There have been many questions among those in the pediatric nephrology community, including the Section of Nephrology members, about the requirements for maintenance of certification (MOC). Included among those queries is the rationale for MOC and about the available options to meet Part 4 MOC requirements. This article will focus on the rationale for MOC, the requirements for MOC in pediatrics and pediatric nephrology, and the available options to meet Part 4 MOC requirements.

Rationale for MOC
The rationale for MOC was eloquently outlined in a 2001 Institute of Medicine (IOM) (http://www.nap.edu/catalog/10027/crossing-the-quality-chasm-a-new-health-system-for-the.) report that showed a “chasm” existed between the quality of medical care expected and deserved to be delivered to the public and that which is delivered by the healthcare system. Indeed, the report showed that “health care harms patients far too frequently and routinely fails to deliver its potential benefits”.

In response to the IOM and other reports, the American Board of Pediatrics (ABP) created programs to close the gap and improve the quality of care provided by pediatricians. Included among those programs was development of maintenance of certification (MOC). Since its inception, the MOC has been the focus of extensive discussion and debate regarding its applicability to daily practice and contribution to ensuring the public trust and faith in pediatricians. In fact, while it is challenging to perform studies to ascertain the success of MOC to improve quality of care and close knowledge gaps, an American Board of Medical Specialties report shows that there is some evidence to suggest that implementation of MOC does contribute to improved quality of care and better outcomes (American Board of Medical Specialties. Welcome to the ABMS Evidence Library. ABMS web site. http://evidencelibrary.abms.org/. Accessed July 23, 2014.).

Chair Update  Continued from Page 1

General Components of MOC

Maintenance of certification for pediatricians consists of four parts:

1) Professinal Standing (Part 1): This part requires a physician to have at least one valid, unrestricted medical license, and no restricted licenses.

2) Lifelong Learning and Self-Assessment (Part 2): This part includes participation in programs that are aimed to enhance knowledge that is pertinent to one's practice. This part can be achieved through a variety of activities, including Knowledge Self-Assessment and Subspecialty Self-Assessment. Part 2 activities must be approved by the ABP; in fact, there are at least 120 currently active Part 2 activities listed on the ABP website. Fortuitously, Part 2 activities can also contribute to continuing medical education credit.

3) Cognitive Expertise (Part 3): This is an examination that is performed at various centers throughout the United States. The time cycle to complete the examination is every 10 years from the initial passing of the certification exam. The exam cycle need not align with the 5 year cycles for Parts 2 and 4.

4) Improving Professional Practice (Part 4): Along with Part 2, Part 4 must be completed every 5 years and is also described as the “Activities/Points Cycle.” Part 4 requires participation in Quality Improvement (QI) projects. Part 4 is intended to demonstrate the individual's competence in the assessment and improvement in patient care and is designed to foster enhanced quality of patient care.

Once a pediatrician achieves initial certification in general pediatrics, the diplomate is automatically enrolled in a 5-year MOC cycle. Therefore, the diplomate must meet a defined set of requirements within 5 years, which includes accumulating 100 points in that 5 year cycle. Information regarding the points accumulated during a 5 year cycle is available on the ABP website. Three are no points earned for parts 1 and 3. All points are accumulated in Parts 2 and 4, as detailed below:

- Part 2: 40 points during a 5 year cycle period
- Part 4: 40 points during a 5 year cycle period
- Additional 20 points (either Part 2 or Part 4 or mix) during the specified 5 year cycle for a total of 100 points

The concept and implementation of Part 4 in MOC was originally developed about 15 years ago and has evolved substantially. While Part 4 activities were traditionally geared for the general pediatrician, there has been substantial development of activities for specialists. The ABP has worked diligently and collaboratively with individuals and subspecialty organizations to hasten the number of Part 4 options for pediatricians and subspecialists. Yet, there are certain rules that some may find cumbersome and restrictive, such as not permitting individuals to carry over points from one MOC cycle to the next or allowing participation in the same Part 4 project in concurrent 5 year cycles. Thus, despite what are good intentions, there has been much consternation, confusion, and misinformation about the requirements and opportunities to complete Part 4.

MOC Part 4 Options:

ABP Established and Web-based Part 4 MOC Initiatives

1. Collaborative Quality Improvement Projects: These are projects that require groups of physicians in practices and/or institutions that collaborate to develop programs that aim to improve the quality of care.

2. QI Projects Initiated in the Workplace: Individuals can work with the ABP to develop projects designed to identify gaps in care in a local setting.

3. Web-Based Improvement Activities: These activities are ABP-approved improvement programs that physicians can perform within their own practice.

4. QI Articles or Posters: Individuals or groups that develop QI projects and subsequently publish the description of that project in such venues as peer-reviewed journal at a national conference may be eligible for Part 4 MOC credit.

5. Performance Improvement Modules (PIMs): These are intended for individuals who do not have a project of their own in mind. There are at least 36 PIMs that were developed by the ABP, AAP or other organizations. A list of PIMs is available on the ABP website.

6. Institutional QI Projects: Institutions that are MOC Portfolio sponsors may develop, sponsor, or approve QI projects within an institution and submit the names of participants to the ABP and approve projects in many specialties.
7. **Small and Large Group Projects:** The ABP awards credit to structured, well-designed QI projects that are based on accepted improvement science and methodology. Credit is awarded to all physicians who are meaningfully involved in the conception and execution of the project, including project leaders and coaches. One can apply for approval for small group QI projects with 1 - 10 physicians and groups with >10 MDs.

**AAP Projects for All Pediatricians**

*A full description of all the projects available through the AAP can be found on its [MOC website](https://www.aap.org/en-us/continuing-medical-education/moc/Pages/default.aspx?nfstatus=401&nftoken=00000000-0000-0000-0000-000000000000&nfstatusdescription=ERROR%3a+No+local+token).*

**AAP MOC Portfolio Program:** This program permits the academy to review and approve its own QI projects. These projects must be consistent with and adhere to ABP MOC standards. Once approved by the AAP, the Academy can award MOC credit for the participation and approval of these projects.

**Chapter Quality Network (CQN):** The AAP organization is divided into 59 chapters. These chapters play a critical role in helping the AAP achieve its mission. The AAP created the Chapter Quality Improvement Initiatives in 2014. The Division of Chapter Quality Improvement Initiatives facilitates and supports chapter quality improvement projects, including the CQN. These projects are designed to improve care and outcomes at the population level. The national office helps chapter members apply evidence-based guidelines to standardize care and use QI to build the concepts into practice. The Chapter Alliance for Quality Improvement (CAQI) offers direct support for participants to lead QI efforts.

There are currently four CQN projects:

- CQN Asthma
- CQN ADHD
- CQN for Mental Health and Adolescent Substance Use (Department of Child Health and Wellness)
- CQN US Immunizations

**AAP Projects for Pediatric Nephrologists**

The AAP offers three ABP-approved programs that meet Part 4 MOC requirements:

1) **Education in Quality Improvement for Pediatric Practice (EQIPP):** The Section of Nephrology (SONp), in collaboration with the International Pediatric Hypertension Association, the American Society of Pediatric Nephrology and the AAP Section on Cardiology/Cardiac Surgery, developed an EQIPP course entitled “Hypertension-Identification and Management”. This course provides information for general pediatricians and specialists aimed to enhance the diagnosis and management of hypertension in children. The course (and all EQIPP courses) is included with AAP membership.

2) **Quality Improvement Innovation Networks (QUIIN):** The AAP QUIIN offers many QI networks for the care of children and their families. Basically, QUIIN provides the infrastructure (staff, financial support, standard operating systems) for the networks.

3) **PediaLink for Part 4 MOC specific to pediatric nephrology:** The project was developed by Dr. Neal Blatt, University of Michigan and ASPN Certification Committee. It was approved by AAP and offered through the PediaLink QI platform ([https://pedialink.aap.org/visitor/pedialinkqi](https://pedialink.aap.org/visitor/pedialinkqi)). The focus of the project is to use EMR and ICD-10 codes to identify proper staging of patient with CKD. This project is scheduled to run from August to November, 2016 so that participants can receive their credit for this year. This project is already filled, but there may be consideration for repeating it in the future.

**Other Part 4 Programs for Pediatric Nephrologists**

**SCOPE:** The quality transformation network operated through the Children’s Hospital Association (formerly NACHRI) now includes a project focused on reducing **HD access-related infections**. Approximately 30 pediatric dialysis units are participating in SCOPE. The HD project has been up and running for about a year--we just had our spring workshop and there are nearly 300 pediatric HD patients enrolled.

*Continued on Page 4*
**Chair Update**  *Continued from Page 3*

**Part 4 MOC Projects at Individual Centers:** These are projects developed and approved at institutions that have ABP portfolio status:

- **Vitamin D status:** This project is being developed. More information is pending.
- **ASPN Listing of Part 4 MOC Projects:** For a full list of available projects, please see: [http://www.aspneph.com/Committees/T&C/MOC%20Part%204%20Project%20List.pdf](http://www.aspneph.com/Committees/T&C/MOC%20Part%204%20Project%20List.pdf) For some projects, the cost is free. For projects offered by different organizations, the cost may vary depending on membership.

**Free Part 4 Projects**

1. Hand Hygiene: 20 points; Open until 1/6/17
2. Influenza: Increase Immunization rates Performance Improvement: 20 points; Open until 9/15/17
3. Motivational Interviewing Performance Improvement: 20 points; Open until 2/23/18
4. Patient Centered Medication Management: 20 points; Open until 6/18/17
5. Reducing Errors in Prescriptions and Medication Orders: 20 points; Open until 10/27/17
6. Simulated Data Performance Improvement (for non-clinicians only): 40 points; Open until 3/17/18

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**Call for Nominations: 2017 SONp Henry Barnett Award**

The AAP Section on Nephrology will recognize one individual for lifetime achievement in the field of pediatric nephrology. Any pediatric nephrologist meeting the following qualifications can be nominated for this award:

- Dedication to teaching nephrology
- Contributions to advocacy for children
- Distinguished service to the field of pediatric nephrology

Access the [nominations form](http://www.aspneph.com/Committees/T&C/MOC%20Part%204%20Project%20List.pdf) on the website. Please submit the necessary information to Suzanne Kirkwood at skirkwood@aap.org by **September 30, 2016**.

**Previous Henry L. Barnett Award Recipients**

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Year</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>Barbara Fivush, MD</td>
<td>2003</td>
<td>Richard N. Fine, MD</td>
</tr>
<tr>
<td>2015</td>
<td>Bradley Warady, MD, FAAP</td>
<td>2002</td>
<td>Alan B. Gruskin, MD</td>
</tr>
<tr>
<td>2014</td>
<td>Denis Geary, MD</td>
<td>2000</td>
<td>Shane Roy III, MD</td>
</tr>
<tr>
<td>2013</td>
<td>Robert Chevalier, MD, FAAP</td>
<td>1999</td>
<td>John Lewy, MD</td>
</tr>
<tr>
<td>2012</td>
<td>Sandra Watkins, MD</td>
<td>1998</td>
<td>Malcom Holiday, MD</td>
</tr>
<tr>
<td>2011</td>
<td>James Chan, MD, FAAP</td>
<td>1997</td>
<td>Jay Bernstein, MD</td>
</tr>
<tr>
<td>2010</td>
<td>Aaron Friedman, MD, FAAP</td>
<td>1995</td>
<td>Clarke D. West, MD</td>
</tr>
<tr>
<td>2009</td>
<td>Julie Ingelfinger, MD</td>
<td>1994</td>
<td>Wallace McCrory, MD</td>
</tr>
<tr>
<td>2008</td>
<td>Ellis D. Avner, MD</td>
<td>1993</td>
<td>Robert L. Vernier, MD</td>
</tr>
<tr>
<td>2007</td>
<td>William Harmon, MD</td>
<td>1992</td>
<td>Henry L. Barnett, MD and Ira Griefer, MD</td>
</tr>
<tr>
<td>2006</td>
<td>Jose Strauss, MD</td>
<td>1991</td>
<td>Jack Metcalf</td>
</tr>
<tr>
<td>2005</td>
<td>Adrian Spitzer, MD</td>
<td>1990</td>
<td>Section on Nephrology establishes “The Kidney Award”</td>
</tr>
<tr>
<td>2004</td>
<td>Russell Chesney, MD</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Fellow Corner

Educational and Mentorship Opportunities:
Easy and meaningful ways to make an impact!

Lyndsay Harshman, MD
SONp Training Fellow Liaison
University of Iowa,
Division of Pediatric Nephrology, Dialysis and Transplantation
lyndsay-harshman@uiowa.edu

Usually there is a “catch” related to time and/or effort when fellows and faculty are asked to be involved in educational or mentorship opportunities for students and residents. Described below are two opportunities to contribute meaningfully without the time commitment “catch!”

Education – “Teaching on the Go (TOGO)”: The main mission of the AAP Section on Nephrology is to develop and share information on issues pertaining to pediatric nephrology with physicians in practice, as well as young physicians in training. In support of this mission, one of the strategic initiatives of the SONp Executive Committee is to provide on-line access to case-based information on key inpatient and outpatient pediatric nephrology topics for medical students and residents in a short, power point format (15 – 20 slides) as a “teaching on the go” resource. Ideally, these slide sets would be something our Section members could easily utilize on the wards or in clinic for short, quality teaching resources that could be covered in a brief “on the go” teaching session.

Our current list of topics for focused teaching material includes acute kidney injury, hypertension, disorders of osmoregulation and hydration (e.g., hyper and hyponatremia), hematuria, proteinuria, and recurrent UTI. This is how you can help! We are asking for SONp members to volunteer currently-made presentations (any length, any style) on the aforementioned topics. The goal is to engage fellows in the SONp to distill these presentations to key content and create 15-20 slide TOGO resources for use. All persons providing content will receive credit for submission of foundational content and final slide material will be formatted as a protected PDF to prevent unauthorized reuse. If you are interested in providing content for this project, please contact Suzanne Kirkwood at skirkwood@aap.org.

Mentorship – Mentorship is one of the most important tools for professional development and has been linked to greater productivity, career advancement, and professional satisfaction. The AAP recognizes that mentorship is critical in helping to nurture and grow future leaders and that a mentorship program is a key opportunity to engage new and existing members. The AAP Mentorship Program seeks to establish mentoring relationships between trainees/early career physicians and practicing AAP member physicians. Through a truly very easy process, SONp members have the opportunity to be available to students and residents interested in pediatrics – and potentially stir an interest in pediatric nephrology early in a trainee’s career trajectory! If interested, simply send an e-mail to mentorship@aap.org with a request to participate as a potential mentor, or login with your AAP login and password at https://aapmentorship.chronus.com/about. Participants will be prompted to complete an online mentor/mentee profile form. The profile form collects information on education, training, subspecialty interests, practice/professional/clinical interests, and the amount of time the participant is willing to commit; these factors all facilitate the matching process. Mentor/mentee pairs will have the ability to meet traditionally in person (if they choose a local match) or use one of several online tools to meet virtually.

The mentorship program though the AAP is still growing. Currently there are 2 members of the SONp signed up to serve as mentors for trainees within the AAP. With the theme of engaging young trainees in the field of pediatric nephrology early in career development, I would challenge our section to set a goal of enrolling 25% of our membership (equaling approximately 40 members) as mentors in this program by spring 2017.

Questions, comments, and/or thoughts on how we can improve fellow education/training via the SONp? Feel free to contact me!
Clinical Feature: C3 Glomerulonephritis Versus “C3 Glomerulopathies?”

T. Keefe Davis M.D., FAAP
Pediatric Nephrology and Pheresis
Washington University / St. Louis Children's Hospital

**Background and epidemiology**

C3 glomerulonephritis (C3Gn) is due to abnormal regulation of the alternative complement pathway. The diagnosis is based upon kidney biopsy immunofluorescences studies showing isolated or dominant C3 deposition within the glomerulus with little or no immunoglobulin deposition. It is a distinct entity from the other 4 classes of glomerulonephritis (Gn): immune complex, pauci-immune, antiglomerular basement membrane antibody, and monoclonal Gn. One caveat to immune complex disease is that there is a subset of patients with atypical post infectious glomerulonephritis who have persistent lab abnormalities (low C3, proteinuria, or elevated creatinine). Patients with an atypical post infectious course may have C3Gn.

The cause of C3Gn is excessive activation of the alternative complement pathway. The primary defect is increased activity of the C3 and C5 convertases. One mechanism underlying the increased activity of these convertases is the development of a stabilizing autoantibody called C3 nephritic factor (C3NF). Indeed, C3 nephritic factor hinders the breakdown of C3 convertase, allowing it to continue to amplify the cascade resulting in increased production of C3 and by also generating the C5 convertase which itself initiates the membrane attack complex. The other mechanism responsible for increased activity of the C3 convertase is the loss of factor H functionality. Since the normal function of factor H is to inhibit the C3 convertase, mutations or acquired loss of the ability of factor H to regulate activated C3 results in excessive convergence towards assembly of the membrane attack complex.

C3 glomerulonephritis is a pediatric disease and rates of diagnosis are increasing with greater awareness of this distinct and separate entity from dense deposit disease (DDD), both of which are commonly classified under the broad heading of C3 glomerulopathies (Table 1, see page 7). Unfortunately, the classification of both C3Gn and DDD as C3 glomerulopathies adds confusion to the classification schema due to subtleties in the nomenclature.

**Presentation**

The presentation of C3Gn is variable, but urine abnormalities are always present. Most patients with C3Gn present with nephrotic range proteinuria and/or nephrotic syndrome and hematuria. Cases presenting with subnephrotic range proteinuria or isolated gross hematuria have been reported. The clinician cannot use serum C3 levels or other blood work as a discerning factor from other forms of GN. Therefore, a kidney biopsy is required to establish the diagnosis. Although most biopsies of C3Gn show a membranoproliferative pattern, this is not required. Immunofluorescence (IF) must show dominant C3 glomerular staining in the mesangium and capillary loops that is at least 2+ stronger than other IF stains. Electron microscopy helps differentiate from DDD with C3Gn, with the latter showing lighter mesangial, subendothelial, or epithelial deposits rather than intramembranous linear dense deposits diagnostic of DDD.

**Diagnosis and Patient Management**

C3Gn is a rare disease with an incidence of 1-2 million/year (Table 2, see page 8). Therefore, due to lack of clinical
experience, a standard causative work up/approach cannot be recommended. However, based upon our current understanding of the pathophysiology (over activity of the alternative complement pathway) evaluation may require genetic testing for mutations in alternative complement proteins and measurement of autoantibodies (Table 3, see page 8).3,7

A standard and effective treatment is not available (Table 4, see page 8). A coherent argument can be made for targeting autoantibody (C3NF) generation and/or utilizing drugs and procedures (such as therapeutic plasma exchange) that

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**Table 1.**

C3 Glomerulopathies: Comparing and Contrasting Dense Deposit Disease versus C3 Glomerulonephritis.

<table>
<thead>
<tr>
<th>Descriptive Factor</th>
<th>Dense Deposit Disease</th>
<th>C3 Glomerulonephritis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pathophysiology</td>
<td>Abnormal regulation of the alternative complement pathway</td>
<td>Abnormal regulation of the alternative complement pathway</td>
</tr>
<tr>
<td>Light microscopy findings</td>
<td>Almost always a membranoproliferative glomerulonephritis pattern</td>
<td>Any pattern</td>
</tr>
<tr>
<td>Immunofluorescence findings</td>
<td>Dominant C3 staining</td>
<td>Dominant C3 staining</td>
</tr>
<tr>
<td>Electron microscopy</td>
<td>Linear electron dense material within in the glomerular basement membrane (intramembranous) Dense deposits</td>
<td>Subendothelial, subepithelial and/or mesangial electron-dense deposits; Lighter density deposits</td>
</tr>
<tr>
<td>Age of affected</td>
<td>Children and young adults; over half will be &lt; 16 years of age at diagnosis.</td>
<td>Children and young adults; about a quarter will be &lt; 16 years of age at diagnosis.</td>
</tr>
<tr>
<td>C3 nephritic factor</td>
<td>Present 80% of the time</td>
<td>Present 40% of the time</td>
</tr>
<tr>
<td>Serum C3 level</td>
<td>&gt;80% have low C3 levels</td>
<td>Approx. 50% have low C3 levels</td>
</tr>
<tr>
<td>Soluble C5b-9 level</td>
<td>Elevated in 9%</td>
<td>Elevated in 9%</td>
</tr>
<tr>
<td>Pathological gene variant</td>
<td>Identified in 25%</td>
<td>Identified in 25%</td>
</tr>
<tr>
<td>Dysregulation of alternative pathway convertase</td>
<td>Favors dysregulation of the C3 convertase</td>
<td>Favors dysregulation of the C5 convertase</td>
</tr>
<tr>
<td>Extrarenal abnormalities</td>
<td>Drusen deposition in Bruch's membrane of the retina (macular deposits)</td>
<td></td>
</tr>
<tr>
<td>Risk of end stage kidney disease (ESKD)</td>
<td>Approx. 70% progress to ESKD</td>
<td>Approx. 35% progress to ESKD</td>
</tr>
<tr>
<td>Risk of recurrence after kidney transplant</td>
<td>&gt;50% (100% in some studies)</td>
<td>&gt;50%</td>
</tr>
</tbody>
</table>
Clinical Feature: C3 Glomerulonephritis . . . Continued from Page 7

Table 2. Incidence of Pediatric Nephrology Conditions

<table>
<thead>
<tr>
<th>Disease/Condition</th>
<th>Incidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>C3 Glomerulonephritis</td>
<td>1-2 per million</td>
</tr>
<tr>
<td>Dense Deposit Disease</td>
<td>1-2 per million</td>
</tr>
<tr>
<td>Autosomal Dominant Polycystic Kidney Disease</td>
<td>1 per 1,000</td>
</tr>
<tr>
<td>Autosomal Recessive Polycystic Kidney Disease</td>
<td>1 per 40,000</td>
</tr>
<tr>
<td>Immunoglobulin A Nephropathy</td>
<td>3 per 100,000</td>
</tr>
<tr>
<td>Nephrotic Syndrome</td>
<td>4 per 100,000</td>
</tr>
<tr>
<td>Pediatric End Stage Kidney Disease</td>
<td>10 per million</td>
</tr>
<tr>
<td>Posterior Urethral Valves</td>
<td>1 per 10,000</td>
</tr>
</tbody>
</table>

Table 3. Considerations for the Cause of C3 Glomerulonephritis

<table>
<thead>
<tr>
<th>Genetic Mutations</th>
<th>C3, CD46 (membrane cofactor protein), CFB, CFH, CFHR1, CFHR2, CFHR3, CFHR4, CFHR5, CFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autoantibodies</td>
<td>C3 nephritic factor (anti-complement factor C3bBb), anti-complement factor H, anti-complement factor B, anti-complement factor C3b</td>
</tr>
</tbody>
</table>

Table 4. Considerations for the Treatment of C3 Glomerulopathies: Dense Deposit Disease versus C3 Glomerulonephritis.

<table>
<thead>
<tr>
<th>Therapy</th>
<th>Dense Deposit Disease</th>
<th>C3 Glomerulonephritis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glucocorticoids</td>
<td>No benefit</td>
<td>Possible benefit</td>
</tr>
<tr>
<td>Eculizumab</td>
<td>Possible benefit</td>
<td>Possible benefit</td>
</tr>
<tr>
<td>Plasma Exchange</td>
<td>Possible benefit</td>
<td>Possible benefit</td>
</tr>
<tr>
<td>Plasma Infusion</td>
<td>Possible benefit</td>
<td>No experience reported</td>
</tr>
<tr>
<td>Calcineurin Inhibitors</td>
<td>No benefit</td>
<td>Possible benefit</td>
</tr>
<tr>
<td>Mycophenolate Mofetil</td>
<td>No benefit</td>
<td>Possible benefit</td>
</tr>
<tr>
<td>Rituximab</td>
<td>No benefit</td>
<td>Possible benefit</td>
</tr>
</tbody>
</table>

dampen the alternative pathway activity. Assessing the efficacy of any one therapy is difficult due to the inclusion of patients with membranoproliferative glomerulonephritis type 1 (which includes both C3 glomerulonephritis and immunoglobulin and immune complex glomerulonephritis) in many studies. Further, reports of efficacy from single/small case series show promising results but are subject to publication bias with the non-responders never reported.

Greater awareness of this “new” disease entity will facilitate diagnosis and potential enrollment in study registries and prospective studies evaluating differentiating clinical parameters and therapies. Due to the rareness of C3Gn, this approach will be necessary to help inform best clinical practice.

Continued on Page 9
References


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St Louis, MO 63110
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Email: davis_tk@kids.wustl.edu

Call for Content: Pediatrics Diagnostic Dilemmas and Clinical Reasoning Feature

Content for the feature in *Pediatrics* called Diagnostic Dilemmas and Clinical Reasoning, which debuted in January 2015, is being accepted. Each manuscript is the presentation of an enigmatic clinical case that requires the input of both generalists and specialists, who comment on their thought processes as the case is presented in segments. We publish the robust discussion of those asked to comment on the case regarding the clinical reasoning needed to make a correct diagnosis. If you have a case conference in your institution and wish to have those who present the case write it up as the discussion ensued, that would be ideal.

The author guidelines for Diagnostic Dilemmas and Clinical Reasoning can be found here: [http://www.aappublications.org/content/pediatrics-author-guidelines#d2_cr](http://www.aappublications.org/content/pediatrics-author-guidelines#d2_cr). All manuscripts will undergo a peer review process. Questions should be directed to Rachel Moon, MD, section editor for Diagnostic Dilemmas and Clinical Reasoning, at: rymoon@virginia.edu.
Help FDA Reduce Drug Shortages in the Pediatric Population

Ethan Jorgensen-Earp
Legislative Assistant,
AAP Department of Federal Affairs

The Food and Drug Administration (FDA) has been concerned about drug shortages since the early 1990's and as a result developed the Drug Shortages Staff (DSS) in 1999 to facilitate the prevention and resolution of shortages by working with key governmental and external stakeholders. In 2012, the Food and Drug Administration Safety and Innovation Act (FDASIA) was signed into law and granted new authorities to the agency to strengthen their ability to mitigate drug shortages, including requiring manufacturers to give advanced notice of a drug shortage or discontinuation and to maintain a public list of known shortages. Since that time, the FDA developed and issued a strategic plan in 2013 and a final rule further clarifying manufacturer reporting requirements in 2015. Although these steps have resulted in additional regulatory tools and flexibility for the FDA to help prevent, mitigate, and resolve drug shortages, the direct actions the agency may take in the event of a serious drug shortage remain limited. For instance, the agency cannot require a manufacturer to make more of a drug, dictate new distribution patterns for that drug, or require another manufacturer to produce a drug that is in shortage.

In order to be effective in its mission, the FDA relies on organizations such as the AAP to alert them of the severity of drug shortages and how they impact the care of children. To determine the degree that drug shortages affect pediatric practices nationwide, the AAP Department of Federal Affairs widely distributed a ten-question survey in November, 2015 to AAP members regarding the extent and severity of drug shortages in their practices. The survey was generated to assist the Government Accountability Office (GAO), which is conducting a study on causes of and trends in drug shortages to supplement their previous work on drug shortages in 2011 and 2014, respectively. The survey responses from 365 members were summarized in an AAP-authored report. The report concluded that nearly 75% of respondents saw the number of drug shortages increase in their practice over two years, and while some respondents saw an increase in the duration of shortages, most respondents reported individual shortages to occur unpredictably and last a few months at a time. A high percentage of the shortages have occurred with sterile injectable drugs. While the shortages were generally short-term in nature, certain drugs experienced cyclical shortages that made it challenging for pediatricians to create consistent, long-term care plans for their patients. The report includes responses from eleven pediatric nephrologists.

The AAP has worked for years to ensure that drugs for children, especially therapies for which there are few or no available alternatives, remain in supply for the pediatric patients that need them, and supports FDA policies mandating that drug manufacturers send adequate notice of shortages with clear timelines for their resolution. The AAP addresses shortages on a case-by-case basis and its actions may include letters to the manufacturer, the FDA, and/or congressional representatives. The key messages or questions included in these communications address the impact of the shortage on the care of children, the expected length of the shortage, and the availability of alternative drugs.

What Can You Do?

- The best way to assist in this process is to communicate any shortages you experience to the FDA at [http://www.fda.gov/Drugs/DrugSafety/DrugShortages/ucm142398.htm](http://www.fda.gov/Drugs/DrugSafety/DrugShortages/ucm142398.htm) as well as to the ASPN and AAP so that they are able to track and respond, if appropriate.

- Become an AAP Key Contact: Key Contacts are AAP members who are interested in receiving advocacy opportunities and timely policy updates from the AAP Department of Federal Affairs on federal legislation and other issues important to the Academy. Through regular e-mail communication with specific requests for action, the Department of Federal Affairs keeps Key Contacts informed of the latest legislative developments affecting children and pediatricians. To become a Key Contact, e-mail [kids1st@aap.org](mailto:kids1st@aap.org) with your name, AAP ID if known, and your preferred e-mail address. If you have questions about federal advocacy, contact AAP Department of Federal Affairs at 202-347-8600.
The Business of Nephrology:
ICD-10-CM Updates for Nephrology for Oct 1, 2016

October 1, 2015 all HIPAA covered entities were required to switch from the long-standing ICD-9-CM to ICD-10-CM. That was an enormous undertaking, yet for the most part was very successful. Part of that success was due to the code freeze for the past 5 years, which meant payers and other health care entities could spend 5 years preparing for the transition without the worry of new codes. That freeze is about to be lifted on October 1, 2016 and all the approved code changes (new codes and revised codes) and all tabular and index changes will take effect. Within those 5 years of changes, over 1900 new codes were developed and over 400 codes were revised. The bulk of the codes are injury services as well as diabetes mellitus conditions. However, there will be many other changes throughout each chapter. In this article we will highlight those few changes that will impact nephrology.

**New codes that were added including:**

- D49.511  Neoplasm of unspecified behavior of right kidney
- D49.512  Neoplasm of unspecified behavior of left kidney
- D49.519  Neoplasm of unspecified behavior of unspecified kidney
- D49.59   Neoplasm unspecified behavior of other genitourinary organ

**Do not report D49.5 without additional characters on or after October 1, 2016 because that code is no longer valid.**

- N13.0    Hydronephrosis with ureteropelvic junction obstruction
- N99.840  Postprocedural hematoma of a genitourinary system organ or structure following a genitourinary system procedure
- N99.841  Postprocedural hematoma of a genitourinary system organ or structure following other procedure
- R93.41   Abnormal radiologic findings on diagnostic imaging of renal pelvis, ureter, or bladder
- R93.421  Abnormal radiologic findings on diagnostic imaging of right kidney
- R93.422  Abnormal radiologic findings on diagnostic imaging of left kidney
- R93.429  Abnormal radiologic findings on diagnostic imaging of unspecified kidney
- R93.49   Abnormal radiologic findings on diagnostic imaging of other urinary organs

**Code R93.4**  Abnormal findings on diagnostic imaging of urinary organs was “deleted” so if you have this code in your system be sure to update with the additional characters as shown above.

**Code N10**  was revise from acute tubulo-interstitial nephritis to acute pyelonephritis
If you report these services in your practice be sure to update your system as appropriate and be ready to report by October 1, 2016.

If you have any questions regarding this information, please feel free to contact Becky Dolan at bdolan@aap.org If you have any questions related to coding, payers or documentation please email the coding hotline at aapcodinghotline@aap.org

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Welcome to our New SONp Members

If you know of others who might be interested in joining the Academy and the Section, please have them call 1-800-433-9016 ext. 5885. Current Academy members may join the Section by accessing the online application (member ID and login required).

AAP Fellows:

<table>
<thead>
<tr>
<th>Jennifer Charlton, MD, FAAP</th>
<th>Imran Memon, MD, FAAP</th>
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<td>Charlottesville, VA</td>
<td>Fort Worth, TX</td>
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<tr>
<th>David Hains, MD, FAAP</th>
<th>Rita Sheth, MD, FAAP</th>
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<td>Memphis, TN</td>
<td>Loma Linda, CA</td>
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<th>Scott McEwen, MD, PhD, FAAP</th>
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<td>Cleveland, OH</td>
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AAP Fellows-In Training:

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<tr>
<th>Erica Bjornstad, MD</th>
<th>Sachin Tadphale, MD, FAAP</th>
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<tr>
<td>Carrboro, NC</td>
<td>Little Rock, AR</td>
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AAP Medical Students:

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<tr>
<th>Amelie Bottex</th>
<th>Joseph Watson</th>
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<td>Philadelphia, PA</td>
<td>Brooklyn, NY</td>
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<th>Jessica Shoukry</th>
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<td>Mount Laurel, NJ</td>
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Upcoming Meetings

**50th Annual Scientific Meeting of the European Society of Pediatric Nephrology**
September 7 -9, 2017
Glasgow, Scotland

**17th Congress of the International Pediatric Nephrology Association**
September 20 – 24, 2016
Iguacu, Brazil

**AAP National Conference & Exhibition**
October 22-25, 2016
San Francisco, CA

**Kidney Week 2016**
November 15-20, 2016
Chicago, IL

**National Kidney Foundation - 2017 Clinical Meeting**
April 18 – 22, 2017
Orlando, FL

**2017 Pediatric Academy Societies**
May 6-9, 2017
San Francisco, CA
CoPS July, 2016 Update

Dr. Amy Wilson serves as the AAP Section on Nephrology Liaison to the Council on Pediatric Subspecialties (CoPS). You can view the July, 2016 CoPS update and additional information about CoPS on their website.

Representatives from the CoPS have been working with the American Board of Pediatrics (ABP) on the next phase of entrustable professional activities (EPA) development – that is writing the curricular components for each of the subspecialty-specific EPAs. Each subspecialty had a team lead and a number of writing committee team members who created the draft documents that CoPS is sending for your review.

CoPS is soliciting your feedback on the work that has been completed to date. For each of the 3-6 EPAs per subspecialty there is a brief survey. The survey regarding pediatric nephrology will be open for your comments for one month, through September 17, 2016. The feedback will then be collated and reviewed by the appropriate writing team and revisions made accordingly. Instructions for the review process are included in the introduction to the survey. Click on the following link to begin your review: https://www.surveymonkey.com/r/28L778R

USPSTF Released Final Recommendation Statement on Lipid Disorders in Children and Adolescents

On August 9, 2016, the U.S. Preventive Services Task Force released a final recommendation statement on screening for lipid disorders in children and adolescents. The Task Force concludes that the current evidence is insufficient to assess the balance of benefits and harms of lipid screening in children and adolescents up to age 20. To view the recommendation and the evidence on which it is based, please go to http://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/lipid-disorders-in-children-screening?ds=1&s=lipid. The final recommendation statement can also be found in the August 9th online issue of JAMA.

For Upcoming Newsletters . . .

We welcome your input and encourage you to submit ideas or information by email to Doug Silverstein, MD at dsilverstein2001@yahoo.com or Suzanne Kirkwood at skirkwood@aap.org for future issues of the newsletter.
The Section on Nephrology
Executive Committee

Chairperson:
Douglas Silverstein, MD, FAAP

Executive Committee:
Manju Chandra, MD, FAAP
Vikas Dharnidharka, MD, FAAP
Lyndsay Harshman, MD, FAAP
Stephanie Jernigan, MD, FAAP
Frederick Kaskel, MD, PhD, FAAP
Teri Jo Mauch, MD, PhD, FAAP

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Larry Greenbaum, MD, PhD, FAAP

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