive a child’s parents or relatives, such as telling a parent that the child’s final moments were peaceful and painless when in reality they were not, but that might be for another day, and another flowchart.

**Patel:** In the pediatric settings, healthcare conversations and decision-making involve a 3-way relationship between the minor child, the parents or guardian of the child, and the physician. Deception or lying can be even more complicated in this setting if the parents ask the physician to withhold information from the child or adolescent. As pediatricians, it is our duty to involve the child as is developmentally appropriate while respecting the family unit. Conflict occurs when parents do not want their child to know medical information or when adolescents and parents disagree about treatment. The conflict must be addressed while balancing what is best for the child and still allowing parents to be the decision-makers for their child. This sort of conflict resolution is complex and approached thoughtfully with multiple conversations and ultimately building trust.

There are situations when a pediatrician can withhold information from the child/adolescent at the request of the caregiver. Examples may include if child is in immediate harm to self or others, the child is young and unable to understand the complexity of the medical situation, or the child has expressed [he/she does] not wish to know details of the diagnosis.

However, many cases do fall in the gray zone, such as that of a 15-year-old with a new diagnosis of cancer or a 12-year-old with chronic HIV whose parents ask that the diagnosis not be disclosed. Whereas it may have been acceptable to not disclose the HIV status when the child was 4, it may not be anymore. Despite the parents’ intention of wanting to protect their 15-year-old child, he may be hurt more if he accidentally learns of his diagnosis from others while receiving cancer treatment.

In these cases, the pediatrician should not automatically withhold information as the parents desire. The pediatrician has a duty to consider the developing maturity of the child (respect for developing autonomy) and [his or her] right to participate in [his/her] own medical care. Each case may be ultimately resolved differently but must start with respectful conversation and understanding among all parties.

If the caregiver is clearly not acting in the best interest of the child, which is leading to harm that crosses a threshold of acceptable leeway of parental discretion, pediatricians may withhold information and/or involve protective services for the well-being of the child.

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**BENDING THE TRUTH**

Lying is part of one’s developmental process. The chart shows lying frequency by age over a 24-hour period.

<table>
<thead>
<tr>
<th>Ages</th>
<th>1 to 5 lies</th>
<th>Percent telling more than 5 lies in 1 day</th>
<th>No lies told</th>
</tr>
</thead>
<tbody>
<tr>
<td>60–77 y</td>
<td>34%</td>
<td>10%</td>
<td>56%</td>
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<tr>
<td>45–59 y</td>
<td>39%</td>
<td>11%</td>
<td>50%</td>
</tr>
<tr>
<td>18–44 y</td>
<td>45%</td>
<td>9%</td>
<td>46%</td>
</tr>
<tr>
<td>13–17 y</td>
<td>59%</td>
<td>15%</td>
<td>26%</td>
</tr>
<tr>
<td>9–12 y</td>
<td>43%</td>
<td>14%</td>
<td>43%</td>
</tr>
<tr>
<td>6–8 y</td>
<td>29%</td>
<td>7%</td>
<td>64%</td>
</tr>
</tbody>
</table>

From *National Geographic*; 2017.
Doctors share ethical issues that worry them most

What ethical dilemmas keep you up at night?

For this inaugural issue addressing ethics in pediatric medical care, *Contemporary Pediatrics* asked pediatrics and ethics experts to candidly weigh in on some of the foremost moral and ethical issues confronting pediatricians and pediatric healthcare providers today. Here are their thoughts on these sensitive topics. We welcome your thoughts as well. Write to us at cradwan@mmhgroup.com.

**Ms Hilton** is a medical writer who has covered health and medicine for 25 years. She resides in Boca Raton, Florida. She has nothing to disclose in regard to affiliations with or financial interests in any organizations that may have an interest in any part of this article.
THE DILEMMA  Racial, ethnic, and economic health outcome disparities among US children
I think the biggest ethical issue for pediatricians today is the racial, ethnic, and economic disparities in pediatric outcomes for health and healthcare in the United States.

There is lots of research that minority and disadvantaged children have worse outcomes in many different arenas, including infant mortality, the care of some chronic illnesses, and a variety of other conditions. We also know that low-income children do worse in many aspects of healthcare than higher-income children. This could be related to opportunities for utilization of healthcare services, the environment in which children are raised (which may include exposure to violence, toxic substances, and so on), and more.

All those factors impact our ability to create the next generation of healthy persons in our country.

We have an ethical responsibility to try and ensure that children have the greatest opportunity to have successful childhoods and become healthy adults. We know right now in our country that not all children have that same opportunity. It’s really a matter of working to try and eliminate the social and economic disparities that we know already exist.

Gary L Freed, MD, MPH, professor of Pediatrics, professor of Health Management and Policy, associate chair, Department of Pediatrics, and director of Faculty Programs, Office of Health Equity and Inclusion, University of Michigan, Ann Arbor, Michigan.

Bernard A Cohen, MD, professor of Pediatrics and Dermatology, Johns Hopkins University School of Medicine, Baltimore, Maryland.

THE DILEMMA  Out-of-control drug pricing for commonly prescribed medications
In the last decade or so, prices for medications that I commonly prescribe—many of which have been out for 20 or 30 years and are generics—have exploded. Sometimes, these are commonly used drugs for treatment of general skin conditions. I’ve talked with pediatricians who are experiencing the same issue for medications they prescribe.

Examples in pediatric dermatology are oral erythromycin and topical agents, such as clobetasol, a class-1 high-potency topical steroid.

The ethical dilemma is real in terms of getting patients proper care when the prescription agents that we’re writing for have become prohibitively expensive. Outrageously expensive.

THE DILEMMA  Disagreements among patients, families, and pediatricians on diagnoses, treatments
It can be dicey when we make a diagnosis and recommend treatment, and a parent doesn’t buy into the idea. It gets even more complicated when we have a teenager—a minor—who is cognizant of what’s going on and may feel very differently than the parent about the diagnosis and treatment.

That’s an ethical dilemma because we want to treat the child.

Scenarios range from patients with life-threatening disorders to recommendations regarding immunizations.

One of the goals of the American Academy of Pediatrics (AAP), which we all support very strongly, is the immunization issue and immunizing kids based on recommendations. Having parents who for some reason do not want their otherwise healthy children immunized, even though we expect those children to have appropriate responses to immunizations, is a real dilemma.

There’s disagreement about whether pediatricians should continue to treat children whose parents disagree with guideline-based recommended treatment. I think sometimes that pediatricians can protect patients more if they maintain relationships with these families and continue to care for those children. However, I think it’s also important to make it clear that we don’t buy into the idea that immunization is dangerous and inappropriate in an otherwise healthy child, and that not immunizing the patient poses a significant risk to the child.

THE DILEMMA  Prior authorization
We’re spending more and more time working on prior authorizations for what should be considered to be medically appropriate procedures, and there’s no question that along the way withholding intervention can result in significant morbidity.
Disclosing medical errors

Physicians make errors all the time and don’t necessarily disclose them to families. We weren’t trained to do that.

Disclosing medical errors continues to be an ethical dilemma for us, but we are making progress. We’re starting to include that training in residencies and even at some medical schools.

Many hospitals now have a "blameless" environment where people are encouraged to disclose errors. In my hospital, it is a policy that we should disclose an error to a family, but not all hospitals have an environment where the physician is encouraged to disclose an error. If physicians feel they are going to be punished for making mistakes, they’re more likely to hide errors.

I think we still have an environment in which it’s uncomfortable for doctors to disclose errors because they worry what’s going to happen to them as a result.

Disclosing errors is important for many reasons. It helps maintain relationships of trust with families. They’re not going to trust us if they find out that we didn’t disclose an error. Whereas some might be afraid that being honest about an error will lead to malpractice lawsuits, studies show we’re more likely to be sued if we don’t disclose the error and the family finds out a different way.

There were videos of Jahi responding to commands. There was a recent conference at Harvard where these videos were shown. When you see these, they are very compelling. This was not an accidental movement or automatic reflex.

The ethical point of this is that the whole strength of death by neurological criteria is based on irreversibility. Once you remove that confidence in irreversibility—irreversibility particularly related to consciousness—then you put the whole concept of death by neurological criteria to doubt. If you put that concept in doubt, then you put an added strain on the intensive care units and, of course, organ donation.

Some background on the case to which Dr. Miller refers: Jahi McMath was 13 years old in December 2013 when she was declared brain dead after complications from tonsil-removing surgery performed at a children’s hospital in Oakland, California.

A California coroner issued Jahi’s death certificate the following month, but Jahi’s family saw life in the child, who continued to breathe and whose heart continued to beat with the help of a ventilator. The courts in California agreed that the family could transfer Jahi to New Jersey, where one is allowed not to follow the death by neurological criteria.1

Pediatric neurologist D. Alan Shewmon, MD, was among those who believed Jahi wasn’t in fact brain dead. Video documentation helped to demonstrate that Jahi was capable of following some commands and was minimally conscious.2,3

Jahi died by cardiovascular criteria in a New Jersey hospital in June 2018 and was put to rest. Dr. Miller describes the ethical dilemma next.

When somebody is declared brain dead, the artificial respiration is removed and then they can have organ transplant. If death by neurological criteria is put into doubt, this puts a heavy strain on intensive care units that would have to wait for the heart to stop, and it may not stop for years. It also would put a strain on organ donation for children.

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For references, go to ContemporaryPediatrics.com/ethics-issues
**THE DILEMMA** Who should do a procedure on a child?

An ethical dilemma that I struggle with working in the pediatric emergency department (ED) is who should do a procedure on a child?

We’re in a teaching environment, but is it ethical to allow residents or even students to do a procedure on a child, such as a spinal tap or lumbar puncture, when we know that the experienced attending could probably do it faster and maybe more accurately?

This is something that all physicians who are in academic medicine or teaching struggle with. We do want to allow the trainee to get experience and to learn how to do the procedure. You can’t become experienced unless at some point you’re inexperienced and you perform a procedure under supervision.

We’re torn between our role as a teacher and our role and obligation to the patient.

My opinion is that it’s ethical to allow the trainee to do the procedure under supervision. I think the trainee has some responsibility. The trainee has to read about the procedure and know the risks and benefits of the procedure. Ideally, the trainee should practice the procedure first on a manikin in simulation and come to the procedure somewhat prepared to do it for the first time.

The teacher has an obligation to be there with the trainee to directly supervise and to step in if it looks like...

“Is it ethical to allow residents or students to do a procedure on a child when we know that the attending could do it faster?”

—STEVEN M. SELBST, MD

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**Ethical practice when facing life-limiting disease**

There are resources and guidelines available for pediatricians faced with caring for children with terminal or life-threatening conditions.

LISETTE HILTON

Pediatricians confronted with helping patients and families make sense of difficult healthcare diagnoses and treatments have places and people to turn to for help, according to pediatrician and bioethics expert Brian Carter, MD.

There are pediatric-specific bioethics centers, including at Children’s Mercy Kansas City, Missouri, as well as the Treuman Katz Center for Pediatric Bioethics at Seattle Children’s Hospital, University of Washington, Seattle, says Carter, who is the endowed William T. and Marjorie Sirridge Professor in Medical Humanities and Bioethics at the University of Missouri-Kansas City School of Medicine and codirector for the Children’s Mercy Bioethics Center’s Pediatric Bioethics Certificate Course. Carter also is a board member for the Center for Practical Bioethics, a nonprofit, independent organization in Kansas City, Missouri, started in 1984 to help patients, families, healthcare professionals, and policymakers deal with complex issues in medicine.

There are pediatric bioethicists sprinkled throughout the United States,” Carter says. “There is within the American Academy of Pediatrics (AAP) both a Section on Bioethics and a Section on Hospice and Palliative Care.”

Pediatricians could also refer to adult bioethics centers, which might not be pediatric specific but tend to offer some knowledge or capacity to deal with pediatric issues, according to Carter. “People are generally in this field to be helpful,” he says.

There also are resources such as the Center for Practical Bioethics, as well as guidelines to help pediatricians and others grapple with ethical issues.

**Ethical guidelines for children**

The essence of what pediatricians need to know about the ethics of caring for children when dealing with life-limiting or life-threatening conditions is addressed in the Healthcare Treatment Decision-Making Guidelines for Minors, by the Center for Practical Bioethics, first published in 1995 and revised in May 2015.

CONTINUED ON PAGE 38
Ethical practice

CONTINUED FROM PAGE 37

“Realistically, what this translates to for the general pediatrician is that when considering life-limiting or life-threatening conditions for children who have a voice, that voice should be heard,” Carter says. “The long-standing history here in Kansas City is with the late William G. Bartholome, MD, a physician and ethicist who promoted the identity of the child as being very important when making treatment decisions and when pursuing procedures on the child.”

Parental permission, generally under the guise of consent, should be accompanied by the child’s assent. The child should be respected as an individual and given the opportunity to understand what the treatment is and what needs to be done and why, according to Carter.

“That effort was in one sense codified in the writings of the AAP in the 1990s, as they addressed issues of informed consent and assent for the care of children,” Carter says. “This revolves, again, around respect for the child as a maturing young person, separate from his or her parents, who warrants that respect from health-care professionals.”

For babies, toddlers, and other children who don’t have the capacity to participate in decision-making, the provider is in a situation where he or she can posit potential options for care, comfort, and quality of life, according to Carter.

“In essence, the pediatrician is saying to the parent, you’re not alone here, I’m going to walk you through this space and give you examples of decisions that you might not have thought of that other loving parents have made,” he says. “It’s not that a pediatrician takes on the voice of the child. More times than not, that is really the prerogative of the parents to try to determine what would be in the child’s best interests. The best interests of the child concept is usually relegated to parents, unless they’ve shown that they’re not interested in that and they perhaps are neglectful or otherwise have perpetrated harm on the child.”

Pediatric bioethicists, pediatricians who are interested and in the know about these things, and other bioethics experts can help walk pediatricians through these and other difficult conversations with patients and families, says Carter.

Ms Hilton is a medical writer who has covered health and medicine for 25 years. She resides in Boca Raton, Florida. She has nothing to disclose in regard to affiliations with or financial interests in any organizations that may have an interest in any part of this article.

The child should be respected as an individual and given the opportunity to understand what needs to be done and why.

—BRIAN CARTER, MD

The tough part is explaining this to parents. We explain to them that this is a teaching hospital, and we do need to train. That is our obligation—to train the resident or student—but we reassure [parents] that we will do everything we can to minimize the pain and inconvenience for the patient, and that we will definitely step in if it looks like things are not going well.

THE DILEMMA

What to do about patients and families who abuse providers

At our hospital, we have had [on rare occasions] patients and families mistreat physicians, trainees, and nurses. They may be verbally abusive or very rarely physically abusive. Sometimes, they’re physically threatening to the physician and trainee.

The ethical question becomes: Are we obligated to take care of the patient and the family in those situations?

We do have an obligation, I think, to the child. The child is not usually the one who is doing the abuse; it’s the parent. We don’t want the child to suffer, but we believe that a parent does not have the right to abuse a physician or nurse verbally or physically and that the hospital should protect the staff from families like that while we’re trying to help the child.

If the hospital does not protect the team, ethically, I think it is reasonable to sign off on the case or tell the family that they need to go elsewhere for care. We have suggested this action very infrequently at our hospital and our ethics team felt this was appropriate.
THE DILEMMA: The importance of recommendations in shared decision-making

Recent decades have seen an erosion of physician authority, with increasing value placed on patient autonomy in medical decision-making. The consequence of this movement is a growing discomfort among pediatricians in making specific therapeutic recommendations. A current challenge for pediatricians is ensuring their knowledge and expertise remain a respected part of decision-making.

Shared decision-making (SDM) brings a balance to all voices and is accepted as the preferred method of physician-patient/family communication, but it is only “shared” if physicians are an active participant in the deliberations. Parents are surrogates who are expected to apply their family’s cultural values and religious beliefs. Physicians are surrogates as well, applying our medical knowledge to guide decisions for patients. Shared decision-making has been defined as "a collaborative process that allows patients, their surrogates, and clinicians to make healthcare decisions together, taking into account the best scientific evidence available, as well as the patients’ values, goals, and preferences." We are responsible for providing the best scientific evidence for this process. We are responsible for making recommendations.

I am increasingly aware of scenarios wherein the physician has abdicated [his/her] duty to make a recommendation. It is easy to slide into the role of offering "menu items" and deferring to parents; it takes moral courage to make a strong recommendation. Indeed, it can be argued that it is our ethical duty to use our expertise and knowledge (or authority) to help guide decision-making. Moynihan and colleagues state that failure to provide a recommendation undermines autonomy by preventing surrogates from making an informed decision and places undue burden on families. Pediatricians have the responsibility of learning communication skills that allow them to provide recommendations during SDM, avoiding manipulation but allowing all parties to collaborate toward an optimal outcome. Learning these communication skills takes effort and practice but will improve our service to patients and their families.

Laura A Miller-Smith, MD, associate professor of Pediatrics, University of Missouri-Kansas City School of Medicine, and chair, Ethics Committee, Children’s Mercy Hospital, Kansas City, Missouri.

What’s the cause of 50% of pediatric safety errors?
Surprisingly, electronic medical records (EMRs) may play a role in safety errors, most often related to usability issues with system feedback and visual display.
ContemporaryPediatrics.com/pediatric-safety-errors

What is “consent by proxy” for medical care?
Often, persons other than the parents bring a child to a medical appointment. How do you obtain consent for treatment in these visits without a parent present?
ContemporaryPediatrics.com/consent-by-proxy

Prevent medical errors in your practice
Children are at higher risk than adults for diagnostic and medication errors. Here’s how to establish a culture of safety in your practice.
ContemporaryPediatrics.com/prevent-medical-errors

“Shared decision-making brings a balance to all voices and is accepted as the preferred method of physician-patient/family communication.”
—LAURA A MILLER-SMITH, MD
THE DILEMMA  Physician burnout and well-being

 Changes in our health systems, payment structures, and the practice of medicine have made significant impacts on our personal lives, professional lives, and well-being. Given that burnout negatively impacts patient care, learning environments, personal health, and interpersonal relationships, we have an ethical responsibility to address it in our practices and health systems. I believe how we begin to address the epidemic of physician burnout will be a major challenge for the remainder of my career.

 Whereas work-related stress leading to emotional exhaustion, cynicism, depersonalization, a decreased perception of personal efficacy, and decreased effectiveness has a tremendous impact on individual physicians, the downstream effect on our patients, colleagues, and systems can be exponential.

 On a personal level, burnout is associated with failed relationships, depression, substance abuse, and even suicidal ideation. On a professional level, burnout is associated with job dissatisfaction, increased job turnover, increased medical errors, negative attitudes toward patients, and patient dissatisfaction.

 Individually, and as part of systems, we need to institute preventive programs that identify, impact, and mitigate the factors that lead to burnout.

 Given the evidence that burnout can begin early in training and occur throughout a career, our efforts need to target our colleagues beginning in medical school and continuing through our practice lifetime. The impacts and factors surrounding burnout are different through the many challenging transitions of a career, especially residency and early career. Failing to address issues of burnout early in a career allows the issues to fester and persist into practice. Failing to address issues of burnout once in practice can lead to the aforementioned complications and allows those symptoms and feelings to spread.

 Practices and health systems are beginning to take steps such as appointing chief wellness officers and wellness committees and implementing programs. Given the relationship between the negative impact of physician wellness on quality of care, it is important for health systems to address this issue.

 However, “wellness” is not a magic pill that can be prescribed to a physician. Rather, it requires “lifestyle changes” for both the individual and health systems. Individual physicians and health systems will need to invest time, money, and resources. Both will need to commit to improving “wellness” over the long term.

 Although the evidence base for physician wellness programs is evolving, it is clear such programs are needed and must be comprehensive and systematic, targeting domains that impact burnout: efficiency of practice, a culture of wellness, and personal resilience. We need to ensure that our organizations and individuals are moving toward a practice environment that better supports and enhances physician wellness.
**THE DILEMMA: Too much regulation; too little control**

In my view, it is an ethical priority that we reduce the control that insurance companies, pharmaceutical companies, and the government have over our healthcare system! Decades ago, in simpler times, parents paid their office bill at the time of service and if they had insurance, they would submit a copy of their superbill for reimbursement. Most medications were affordable, and we knew very little of the concept of prior authorizations, managed care, or claim denials. We also wrote very brief and often legible notes in our paper charts.

In today’s world, pediatricians and staff wrestle with requests for prior authorizations, challenge denied claims, prescribe lower-cost medications, and push buttons in electronic health records (EHRs) to justify charges (Contemporary Pediatrics, August 1, 2017). As a consequence, physicians are overwhelmed and either retire early or adopt alternative models of healthcare delivery.

The transformation of our healthcare system has been in part due to the greed of hospital systems, as well as physicians and pharmaceutical companies. Over the years, our national healthcare costs have risen astronomically, from a meager $75 billion in 1970 to over $3.5 trillion in 2017, according to the Kaiser Family Foundation!

In an attempt to control and reduce healthcare costs, the government has repeatedly stepped in to regulate medical services. In addition, insurance companies control what services we can provide as they hold the purse strings. As a consequence, what used to be an effective and kind healthcare system has become so mired in a muck of regulations and cost control that we find it difficult to do what we do. These days, many patients with high-deductible, commercial health insurance think twice before seeking medical care, and primary care physicians are poorly reimbursed for providing services to those patients who have government insurance.

There may be some light at the end of the tunnel, because physicians and patients are desperate for an ethical healthcare system, one free of impediments to care. At the state level, physicians are pushing for reform via legislative mandates that limit control of insurance companies. We have already seen state laws limiting maintenance of certification requirements and facilitating access and payment for telehealth services.

In order to become “pretty good pediatricians” (see Contemporary Pediatrics, January 1, 2019), we need to push for reforms that will limit the control of insurance companies and reduce the cost of medications. Perhaps, one day soon, our healthcare system will be healthy once again.

—ANDREW J SCHUMAN, MD, FAAP

**THE DILEMMA: Maintaining confidentiality when treating teenagers**

Confidentiality when treating adolescents is one of the most difficult ethical territories in pediatric primary care.

Although state laws vary by age and selected circumstance (such as treating sexually transmitted diseases), parents have broad rights to access their teenager’s medical record and ask their pediatrician almost any question about their child’s visit.

Pediatricians know that to provide comprehensive, high-quality care to a teenager, honesty and trust are essential. Some pediatricians try to manage this delicate ethical area by letting parents know what to expect and the practice’s policies well before their patient is a teenager. The pediatrician will begin to ask parents to leave the exam room for part or most of their visit.
Clinical Feature

Pediatric research and medication safety

In the United States, I believe, and the literature supports, that we have major ethical issues specific to the pediatric population surrounding research in medication safety, efficacy, and prescribing practices. In addition, there are significant ethical issues related to medication administration with parents who object to, resist, or refuse medications shown to be beneficial for the health and well-being of their infants/children/adolescents.

It was only in recent years that the National Institutes of Health (NIH) required drug companies to include children in drug testing trials to determine the safety, effectiveness, benefits, and short-term outcomes for administering specific medications to children. Prior to that time, only adults were included in clinical trials, and dosing for children was estimated based on adult data. Informed consent and assent are important considerations when including children/adolescents in clinical trials.

Donna Hallas, PHD, RN, PPCNP-BC, CPNP, PMHS, FAANP, Clinical Professor, New York University Meyers College of Nursing, and Director, Pediatric Nurse Practitioner Program, New York, New York.

“The dilemma” Pediatric research and medication safety

In the United States, I believe, and the literature supports, that we have major ethical issues specific to the pediatric population surrounding research in medication safety, efficacy, and prescribing practices. In addition, there are significant ethical issues related to medication administration with parents who object to, resist, or refuse medications shown to be beneficial for the health and well-being of their infants/children/adolescents.

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Can deception be morally acceptable? This algorithm might help a decision. See “Pediatric truth-telling: Omission vs deception,” on page 23.
Tackling the liver disease linked to T2D

Lifestyle changes, medication may mitigate inflammation in kids with T2D and fatty liver.

RACHAEL ZIMLICH, RN, BSN

A new study reveals that nonalcoholic steatohepatitis (NASH)—a more complex type of nonalcoholic fatty liver disease that includes inflammation and liver cell damage—is common in children with type 2 diabetes, but also that lifestyle changes and improved diabetes management may help.

The study, published in *Pediatric Diabetes*, analyzed data from 38 children with a mean age of 13 years who had been diagnosed with type 2 diabetes mellitus. The children were patients seen at Rady Children's Hospital, San Diego, California, and had undergone liver biopsies for chronically elevated alanine transaminase (ALT) levels. The research team found that 26% of these biopsies showed advanced fibrosis in patients with NASH, according to the report.

Lead author Ron S. Newfield, MD, a pediatric endocrinologist at the University of California, San Diego, and Rady Children's Hospital-San Diego, says the report highlights how common NASH is in children with type 2 diabetes and fatty liver.

“NAFLD incidence is rising as part of the rise in the number of overweight and obese children and adults. Insulin resistance is an integral part of the metabolic syndrome and it increases with obesity and has a central role in the pathogenesis of both type 2 diabetes and NAFLD,” Newfield says. “Diabetes is typically a more advanced form of the metabolic syndrome, with metabolic derangements including both hyperglycemia and dyslipidemia. It has been shown by other investigators that those patients with type 2 diabetes have much higher liver fat content. There are other factors that may predispose to NASH, such as the polymorphism in the *PNPLA3* gene that was shown to correlate with higher liver fat content and a higher risk of developing liver fibrosis.”

Study results

For the children in the study, the research team was able to demonstrate some factors leading to NASH, but more research is needed.

“Pediatric patients with type 2 diabetes and fatty liver are more likely to have nonalcoholic steatohepatitis (NASH).”

—RON S. NEWFIELD, MD

In the cases studied, the research team found that 78.9% of the children had had their diabetes treated with metformin, and 50% were treated with insulin therapy. Liver function was evaluated using the NASH Clinical Research Network scoring system (NAFLD activity score), and patients were also assessed using lab results, lipid panels, biopsies, and HbA1C levels near to the time of biopsy. At the time of NAFLD diagnosis, the researchers found that 61% of the patients in the study group had subjects with NASH versus those without NASH, those with NASH had more steatosis, and 26% had a higher stage of fibrosis (stage 3) that was only observed in those with NASH. This is of concern as those may be more likely to progress to cirrhosis (stage 4).”

The goal of the study was to determine the histologic characteristics in children with type 2 diabetes, and to determine what factors contribute to the development of NASH, including phenotypes, ethnicity, lipid profiles, and diabetes management and control. Although the study group was mostly Hispanic (63.2%) with more females than males, the research team did not find any association in NASH prevalence across age, gender, or ethnicity.
NASH, 13% had borderline NASH, and 26% had NAFLD without NASH. The children who received a NASH diagnosis had higher steatosis grades than those without, and 26% of the children with NASH had advanced—stage 3—fibrosis compared with no stage 3 fibrosis in children with borderline or no NASH diagnosis.

“These can be modified with lifestyle changes and good glycemic control. We were encouraged to find that in 8 subjects with a repeat biopsy (1.7 to 5.6 years after the initial biopsy) there was no worsening, and in almost two-thirds the NAS improved.”

**Important takeaways**
The research team concludes that this data warrants a review of the current cutoff of a NAFLD score of 5 for considering a NASH diagnosis, as well as further research into when biopsies should be performed, investigation of a larger cohort to assess ethnic associations, and whether therapies such as metformin may help improve NAFLD or slow progression.

“Our study reinforces the notion that lifestyle changes, including healthy diet and increased physical activity, together with keeping good glycemic control may help improve the diabetic dyslipidemia, and reduce weight and the chances of developing NASH,” Newfield says.

“Those interventions may also help halt the progression in the degree of steatosis and fibrosis in those with NASH and ultimately the progression towards cirrhosis.”

Newfield says he hopes the study will motivate clinicians to take a closer look at diabetic patients with abnormal liver enzymes, perhaps allowing for earlier evaluation.

“We hope this study will raise awareness of the high likelihood of NAFLD and NASH in patients with type 2 diabetes, even with mild transaminase elevations, and will spur more providers to have diabetes patients undergo a complete evaluation to exclude other treatable causes of elevated transaminases, which may require a liver biopsy in addition to other ancillary testing,” Newfield says. “Taking a history about alcohol consumption and educating youth with type 2 diabetes about avoiding alcohol and certain medications that affect the liver is important. Until effective medications to treat NAFLD are available, lifestyle modifications and achieving good glycemic control appear to offer the best and safest way to help address NASH.”

For reference, go to ContemporaryPediatrics.com/NAFLD-and-T2D

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**Teenagers need private time with their doctors**

New research reveals a concerning lack of confidential communication between physicians and their young patients.

**RACHAEL ZIMLICH, RN, BSN**

Teenagers lack private time with their physicians, according to a new report, raising concern that adolescents may not have adequate time to talk privately with their doctors about sensitive issues and that this could prevent them from getting the care they need.

The report, published in the *Journal of Adolescent Health*, reviewed more than 1900 surveys from young adults aged 13 to 26 years about their experiences with healthcare providers. A little more than half—55%—of females and 49% of males reported ever having private time with their physicians, and 55% of females and
44% of males had the opportunity to speak confidentially with their doctor. A third of 23- to 26-year-olds reported never having a private discussion with a doctor, the report notes.

Stephanie A. Grilo, MA, MPHIL, a PHD candidate in Sociomedical Sciences at the Columbia Population Research Center, Columbia University Mailman School of Public Health, New York, New York, led the study, and says the researchers’ findings were concerning given professional guidelines that recommend teenagers and young adults have access to confidential services and time for private discussions with their physicians starting at age 13 years.

“When broken down by age group, the numbers are even more alarming,” Grilo says. “Only 22% of 13- to 14-year-old women and 14% of 13- to 14-year old men had ever had private time with a healthcare provider. Even among young adults, only about two-thirds of young adult women (68%) and men (61%) had ever experienced private time with their provider.”

**Why private time is important**

According to the report, teenagers who reported having private time with their physicians were older, came from households with higher incomes, engaged in higher-risk behaviors, and were the same sex as their physician. Young adults who did have private time with their doc-

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**Teenaged motherhood affects generations of offspring**

Teenaged moms may pass negative effects of young motherhood on to their children, and maybe even to their grandchildren.

RACHEL ZIMLICH, RN, BSN

Negative cycles can be perpetuated when it comes to psychosocial development, and a new study reveals that children born to teenaged mothers—and even the grandchildren of teenaged mothers—often fall behind when it comes to education, leaving them at risk for lifelong disadvantages.

The study, published in *PLoS One*, suggests that teenaged motherhood has a significant impact on childhood development—affecting children in the family for generations.

“When considering the social determinants of development in children, it is important to consider factors beyond those of the child’s immediate family,” says lead author Elizabeth Wall-Wieler, PHD, a postdoctoral research fellow in neonatal and developmental medicine at Stanford University, Stanford, California. “A family history of adolescent pregnancy, even if the mother was not an adolescent mother, is related to early childhood development.”

The aim of the study was to assess multigenerational outcomes associated with adolescent motherhood, and was conducted by comparing children and grandchildren of mothers who were aged 20 years or younger at the birth of their first child. Researchers found that children whose mothers were unprepared for school when their first child was born were more likely to also be unprepared by the time they reached school entry. Children whose grandmothers were aged older than 20 years when their first child was born but whose mothers were aged younger than 20 years when their first child was born were 25% more likely to be unprepared for school when their first child was born, according to the report.

*Why young motherhood matters*

School readiness at the time of school entry has a significant effect on how
children perform throughout their educational career, the researchers say. Some factors previously linked to poor school readiness include living in poverty, low levels of parents’ education, family and neighborhood instability, and having mothers who were young when they began having children, the report notes.

Whereas young motherhood has previously been described as a risk factor for poor school readiness, this report shows that the effects of young motherhood can persist for generations.

“A greater percentage of children whose grandmothers had been adolescent mothers were not ready for school (36%) than those children whose grandmothers were aged 20 years or older when their first child was born (31%),” the researchers write.

The report also shows a trend in young motherhood, with 39.8% of children whose mothers had their first child before age 20 years also having grandmothers whose first child was born before age 20 years. In comparison, 21.6% of children whose mothers were aged 20 years or older when they were born had a grandmother who was aged younger than 20 years when her first child was born.

School readiness was highest among children whose mothers and grandmothers were not adolescent mothers, the study notes. Even when mothers were aged older than 20 years when an individual child was born, the study also reveals that school readiness was lower just by that mother having her first child overall before the age of 20 years.

Some of the individual factors noted that contributed to lower school readiness in the children studied were lower social competence, language and cognitive development, and poor physical well-being, the study points out.

Although the study did not investigate exactly why young motherhood threatens school readiness, the researchers note that this is just another cost to consider when assessing the effects of teenaged motherhood.

Wall-Wieler says the study underscores the need for pediatricians to assess family dynamics and offer early interventions.

“Pediatricians should pay close attention to the development of children whose mothers or grandmothers were adolescent mothers, and provide parents with information about programs like Head Start and Early Head Start that aim to increase school readiness,” she says. “Well-child visits present an opportunity for pediatricians to identify children who would benefit from Early Head Start and recommend these programs to families.”

For reference, go to ContemporaryPediatrics.com/teenaged-motherhood

“[W]hen confidentiality is not assured, adolescents and young adults are less willing to discuss sensitive topics with providers or may skip care altogether.”

—STEFANIE A. GRILLO, MA, MPHIL

35% Of children with mothers/grandmothers aged <20 years when their first child was born are unprepared for school.1

Grilo says. “This is especially true for young people who report behaviors or psychological distress—therefore the most vulnerable may not be getting care.”

Whereas the study didn’t investigate specifically why teenagers aren’t getting private access to their physicians, researchers suggest that clinician comfort may play a role. Suggesting private time may be a challenge for healthcare providers, but Grilo says they need to make clear the benefits of confidential conversations with young patients.

“Parents want their adolescent to be healthy. Parents need to know that private time and confidentiality are important parts of keeping teenagers healthy and they should be asking for this as it will improve the health of their adolescent,” Grilo
A pediatrician’s role in the care of a child with special health needs does not end at the conclusion of a visit and is not restricted to physical problems. New guidance suggests that pediatricians have a much larger role to play in this population, and that includes reaching out to schools, community groups, and working with parents to help the whole child thrive.

**Gerri L. Mattson, MD, MSPH, FAAP, public health pediatrician, adjunct assistant professor, Department of Maternal and Child Health, University of North Carolina Gillings School of Global Public Health, Chapel Hill, pediatric medical consultant for the North Carolina Division of Public Health, and lead author of the new guidance from the American Academy of Pediatrics (AAP), says**

Grilo notes, and are more likely to be honest with providers and seek medical help when they need it. Providers should work to make parents and young adults comfortable with having private time with their doctors, Grilo adds.

“On the provider side, we need to make sure we are training everyone to do this well—to introduce private time and explain confidentiality to parents and adolescents,” she says. “Providers should introduce private time at earlier ages to begin making adolescents and their parents comfortable with the idea, and should make clinic policies around age that private time should begin so that providers can point to the policy to help them uniformly provide private time to their adolescent patients. We also need to create accountability measures so that we know where and when we are doing this well and where we can improve.”

**Benefits of private time**
Teenagers who are able to have time alone and confidential conversations with providers have better attitudes about preventive services, says. “Parents worry about their adolescent engaging in risk behaviors. Private time allows for proper screening, counseling, and testing, which are recommended by care guidelines. These practices ensure that teenagers who are engaging in risk behaviors have a chance to stay as healthy as possible.”

**It takes a team to care for kids with special health needs**
Pediatric medical homes must offer psychosocial support and more.

**RACHAEL ZIMLICH, RN, BSN**

A pediatrician’s role in the care of a child with special health needs does not end at the conclusion of a visit and is not restricted to physical problems. New guidance suggests that pediatricians have a much larger role to play in this population, and that includes reaching out to schools, community groups, and working with parents to help the whole child thrive.

Gerri L. Mattson, MD, MSPH, FAAP, public health pediatrician, adjunct assistant professor, Department of Maternal and Child Health, University of North Carolina Gillings School of Global Public Health, Chapel Hill, pediatric medical consultant for the North Carolina Division of Public Health, and lead author of the new guidance from the American Academy of Pediatrics (AAP), says the updated recommendations center on the notion that it takes much more than basic medical care to help children with special needs.

“Children with special healthcare needs can grow and thrive, and the report highlights the importance of building strong and healthy children and families,” Mattson says. “Housing, school, food security, transportation, and other social determinants of health can strongly affect the capacity for children and youth with special healthcare needs to experience health and wellness over their life course.”

Children with special healthcare needs have unique psychosocial needs, and the new guidelines seek to raise awareness of these needs and help providers better coordinate appropriate care and resources. Mattson says the new guidance is an update to a 1993 report and uses a strength-based approach rather than a deficit- or disease-based model.

“The report shares strategies and resources that support psychosocial protective factors for children and youth across special healthcare needs and their families and communities.”

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**For reference, go to ContemporaryPediatrics.com/teen-dr-private-time**
also how to assess for and mitigate potential risk factors that can vary by the condition and its treatment,” Mattson says. “Pediatric medical home teams are encouraged to increase their collaboration with child care providers, schools, and other community providers as part of care for children and youth with special healthcare needs when they assess and try to address individual, interpersonal, and community psychosocial factors for these children and families.”

**Beyond basic medical care**

Children with special healthcare needs may suffer from a variety of physical, developmental, behavioral, and/or emotional problems that usually require a multidisciplinary team to successfully manage, according to the AAP. Pediatricians are therefore challenged to the psychosocial needs of this population, with the new guidance offering a roadmap for working with coordinated care teams and other healthcare and community agencies involved in a child’s care.

The guidance, published in *Pediatrics*, reveals that 19.4% of children polled as part of the 2016 National Survey of Children’s Health (NSCH) have special healthcare needs—an increase from 15.1% in the 2010 survey.¹ Other national surveys have reported increases in prevalence and severity of a number of chronic conditions among children as well, including obesity, asthma, and diabetes, the report states. There are racial and socioeconomic disparities across the spectrum for children and families facing these conditions, the report adds, with higher disease prevalence and lower insurance coverage noted in several minority groups.

“...”

**GUIDELINES FOR CARE**

Access to comprehensive care is key to successful care of children with special needs and their families, the AAP report notes, and the AAP offers specific suggestions for how to accomplish this:

1. **Use the Bright Futures recommendations** for caring for children with special healthcare needs and their families. These recommendations include health and wellness promotion and social-emotional health assessments of the child and his/her family.

2. **Utilize practice transformation strategies** including quality improvement, pre-visit planning, psychosocial assessments, and after-visit follow-ups with patients and families.

3. **Use team-based care and care coordinators** to manage the physical and psychosocial factors faced by this population. This may require integrating or co-managing care with behavioral health specialists or other specialty care teams.

4. **Reach out to child care and school staff** to monitor progress in those environments and work together to improve performance and reduce absences.

5. **Advocate for flexible payment design** with Medicaid and other insurers to allow for appropriate care and care coordination. Clinicians also can be advocates when it comes to screening tools and interventions, as well as access to community resources.

6. **Promote evidence-based interventions** at every level of the medical home, particularly in supporting psychosocial development of the child and support for the parents or caregivers.

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¹ Data from the 2016 National Survey of Children’s Health shows that almost 19.4% of children have special healthcare needs and 42.4% of children and youth with special healthcare needs were reported to have an emotional, developmental, or behavioral issue.”

In addition to those children with chronic health issues that may be caused or exacerbated by environ-
mental or socioeconomic conditions, the number of children with genetic or congenital conditions is also on the rise. This resource-intensive population—albeit a smaller part of the population in overall pediatric care—is also increasing, with pediatric inpatient admissions for children with medical complexities doubling between 1991 and 2005, according to the study.

**Many more hidden problems**

The report also notes an increase in children with health problems that aren’t as visible—those with behavioral, mental health, or developmental disabilities. According to the data, parent reports of conditions such as attention-deficit/hyperactivity disorder, autism spectrum disorders, and bipolar disorders have increased over the last 2 decades, with 42.4% of children with special healthcare needs observed as having emotional, developmental, or behavioral problems in the 2016 NSCH survey.

Whereas physical and mental or emotional problems are on the rise, the AAP report points out that literature reviews have found that these issues—although sometimes independent of one another—often coexist. Physical problems can result in poor self-esteem or coping problems, and this isn’t limited to the child. Families, too, are greatly affected by the impacts of disease processes in children with special needs.

These children and their families also struggle with other stressors, the study adds, including housing and food supply problems, as well as in their exposure to adverse experiences. The AAP report notes that 37% of children with special needs experience 2 or more adverse experiences or toxic stress events such as domestic abuse compared with 18% of children without special needs. Exposure to 2 or more of these events may also play a role in exacerbating chronic conditions, the AAP suggests, and put children with special needs at risk for developing secondary conditions or participating in high-risk behaviors themselves as a coping mechanism.

As chronic physical and psychosocial problems snowball, parents, schools, and community organizations may struggle to offer appropriate support to children with special needs and their families, the AAP notes, but pediatricians may be able to help fill gaps in care. Pediatric medical homes can provide surveillance and screening for psychosocial factors that may present problems, and offer care coordination for additional support services that may help, says the AAP.

“The report highlights the importance for pediatricians to recognize how psychosocial factors can positively and negatively impact health and wellness for children with special healthcare needs and their families,” Mattson adds. “The mitigation of risk factors and promotion of protective factors such as family support, stress reduction, and social services can increase strengths and resiliency.”

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**You’ve been served! What to do if you get sued for malpractice**

Pediatricians are less likely than other specialties to be sued over the course of their careers, but when losing or settling a suit, their payouts are among the highest. Here’s what to expect if you get sued.

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**Deformational plagiocephaly/brachycephaly and congenital muscular torticollis**

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Adolescent privacy and the EHR

Adolescents are more likely to see a healthcare provider if they are certain their private information will be kept confidential. Here’s how to create a secure environment for these patients within your electronic health record (EHR) system.

RYAN H PASTERNAK, MD, MPH, FAAP; KIRSTEN B HAWKINS, MD, MPH, FAAP, FSAHM; ANDREW J SCHUMAN, MD, FAAP

To optimize care for minor adolescent patients, pediatric providers need to create practice policies addressing the confidential needs of these minors and develop workflows to accommodate those policies. Additionally, pediatricians need to integrate confidentiality for adolescent patients into the practice’s electronic health record (EHR) and patient portal if one is utilized. In this article, we present suggestions for achieving these goals.

Nuances of adolescent medicine
Adolescence represents a period of rapid change wherein patients seek advice from friends, family, and physicians on topics such as sexuality, drug use, and mental health. Unfortunately, adolescents have the lowest rate of primary care usage of any age group cared for by pediatricians. One study showed that one-third of adolescents had no preventive care visits from ages 13 to 17 years while another 40% had a single visit.1 Issues that are difficult for teenagers to talk about include violence, depression, anxiety, suicide, drug use, and sexuality.2 Adolescents are more likely to see a provider if they are told the information will be kept confidential. These assurances result in patients more likely to return for follow-up visits.3-5 There are many barriers to confidential care for adolescents. These include the conspicuous lack

HIGH-RISK ADOLESCENT BEHAVIOR
BY THE NUMBERS

AMONG HIGH SCHOOL STUDENTS:

4 in 10 text or e-mail while driving
35% drink alcohol  23% use marijuana

IN THE PAST YEAR:

15% of high school students were electronically bullied
20% were bullied on school grounds
8% attempted suicide
46% had sexual intercourse
15% smoked cigarettes

From Committee on Adolescence.2
of knowledge regarding minor consent laws among pediatric providers, and the ability to maintain confidentiality for adolescents with commercial insurance coverage and within shared medical records.6,7

It should be noted that although pediatricians strive to respect the confidentiality of our patients, we are at times obligated to disclose our patients’ healthcare information without their support to reduce risk or prevent harm. Examples include when there is suspicion of sexual or physical abuse or admission of homicidal or suicidal thoughts.

The road best taken
Medical practices are able to set specific policies regarding confidentiality for adolescent patients, as long as they do not violate state or federal laws. By doing so within professional guidelines, pediatricians can improve the care provided to their adolescent patients, as well as dramatically improve access to care. The American Academy of Pediatrics (AAP) recommends that adolescent visits include “private time” with providers to discuss sensitive issues and review confidential health screens. It has been shown that in most practices, however, only 50% of visits incorporate some private time. In adolescent clinics staffed by pediatricians with fellowship training in adolescent medicine, inclusion of private time is nearly 100%.7

The Children’s Hospital New Orleans, Louisiana, has an adolescent patient policy that facilitates adolescent visits by including the following guidelines:

- Adolescents have the right to speak with providers alone without parents or guardians in the room. Adolescents are encouraged to share or include discussions with parents or guardians when able.
- Adolescents have the right to the confidentiality of their clinical records, as well as the right to access their own health information.
- Under Louisiana state law, minors are allowed to give consent to medical or surgical care without permission from a parent or legal guardian. This care is extended to patients aged 13 years and older at the Children’s Hospital New Orleans.
- Adolescents have the right to have options for care explained to them and to participate in their plan of care.

To implement the above policy, the Adolescent Medicine Clinic at Children’s Hospital New Orleans has implemented the workflow shown in Figure 1. At check-in, the patient and parents or guardians receive a copy of the Adolescent Patients’ Bill of Rights and the Confidential Workflow handout. The patient is taken to the exam room where the vital signs and screening surveys are performed without the parent in the room. Once completed, the parent is brought into the exam room with the patient. The provider begins the visit with both patient and parent present and then will ask the parent to step out of the room for further discussion with the patient and the examination.

There are many pitfalls that need to be avoided in an office environment. Staff need to be trained to be cautious when discussing reasons for a visit at check-in or triage and when reconciling medications or reviewing after-visit summaries with the parent present. Additionally, staff need to ensure they do not send appointment reminders or follow-up
surveys to parental contact numbers or e-mails for confidential visits.

**EHR documentation for adolescents**

Most EHRs do not by default integrate tools for keeping elements of the adolescent record and the corresponding patient portal confidential. In many adolescent clinics, providers have taken the time and effort to work with their Health Information Management (HIM) departments to preserve the confidentiality of patients. For example, in many clinics adolescents become the owner of their patient portal at an age designated by the institution and grant proxy access to parents to enable them to review all or a portion of the information contained therein (Figure 2).

Many institutions have a list of common labs performed on adolescents that are not transmitted to the patient portal. Some EHRs can be configured such that all adolescent notes are written in separate confidential notes that trigger a warning when accessed, indicating to the viewer that the information contained therein is provided on a “need-to-know” basis. Additionally, many clinics do not include adolescent visits when charts are copied unless approved by a physician. Some institutions choose to turn off portal access during this sensitive period, which may undermine communication with providers.

**Insurance companies and confidentiality**

Confidentiality of adolescent patients often breaks down because there is no universal policy regarding billing standards to ensure parents/guardians (policyholders) will not view sensitive information in adolescents’ Explanation of Benefits (EOB). It is the position of the Society for Adolescent Health and Medicine (SAHM), the AAP, and the American College of Obstetricians and Gynecologists (ACOG) that policies should be developed to not impede the provision of confidential healthcare to adolescent patients.
To this end, these organizations recommend that EOBs should not be required when individuals obtain “sensitive services.” Approaches include sending EOBs for these services directly to the patient and utilizing minor consent laws to direct insurance companies to use specific language in EOBs. The EOBs for such services can be designated as “adolescent health services” without detailing the services provided. As insurance laws/regulations are state based, there is much to be done legislatively at the state and federal levels to protect the confidentiality of adolescent patients. We recommend working with your state chapter of the AAP to achieve this goal.

In conclusion
In this brief article, we have reviewed ways pediatricians can create an effective confidentiality policy for adolescent patients and a workflow to implement that policy. Motivated pediatricians also will work within their practices to safeguard confidentiality in their practice EHRs and patient portals as well.

References

PLUS New research says teenagers need private time with their doctors to discuss sensitive issues. See page 44.
Diffuse hypopigmentation can occur as a result of a variety of inflammatory diagnoses as well as more rare disease processes. Postinflammatory hypopigmentation is particularly common following eczematous eruptions (eg, contact and atopic dermatitis). History would include an itchy antecedent rash with improvement with therapies including daily moisturizers, topical corticosteroids, and/or calcineurin inhibitors.

Hypopigmentation is the hallmark of pityriasis alba, which manifests as minimally scaly patches on the face of children and likewise responds to eczema regimens. Pityriasis versicolor, pityriasis lichenoides chronica, and disorders of pigmentation such as progressive macular hypomelanosis and vitiligo also may be considered in appropriate clinical scenarios.1,2,5,8,9 Ultimately, the diagnosis of HMF requires skin biopsy and clinico-pathologic correlation. Typical histologic features of HMF include focal parakeratosis, migration of atypical T-lymphocytes into the epidermis (ie, epidermotropism), and a lymphocytic interstitial infiltrate with mild atypia of the papillary dermis. Immuno-histochemical stains and T-cell gene rearrangement analyses are typically used to confirm the diagnosis.5-2,10,11 Histopathologic changes can require repeat skin biopsies at follow-up visits to confirm the diagnosis.10,12

Discussion and treatment
Mycosis fungoides is the most commonly diagnosed primary cutaneous lymphoma in children.2 According to the World Health Organization and the European Organization for Research and Treatment of Cancer classification system of primary cutaneous lymphomas, MF is categorized as an indolent lymphoma.3 Pediatric patients with HMF often present with limited cutaneous disease (stage IA or IB), have a good prognosis, and do not experience disease progression for years or even decades.13

Because of low overall incidence and clinical presentations that mimic a variety of benign skin conditions, the diagnosis of pediatric HMF is often delayed. Furthermore, there may be reluctance among physicians to perform skin biopsies on young patients.3 Prompt diagnosis requires an adequate level of clinical suspicion, particularly for those patients with darker skin tones presenting with unusual or progressive hypopigmented lesions, with or without pruritus, that are resistant to standard therapies. Clinical evaluation should then include a lesional skin biopsy.8,14 The most successful treatment modality across multiple series of pediatric patients with HMF has been ultraviolet light therapy, either with narrow band ultraviolet B (nbUVB) or UVA with or without psoralen photosensitization. The nbUVB therapy results in clearance within 2 to 3 years in a majority of patients.4 Other management options include observation, topical corticosteroids, and topical calcineurin inhibitors.

Patient outcome
The patient’s skin biopsy showed a prominent atypical intraepidermal lymphoid infiltrate that was primarily CD8+ on immunohistochemistry stains (Figure 2). Her T-cell gene rearrangement studies were positive for beta and gamma gene rearrangements. Taken together, the clinical presentation and pathology results were diagnostic of CD8+ HMF and nbUVB therapy was recommended. However, the patient lived at a distance and was lost to follow-up. [image: FIGURE 2 Punch biopsy prepared with CD8-targeted immunostain demonstrates clonal lymphocytic infiltrate in the dermis characteristic of mycosis fungoides.]

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Hypopigmented lesions in a teenaged girl

CARLI P WHITTINGTON, MD; DEANNA I DICKERMAN, MD; LORETTA S DAVIS, MD

A healthy 14-year-old girl with a progressive asymptomatic rash on her arms, legs, trunk, and face presents for evaluation (Figure 1). She was treated for eczema with minimal improvement.

▶ FIGURE 1 Multiple hypopigmented ovoid macules and patches were noted on the patient’s bilateral anterior thighs.

HYPOPIGMENTED MYCOSIS FUNGOIDES

Etiology, epidemiology, and clinical presentation

Cutaneous lymphomas are a diverse group of neoplasms that develop as an abnormal proliferation of either T- or B-lymphocytes. Mycosis fungoides (MF) is the most common cutaneous T-cell lymphoma (CTCL) and accounts for 54% of cases.1 In adults, hypopigmented MF (HMF) is a rare variant typically presenting in dark-skinned individuals and in those of Asian descent.

Mean age of onset is 55 to 60 years with a slight male predominance.2 Whereas CTCL is rare in the pediatric population, by some estimates representing 0.5% to 5% of total diagnoses, atypical variants predominate.3 In a review of 46 cases of MF presenting before age 16 years, 91% were ultimately diagnosed with the hypopigmented variant.4

Hypopigmented MF presents with hypopigmented macules and patches. Lesions often occur on the head, neck, upper extremities, trunk, and buttocks. Erythema, scale, and papules within these macules and patches are variable. Cases have been reported in both the first and second decades of life. Histopathologically, pediatric HMF typically displays a predominantly T-suppressor CD8+ phenotype, which has a clinically benign course. This is in direct contrast to the CD4+ more clinically aggressive variant of HMF commonly diagnosed in adults.5,7

FOR MORE ON THIS CASE, TURN TO PAGE 54.
Dr Farber Says

My parting words

This will be my final column for Contemporary Pediatrics for the foreseeable future. I appreciate the opportunity I have been given to share my thoughts on practicing pediatrics—the best of all professions—with you. Here I present some parting, philosophically orientated views on making sure we stay on the true path to best serve our patients and families.

1 Don’t assume we are out of the dark ages of medicine, now banished because of science. For example, the most recent statement on sudden infant death syndrome (SIDS) from the American Academy of Pediatrics (AAP) says that, ideally, infants should sleep close to the parents’ bed until aged 12 months, provoking comments that the data in support of this are weak and not based on studies conducted in this country.

2 Along these lines, always remember that what you think you know may not be true. At the turn of the last century, ear/nose/throat (ENT) physicians knew that adults with large tonsils had problems, and the tonsils needed to be removed. When they saw a child in for a throat problem, and the child had large tonsils, the obvious conclusion—not knowing that this was normal in children—was that the tonsils needed to come out. This resulted in tremendous numbers of unnecessary tonsillectomies over the years. The most egregious example of this is probably the tonsillectomy riots of 1906. That year, ENT volunteers, who thought they were providing a public service and doing good, went with strong assistants (to hold children still) to schools on the lower East Side in New York City. They then, free of charge, removed tonsils from many children on the school grounds, without anaesthesia. This was not favorably received by the parents.

3 This country is weak in science, either from lack of knowledge or an outright antiscience bias. Four well-written and entertaining books on the subject are the following (the last 2 deal directly with medicine): Science: Good, Bad, and Bogus by Martin Gardner; Galileo’s Revenge: Junk Science in the Courtroom by Peter W. Huber; Autism’s False Prophets: Bad Science, Risky Medicine, and the Search for a Cure by Paul Offit; and Hippocrates’ Shadow by David H. Newman.

4 A final thought, a common theme to many of my “pearls,” is one that is well worth emphasizing. Having gifted hands, or being brilliant, may be sufficient to make one a superior physician if you are a surgeon or running a diagnostic dilemma clinic. For those of us in everyday practice, however, our routine knowledge base is sufficient to handle the majority of what comes through our doors.

What makes for the excellent doctor in the office is the ability to put oneself in the family’s shoes and communicate with them accordingly, anticipating and answering their questions, both asked and unasked, in sufficient detail and clarity for them to understand.

I know this is not easy, given the busy office setting, particularly if, like me, you are not naturally empathic. However, if you make it a priority, and work at it, it can be done, and the benefits to both you and the families you serve will be enormous.

For references, go to ContemporaryPediatrics.com/Farber-parting-words

Jon Matthew Farber, MD, is a pediatrician in Woodbridge, Virginia. He has nothing to disclose in regard to affiliations with or financial interests in any organizations that may have an interest in any part of this article.

For Contemporary Pediatrics’ entire collection of Dr. Farber’s treasure chest of “pearls” of wisdom gleaned from his many years as a practicing pediatrician, go to ContemporaryPediatrics.com/authors/jon-matthew-farber-md
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