



CARE FOR KIDS



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Pediatric Voiding Dysfunction

Laura L. Fuller, PhD, Douglas Storm, MD, and Kristine Bonnett, ARNP

Department of Psychiatry and Department of Urology, University of Iowa Hospitals and Clinics



Because 98 percent of children attain daytime continence of urine by 36 months of age², the majority of parents do not have to contend with the challenges that occur when an older child continues to have wetting accidents in the daytime. For those parents who do, there can be frustration and anxiety when the problems don't resolve as their child ages. Professionals who work with children in a medical or educational setting are likely to encounter children with daytime wetting over the years, and may feel at a loss as to how to best help them and their families.

Typically, evaluation of children and adolescents with bowel and bladder dysfunction involves taking an accurate history to establish the primary cause of

the child's voiding complaints and to identify conditions that may confound treatment or exist alongside the voiding issues, including constipation. Physical examination also is conducted, including palpation of the abdomen, examination of external genitalia, and inspection of the back to look for features such as café au lait spots, abnormal creases, dimples, hair tufts, and evidence of prior surgery.

Urine studies may be performed to screen for infection, diabetes, and other issues. Some advocate a sacral X-ray to screen for spina bifida occulta. In some cases imaging is done to look for abnormalities of the kidneys and bladder, as well as masses and obstructions.

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Pediatric Voiding Dysfunction

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A uroflow, which is done by having the child void into a special type of commode, can give information about voiding patterns without requiring invasive techniques. Urodynamic studies are used in some cases to examine bladder filling and emptying.

Effective treatment depends on many factors, and primary care providers have different levels of comfort when recommending interventions. An overview of the evaluation and treatment of voiding dysfunction in pediatric patients is found in Palmer⁵.

At UIHC, a collaborative clinic to treat children with continued urinary accidents has been established with professionals from pediatric urology and child psychiatry, called the Voiding Improvement Partnership (VIP) Clinic. Children are seen jointly by a child psychologist with either a nurse practitioner or pediatric urologist who specializes in the treatment of voiding dysfunction. Established in 2013, the VIP clinic is currently held every two weeks in the Pediatric Specialty Clinics. Patients are first screened in pediatric urology and are then referred to the voiding clinic.

Bladder and bowel dysfunction account for upwards of 40 percent of pediatric urology visits. Daytime and night wetting are common, occurring in two to seven percent of all school-aged children. While children with primary nocturnal



enuresis are not typically seen in the VIP clinic, they can be seen in pediatric urology, and a variety of treatments are available.

Children with daytime wetting often have one or more of the following:

- Constipation
- Infrequent urination
- Urinary tract infections

Thus, it follows that the usual treatment involves making sure the child drinks plenty of water during the day, practices “timed toileting” (i.e., going to the bathroom at least every two hours whether they feel the need to or not), and avoids becoming constipated. Education is provided about why these practices are important, and there are several child-friendly videos that can be helpful in making families more knowledgeable. However, there is a subset of children who do not respond to these efforts, often because they can’t implement the recommendations effectively or other issues are getting in the way.

Sometimes there are psychological conditions that can contribute to these toileting problems. Children with voiding dysfunction are at increased risk for psychosocial difficulties compared with children seen in primary care settings⁴. Psychological conditions can also impact response to treatment. In a retrospective analysis, 68 percent of children with daytime incontinence and ADHD became dry, compared to 91 percent of controls³.

Various psychological issues, such as ADHD, oppositional behavior, and anxiety, are seen in some of the VIP clinic patients as well. Some children have specific fears related to using the bathroom or drawing attention to themselves by taking a rest room break. Others get busy engaging in preferred activities and don’t attend to the signals that their bodies are sending them until it is too late. Still others cannot maintain their attention or sit still long enough to complete the recommended toileting.

In our clinic, we try to take a problem-solving approach to determine what the child needs to be doing that s/he is not currently doing, and what is getting in the way. This may result in referrals for additional evaluations or therapies, the use of some targeted behavioral interventions, establishment of rewards for specific desired behaviors, and/or communication with schools or local providers about the treatment plan. With a medical professional and psychologist working together, the treatment can be individualized, and the child can be followed until treatment is no longer needed.

To our knowledge, there are only a handful of centers in the United States that currently provide psycho-urolologic collaborative treatment of voiding dysfunction. We have performed a retrospective review of our early experiences surrounding the VIP clinic. Using a validated bowel and bladder dysfunction questionnaire, we identified that over time there is a significant improvement in symptoms experienced by our patients. In the future we plan to collect data on psychological adjustment, as well as on the financial impact of voiding dysfunction on families.

It is hoped that families who have children with bowel and bladder dysfunction are able to obtain effective treatment. The first line of treatment is typically the child's primary care provider, who can make additional referrals if needed.



Resources

1. Bonnett K, Fuller LL, Arlen A, Cooper C, Storm DS. Podium presentation at the Society for Pediatric Urology, Dallas, Texas, 2016.
2. Brazelton TB. *Pediatrics* 1962; 29:121-128.
3. Crimmins CR, Rathbun SR, Husmann DA. *Journal of Urology* 2003; 170:1347-1350.
4. Wolfe-Christensen C, Veenstra AL, Kovacevic L, Elder JS, Lakshmanan Y. *Journal of Urology* 2012; 80(4):907-913.
5. Palmer LS. Evaluation and Targeted Therapy of Voiding Dysfunction in Children, *Urology* 2016; 92:87-94.

Oral Health Matters

By Bob Russell, DDS, MPH, Public Health Dental Director, and Chief, Bureau of Oral and Health Delivery Systems, Iowa Department of Public Health



Did you know that poor oral health contributes to worsening chronic health conditions such as diabetes, heart disease, and even stroke?

Are you aware that children have died from lack of timely and appropriate care from an acute oral health emergency?

Oral health care is a component of health care, and as a primary care provider a part of your charge. However, this should not be overwhelming as you have a support network here in Iowa to assist you.

The I-Smile Dental Home program, developed in 2006, was created to provide support to the primary care physician, link patients to a dental home, educate you and your staff on protocols to provide basic dental screenings and fluoride applications, and direct you to resources to answer your questions.

There are 24 I-Smile coordinators throughout Iowa, located in 22 local public health agencies throughout the state. As you consider implementing oral health screening services in your practice, your first step should be to reach out to your local I-Smile coordinator by accessing the following link: idph.iowa.gov/ohds/oral-health-center/coordinator. You will find a map and list of I-Smile coordinators and their contact information. You can use this information to find a coordinator near you.

Are you concerned that you aren't trained in dentistry or do not know enough to be effective in providing oral health advice to your patients? Rest assured there are many

resources to help you navigate the simple steps you need. Along with the support of your local I-Smile Coordinator, there are excellent online resources from credible professional associations

for you to review and update your knowledge.

The American Academy of Pediatrics has a complete training protocol for physicians and primary care providers on their website at: brightfutures.aap.org/materials-and-tools/guidelines-and-pocket-guide/Pages/default.aspx. Also, the American Academy of Family Physicians has an extensive oral health protocol at: aafp.org/aafp/2004/1201/p2113.html.

The addition of oral health screening to your practice should not be overwhelming or complex, nor are you asked to be an expert in oral disease identification.

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Oral Health Risk Assessment Tool

The American Academy of Pediatrics (AAP) has developed this tool to aid in the implementation of oral health risk assessment during health supervision visits. This tool has been subsequently reviewed and endorsed by the National Interprofessional Initiative on Oral Health.

Instructions for Use

This tool is intended for documenting caries risk of the child, however, two risk factors are based on the mother or primary caregiver's oral health. All other factors and findings should be documented based on the child.

The child is at an absolute high risk for caries if any risk factors or clinical findings, marked with a ▲ sign, are documented yes. In the absence of ▲ risk factors or clinical findings, the clinician may determine the child is at high risk of caries based on one or more positive responses to other risk factors or clinical findings. Answering yes to protective factors should be taken into account with risk factors/clinical findings in determining low versus high risk.

Patient Name: _____		Date of Birth: _____	Date: _____
Visit: <input type="checkbox"/> 6 month <input type="checkbox"/> 9 month <input type="checkbox"/> 12 month <input type="checkbox"/> 15 month <input type="checkbox"/> 18 month <input type="checkbox"/> 24 month			
<input type="checkbox"/> 30 month <input type="checkbox"/> 3 year <input type="checkbox"/> 4 year <input type="checkbox"/> 5 year <input type="checkbox"/> 6 year <input type="checkbox"/> Other _____			
RISK FACTORS	PROTECTIVE FACTORS	CLINICAL FINDINGS	
<p>▲ Mother or primary caregiver had active decay in the past 12 months <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>● Mother or primary caregiver does not have a dentist <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>● Continual bottle/sippy cup use with fluid other than water <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>● Frequent snacking <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>● Special health care needs <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>● Medicaid eligible <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>● Existing dental home <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>● Drinks fluoridated water or takes fluoride supplement <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>● Fluoride varnish in the last 6 months <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>● Has teeth brushed twice daily <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>▲ White spots or visible decalcifications in the past 12 months <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>▲ Obvious decay <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>▲ Restorations (fillings) present <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>● Visible plaque accumulation <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>● Gingivitis (swollen/bleeding gums) <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>● Teeth present <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>● Healthy teeth <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	
ASSESSMENT/PLAN			
Caries Risk: <input type="checkbox"/> Low <input type="checkbox"/> High	Self Management Goals:		
Completed: <input type="checkbox"/> Anticipatory Guidance <input type="checkbox"/> Fluoride Varnish <input type="checkbox"/> Dental Referral	<input type="checkbox"/> Regular dental visits <input type="checkbox"/> Dental treatment for parents <input type="checkbox"/> Brush twice daily <input type="checkbox"/> Use fluoride toothpaste	<input type="checkbox"/> Wean off bottle <input type="checkbox"/> Less/No juice <input type="checkbox"/> Only water in sippy cup <input type="checkbox"/> Drink tap water	<input type="checkbox"/> Healthy snacks <input type="checkbox"/> Less/No junk food or candy <input type="checkbox"/> No soda <input type="checkbox"/> Xylitol

Treatment of High Risk Children

If appropriate, high-risk children should receive professionally applied fluoride varnish and have their teeth brushed twice daily with an age-appropriate amount of fluoridated toothpaste. Referral to a pediatric dentist or a dentist comfortable caring for children should be made with follow-up to ensure that the child is being cared for in the dental home.

Adapted from Ramos-Gomez FJ, Crystal YO, Ng MW, Crall JJ, Featherstone JD. Pediatric dental care: prevention and management protocols based on caries risk assessment. J Calif Dent Assoc. 2010;38(10):746-761; American Academy of Pediatrics Section on Pediatric Dentistry and Oral Health. Preventive oral health intervention for pediatricians. Pediatrics. 2003; 122(6):1387-1394; and American Academy of Pediatrics Section of Pediatric Dentistry. Oral health risk assessment timing and establishment of the dental home. Pediatrics. 2003;111(5):1113-1116.

The recommendations in this publication do not indicate an exclusive course of treatment or serve as a standard of medical care.

Variations, taking into account individual circumstances, may be appropriate.

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Timing of Risk Assessment The Bright Futures/AAP “Recommendations for Preventive Pediatric Health Care,” (ie, Periodicity Schedule) recommends all children receive a risk assessment at the 6- and 9-month visits. For the 12-, 18-, 24-, 30-month, and the 3- and 6-year visits, risk assessment should continue if a dental home has not been established. View the Bright Futures/AAP Periodicity Schedule—brightfutures.aap.org/clinical_practice.html.

Risk Factors

⚠ Maternal Oral Health

Studies have shown that children with mothers or primary caregivers who have had active decay in the past 12 months are at greater risk to develop caries.

This child is high risk.

Maternal Access to Dental Care

Studies have shown that children with mothers or primary caregivers who do not have a regular source of dental care are at a greater risk to develop caries. A follow-up question may be if the child has a dentist.

Special Health Care Needs

Children with special health care needs are at an increased risk for caries due to their diet, xerostomia (dryness of the mouth, sometimes due to asthma or allergy medication use), difficulty performing oral hygiene, seizures, gastroesophageal reflux disease and vomiting, attention deficit hyperactivity disorder, and gingival hyperplasia or overcrowding of teeth. Premature babies also may experience enamel hypoplasia.

Continual Bottle/Sippy Cup Use

Children who drink juice, soda, and other liquids that are not water, from a bottle or sippy cup continually throughout the day or at night are at an increased risk of caries. The frequent intake of sugar does not allow for the acid it produces to be neutralized or washed away by saliva. Parents of children with this risk factor need to be counseled on how to reduce the frequency of sugar-containing beverages in the child’s diet.

Frequent Snacking

Children who snack frequently are at an increased risk of caries. The frequent intake of sugar/refined carbohydrates does not allow for the acid it produces to be neutralized or washed away by saliva. Parents of children with this risk factor need to be counseled on how to reduce frequent snacking and choose healthy snacks such as cheese, vegetables, and fruit.

Protective Factors

Dental Home

According to the American Academy of Pediatric Dentistry (AAPD), the dental home is oral health care for the child that is delivered in a comprehensive, continuously accessible, coordinated and family-centered way by a licensed dentist. The AAP and the AAPD recommend that a dental home be established by age 1. Communication between the dental and medical homes should be ongoing to appropriately coordinate care for the child. If a dental home is not available, the primary care clinician should continue to do oral health risk assessment at every well-child visit.

Fluoridated Water/Supplements

Drinking fluoridated water provides a child with systemic and topical fluoride exposure, a proven caries reduction intervention. Fluoride supplements may be prescribed by the primary care clinician or dentist if needed. View fluoride resources on the Oral Health Practice Tools Web Page aap.org/oralhealth/PracticeTools.html.

Fluoride Varnish in the Last 6 Months

Applying fluoride varnish provides a child with highly concentrated fluoride to protect against caries. Fluoride varnish may be

professionally applied and is now recommended by the United States Preventive Services Task Force as a preventive service in the primary care setting for all children through age 5 uspreventiveservicestaskforce.org/Page/Topic/recommendation-summary/dental-caries-in-children-from-birth-through-age-5-years-screening. For online fluoride varnish training, access the Caries Risk Assessment, Fluoride Varnish, and Counseling Module in the Smiles for Life National Oral Health Curriculum, smilesforlifeoralhealth.org.

Tooth Brushing and Oral Hygiene

Primary care clinicians can reinforce good oral hygiene by teaching parents and children simple practices. Infants should have their mouths cleaned after feedings with a wet soft washcloth. Once teeth erupt it is recommended that children have their teeth brushed twice a day. For children under the age of 3 (until 3rd birthday) it is appropriate to recommend brushing with a smear (grain of rice amount) of fluoridated toothpaste twice per day. Children 3 years of age and older should use a pea-sized amount of fluoridated toothpaste twice a day. View the AAP Clinical Report on the use of fluoride in the primary care setting for more information pediatrics.aappublications.org/content/early/2014/08/19/peds.2014-1699.



The goal is to identify simple risk factors for the development of future dental disease, scan the mouth and notice any suspicious change that doesn't appear normal, and use the I-Smile dental home system. In addition, you or one of your staff may apply a simple fluoride varnish coating as a non-invasive preventive measure to the teeth to increase resistance to dental decay.

It's not rocket science, but if you have never tried it before it can feel as if it will be difficult. The good news is that in Iowa – you have help. Contact your I-Smile coordinator to start protecting and improving the health of Iowans today.



How to Conduct a Dental Screening

Screening should be instituted at the 12-month well-child visit, with the child examined in a lap-to-lap position or supine on the examination table. If a child is in pain refer to a dentist or the I-Smile dental home system immediately. Once you have identified a child in need of an oral health screen, you will need a pair of gloves, tongue depressor or toothbrush, and a light source.

With gloved hands, move the lip to view and feel the teeth and soft tissues on the outer side of the mouth. Next, view and feel the teeth and soft tissues inside the mouth. Use a tongue depressor or toothbrush to move the tongue to allow a full view of the teeth and soft tissue. Here are some examples of what to look for:

- An abscess on the gums above or below the teeth. An abscess often looks like a "gum boil" with signs of infection such as swelling and pus drainage. If you suspect an abscess refer to a dentist or the I-Smile dental home system immediately.
- Are teeth coming in and being lost appropriately for the child's age? Have there been any injuries to the mouth or teeth? If so, refer to the I-Smile dental home system. If you suspect abuse, call the Iowa Child Abuse Hotline (1-800-362-2178).
- Teeth that appear to have unusual color or shape, the presence of chalky appearing white spot lesions, stains, plaque, or brown or dark spots or "holes," which can be signs of a cavity. If you suspect untreated caries refer to the I-Smile dental home system.



University of Iowa Children's Hospital
 Center for Disabilities and Development
University Center for Excellence on Disabilities
 100 Hawkins Drive
 Iowa City, IA 52242-1011

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If you have questions about **billing** related to EPSDT Care for Kids services, please call Provider Services: **1-800-338-7909**. If you have questions about **clinical issues** and EPSDT Care for Kids services, please call **1-800-383-3826**. Please note: Due to budget restraints, the *EPSDT Care for Kids Newsletter* is sent to offices and organizations, rather than to individuals. **The newsletter is also available on line at www.iowaepsdt.org.** Readers are welcome to photocopy or download material from the newsletter to share with others. If you wish to reproduce material from the newsletter in another publication, whether print or electronic, please obtain permission prior to publication by contacting the editor. Please include the following acknowledgment with reprinted material: Reprinted by permission of the Iowa *EPSDT Care for Kids Newsletter*.

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Please send correspondence concerning **content** to:

Ellen Link, MD
 University of Iowa
 Health Care
 Iowa River Landing
 Office 2627
 105 9th Street
 Coralville, IA 52241

Please send **change of address** information to:

Julie Temple
 University of Iowa
 Children's Hospital
 Center for Disabilities and
 Development Room 257
 100 Hawkins Drive
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