Welcome to the many pediatric nephrologists who have recently joined the Section on Nephrology. We noticed that many pediatric nephrologists belong to the AAP, but had not joined the Section on Nephrology despite the minimal cost ($25 per year). When we have asked you about this, it seems that most of you either thought you belonged or had had trouble joining due to technical issues. Hence, we decided to enroll you this year for free and give you the option of renewing your membership next year, which will make the process more straightforward.

Why do we want all pediatric nephrologists in the AAP to belong to the Section on Nephrology? It is not because of the $25 membership fee! The number of section members is a barometer of the engagement of pediatric nephrologists in the AAP. This is essential for making sure our voice is heard within the AAP. Hence, your membership in the section is important.

We are also making a variety of efforts to increase the value of your section membership. We hope that you will find the section newsletter useful. Our website is being completely reworked under the leadership of Rick Kaskel. We are also making a concerted effort to increase involvement of section members in AAP activities, including writing articles for the newsletter (e.g., see review of ambulatory blood pressure by Gaurav Kapur in this issue), speaking at the NCE, and participating on AAP committees. Involvement is gratifying and may be helpful for academic advancement. Please let me know if you’d like to get involved.

Larry Greenbaum, MD, PhD, FAAP
Chair, Section of Nephrology Executive Committee
l.green6@emory.edu

For Upcoming Newsletters

We welcome your input and encourage you to submit ideas or information by email to Larry Greenbaum, MD, PhD at l.green6@emory.edu or Suzanne Kirkwood at skirkwood@aap.org for future issues of the newsletter.
The 2013 recipient of the Henry L. Barnett award is Robert L. Chevalier, MD, FAAP. The Barnett award is given to a pediatric nephrologist who has demonstrated lifetime achievement in the field of pediatric nephrology through distinguished clinical service, dedication to patient care, and teaching of pediatric nephrology. Dr. Robert Chevalier's career demonstrates a lifelong commitment to pediatric nephrology in all of its missions, the central criteria for the Barnett Award.

Dr. Chevalier has spent his entire academic career at the University of Virginia, where he founded the Division of Pediatric Nephrology in 1978. He served as Division Director of Pediatric Nephrology until 1991 and as Chair of the Department of Pediatrics from 1996 to 2010. He started the Fellowship Training Program in Pediatric Nephrology and he continues to mentor young pediatric nephrologists.

Dr. Chevalier is one of the world's leaders in the area of obstructive uropathy. He is recognized as one of the preeminent scientists in the pathophysiology and biology of obstructive uropathy in the developing kidney. He has published more than 160 peer reviewed articles and more than 40 books, chapters, and reviews. Dr. Chevalier has had a multitude of world-wide speaking invitations during his career.

Dr. Chevalier has advocated with the NIH for funding for pediatric kidney research and continues to serve as a mentor and supporter of trainees in the field of pediatric nephrology. Dr. Chevalier has been a member of the American Academy of Pediatrics since 1990. He has been an active member of the ASPN since 1978, and served as President of that society from 1991-1992. Dr. Chevalier's advocacy efforts have included local, regional, national and international efforts to enhance the access of children to quality medical care and to enable optimal training for those who desire to care for children with special healthcare needs.

Dr. Robert Chevalier has dedicated his career to the advancement of clinical care, science and education within the realm of pediatric nephrology. He will receive the Henry Barnett Award as part of the ASPN Award Luncheon in conjunction with the PAS conference in Washington D.C. on Saturday, May 4, 2013. Please join us in congratulating Dr. Chevalier!

Nominations for the 2014 award will be accepted beginning in July, 2013.
What do I need to know to start ambulatory blood pressure monitoring for children with hypertension?

By Gaurav Kapur, MD FAAP

Ambulatory blood pressure monitoring (ABPM) is considered a key component in the evaluation of children with hypertension (HTN). The recommendations by the American Heart Association (AHA) provide standardized guidelines for obtaining and interpreting ABPM readings in children and adolescents and can be accessed at: [http://hyper.ahajournals.org/content/52/3/433.full.pdf](http://hyper.ahajournals.org/content/52/3/433.full.pdf). In children, ABPM has been reported to be useful in 1) differentiating between white coat (elevated BP in clinic and normal BP in the home), masked (elevated BP in the home and normal BP in the clinic) and true HTN, 2) assessment of HTN severity and risk for end organ damage, 3) evaluation of effectiveness of anti-hypertensive therapy and 4) determination of nocturnal BP elevation and associated increased risk for end organ damage. Despite the available evidence, ABPM utilization in the pediatric population continues to be limited in comparison to adults. The following commentary provides a brief overview of ABPM in children with the aim of increasing the use of this modality in children with elevated BP.

**Ambulatory Blood Pressure (ABP) Monitors**

Both auscultatory and oscillometric devices are available for ABPM. Auscultatory devices, despite receiving higher overall ratings, are not commonly used due to: 1) confusion regarding which Korotkoff sound, K4 or K5 accurately determines diastolic blood pressure (DBP) in children; 2) higher percentage of erroneous readings, 3) reference ABPM data is derived from oscillometric measurements and 4) overall greater user difficulty in comparison to oscillometric devices. Oscillometric devices are the most commonly used instruments for measuring ambulatory blood pressure. The BP recorded by oscillometric devices is based on confidential, proprietary algorithms. The validation process for the oscillometric devices is difficult and despite a machine passing the process it is not certain that it would provide accurate readings for a specific patient. Oscillometric devices validated in adults may not necessarily provide accurate information in children because the algorithms used for calculating BP are influenced by vessel stiffness. Spacelabs 90207 ABPM monitor (Spacelabs Medical, Hawthorne, CA) is one of the commonly used monitors in children. Despite not being validated for use in children, the monitor’s use in the development of the currently available pediatric reference data has led to widespread use in children. An updated list of the available BP measuring devices (automated and non-automated) can be viewed at [http://www.dableducational.com](http://www.dableducational.com) (this site reviews and provides information on validation experiments for BP devices; it is a not for profit website maintained by dabl® Educational Trust, an international consortium of members with expertise and training in blood pressure measurement and device validation).

**ABPM Cost and Reimbursement**

A pediatric study model has predicted that the use of ABPM for all patients with stage 1 HTN would yield savings of $2.4 million for every 1000 referred patients. Despite the reported cost savings, ABPM is often not a covered benefit for children with Medicaid and other health insurances. One ABPM monitor (Spacelabs 90207; Spacelabs Medical, Hawthorne, CA), along with the software, costs around $3500-$4000. Factoring in Medicare’s current reimbursement rate of around $18.19; 190-220 ABPM studies will recover the initial starting cost. Also, including proper documentation of ABPM scanning and physician interpretation in a clinic note may change the reimbursement of a patient visit from a level 4 to a level 5.

Currently ABPM is a covered benefit for adults with suspected “white coat hypertension” (WCH). Suspected “WCH” is defined as: (1) Clinic/office blood pressure >140/90 mm Hg on at least three separate visits with two separate measurements at each visit; (2) At least two documented separate blood pressure measurements taken outside the clinic/office which are < 140/90 mm Hg; and (3) No evidence of end-organ damage. The associated CPT diagnosis code for ABPM is 796.2 (Elevated blood pressure reading without diagnosis of hypertension). The CPT codes associated with ABPM are: 1) 93784 - ABPM recording, scanning analysis, interpretation and report, 2) 93786 – ABPM recording only, 3) 93788- ABPM scanning, analysis with report and 4) 93790-ABPM with physician review, interpretation and report.
ABPM for children with hypertension (Continued from Page 3)

**ABP- device application, logistics and successful monitoring**

Some points to consider when starting ABPM at an institution include: 1) Application of the monitor in the clinic by trained personnel versus at home by a family member, 2) Performing ABPM on regular school days versus weekends, and 3) Return of ABP monitor via prepackaged mailing envelopes versus return by a family member. The solution to these issues is influenced by the number of ABP monitors available in relation to patients eligible for ABP monitoring, available hospital / institutional / financial support when starting the program and practice-patient preferences.

Routine use of ABPM has been reported in children 5 years and older. Activity, besides influencing a patient’s BP, is also linked with the overall success of the ABPM. It is currently recommended that children undergoing ABPM should not undertake vigorous exercise or contact sports. However, they should continue with their normal routine, maintain a log of sleep/awake time, activity and anti-hypertensive medication administration. Reporting of sleep and awake times during ABPM is important to differentiate ambulatory and nighttime BP readings. During ABPM, blood pressure is recorded every 15-30 minutes during daytime and every 20-60 minutes during nighttime. A successful ABPM recording usually has at least 1 reading per hour (including nighttime) and around 40-50 successful readings for a full report. Sleep disturbance has been reported as a side effect with ABPM. In our experience, this is a hindrance in the successful completion of the study, especially in adolescent patients who remove the monitor at night and subsequently refuse a repeat study for evaluation.

**ABPM interpretation**

Oscillometric devices directly measure mean arterial pressure (MAP); however, MAP is not currently used for interpreting ABPM. Systolic (SBP) and diastolic blood pressure (DBP) is calculated from MAP using proprietary software and the ABPM data is subsequently interpreted in terms of various BP indices. SBP indices referenced with normative data derived from ABPM studies conducted in nearly 1100 predominantly Caucasian children of Central European descent are currently used for defining HTN in children.

Besides the small cohort from which the dataset originated, other limitations include lack of ethnic diversity in the cohort, minimal diastolic BP variability and limited data on children with height less than 140cm. The current guidelines for interpreting ABPM readings are based on systolic BP indices only. There are no AHA recommendations for patients with isolated elevated diastolic BP indices. A recent review on ABPM in children recommends using the same cutoff limits as listed in AHA guidelines for patients with isolated abnormal (>95th percentile of reference mean DBP and >25% DBP load) diastolic indices.

Abnormal nighttime dipping is defined as less than 10% decrease between the mean daytime and nighttime BP. Current research has prognostically linked abnormal dipping of night-time BP with mortality, cardiovascular events and progressive nephropathy. However, nighttime dipping abnormalities are not considered in the current recommended schema for categorizing ambulatory BP in children. Hence, there are no recommendations to guide further management for children with normal BP by ABPM but abnormal dipping. The threshold of 10% for abnormal dipping is arbitrary and it is unclear whether SBP, DBP or MAP indices should be used in isolation or in combination for calculating nocturnal dipping. Also, ABPM research has failed to identify the underlying pathophysiological factors associated with abnormal dipping. This could be a contributing factor in the lack of research demonstrating a beneficial effect of reversal of abnormal dipping.

**Conclusion**

HTN is the most commonly diagnosed condition in the United States and is associated with significant costs to medical care secondary to treatment and associated morbidity and mortality. The correct measurement of blood pressure is fundamental for proper understanding and treatment of this major public health problem. ABPM, despite its inherent limitations, is currently the best available technique for BP measurement. As such, ABPM has contributed towards increased understanding of HTN pathophysiology, related complications and management. Continued
consistent use of ABPM in evaluation and management of HTN in children should overcome the current limitations.

Suggested Reading:


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**Quality Connections Newsletter**

The AAP Quality Connections newsletter was launched by the AAP Steering Committee on Quality Improvement and Management (SCOQIM) to communicate timely information and increase awareness of the importance of quality improvement. The newsletter also provides updates on current AAP quality improvement programs and projects.

Highlights from the winter issue follow:

- Music to the Ears of Patients with IBD
- Innovations in Practice: No “Flu Drive Thru”
- Breaking Down the Walls of Inpatient Silos
- New AAP Guideline on Managing Type 2 Diabetes
- Advanced Access
- SCOQIM Proposing Topics for Measure Development

To access the newsletter, visit [http://www2.aap.org/visit/Winter2013QIConnnections.pdf](http://www2.aap.org/visit/Winter2013QIConnnections.pdf). Archives of precious newsletters can be found at: [http://www2.aap.org/visit/QIConnnectionArchive.html](http://www2.aap.org/visit/QIConnnectionArchive.html)

For questions regarding the newsletter, please contact Junelle Speller, Senior Health Policy Analyst, Quality Improvement, [jspeller@aap.org](mailto:jspeller@aap.org), 847-434-7650 office, 847-434-4996 fax.
Relative Value Units (RVU’s) originated in the Medicare Omnibus Reconciliation Bill of 1985 and have been the principle driver of physician compensation since that time. For each identified service (CPT code), a payment formula contains three RVUs, one for physician work, one for practice expense, and one for malpractice expense. On average, the proportions of costs for Medicare are 52%, 44% and 4%, respectively: Below are brief descriptions of each RVU:

1. **Physician work RVU** – The relative level of time, skill, training and intensity to provide a given service. Each CPT® code is targeted for review at least every five years to determine the work RVU for a particular service and consider if it remains the same as the value previously set. In the next installment of this newsletter, I will discuss the ‘RUC’ (RVU Update Committee), which has tremendous influence on the physician work portion of the RVU.

2. **Practice Expense (PE) RVU** – This component addresses the costs of maintaining a practice, including rent, equipment, supplies and nonphysician staff costs. Frequently, a CPT® code will be assigned a practice expense RVU for a facility setting, such as a hospital, and a different practice expense RVU for a nonfacility setting, such as a freestanding center. Generally, freestanding centers receive more practice expense compensation than hospital-based centers, since the practice expense of owning and operating equipment and providing staff resources are significantly more than the practice expenses covered by the physician in a hospital setting.

3. **Professional Liability Insurance (PLI) RVUs** - These are generally the smallest component of the RVU values and represent payment for the professional liability expenses.

The sum of the 3 RVUs is then modified by the Geographic Practice Cost Indices (GPCI) that accounts for the geographic differences in the cost of practice, cost of living and cost of PLI across the country. GPCIs are reviewed every three years.

Finally, the dollar amount is dictated by the Conversion Factor (CF), which converts the RVUs into an actual dollar amount. The CF applies only to Medicare but an Affordable Care Act mandate allows Medicare CF to be used for Medicaid in 2013-14. The CF or dollar multiplier is updated on an annual basis according to a formula specified by statute. Congress has the ability to override the statutorily defined formula, as it recently did as part of the “fiscal cliff” settlement in early January of this year when it fixed the sustainable growth rate (SGR). Otherwise the conversion factor would have decreased by 26.5%. For 2013, the Medicare CF will be $34.0230.

The following are examples of common codes reported by Nephrology. The RVUs and payment shown below are not geographically adjusted:

<table>
<thead>
<tr>
<th>CPT Code</th>
<th>Work RVU</th>
<th>PE RVUs* NF and F</th>
<th>PLI</th>
<th>Total NF RVU</th>
<th>Total F RVU</th>
<th>Medicare Payment NF</th>
<th>Medicare Payment F</th>
</tr>
</thead>
<tbody>
<tr>
<td>99204</td>
<td>2.43</td>
<td>2.18 / 1.10</td>
<td>0.27</td>
<td>5.99</td>
<td>4.83</td>
<td>$164.67</td>
<td>$127.93</td>
</tr>
<tr>
<td>99214</td>
<td>1.50</td>
<td>1.53 / 0.65</td>
<td>0.10</td>
<td>3.13</td>
<td>2.25</td>
<td>$106.49</td>
<td>$76.55</td>
</tr>
<tr>
<td>99222</td>
<td>2.61</td>
<td>1.12</td>
<td>0.22</td>
<td>N/A</td>
<td>3.95</td>
<td>N/A</td>
<td>$96.29</td>
</tr>
<tr>
<td>50200</td>
<td>2.63</td>
<td>14.90 / 1.28</td>
<td>0.31</td>
<td>17.84</td>
<td>4.22</td>
<td>$606.97</td>
<td>$143.58</td>
</tr>
</tbody>
</table>

*There are always two different values for (practice expense) PE when a service can be billed in a facility (F) setting (eg, hospital) versus a non-facility (NF) setting (e.g., private office). If the facility bills a separate fee, as a hospital does for a biopsy, you will be paid at the lower facility (F) rate.

Continued on Page 7
The Business of Pediatric Nephrology: WHAT IS AN RVU?  

As mentioned above, the GPCI adjusts payment based on different practice costs, cost of living and PLI across the country. For example, let’s compare the GPCIs for a relatively low cost area, North Carolina, to a high cost area, Los Angeles. Here is a comparison of the adjustments:

Table 2.

<table>
<thead>
<tr>
<th>Service</th>
<th>Work</th>
<th>PE</th>
<th>PLI</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Carolina</td>
<td>1.000</td>
<td>0.9270</td>
<td>0.6950</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>1.0360</td>
<td>1.1540</td>
<td>0.6420</td>
</tr>
</tbody>
</table>

Now take the GPCIs for your location and then multiply the Medicare RVU by its GPCI adjustment and sum that up for the total GPCI RVU. Then multiply it by the conversion factor for the payment rate for that location.

Table 3.

<table>
<thead>
<tr>
<th>Service</th>
<th>Total NF/ F RVU**</th>
<th>NF Payment</th>
<th>F Payment</th>
<th>Total NF/ F RVU**</th>
<th>NF Payment</th>
<th>F Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>99204 (new patient including new consult)</td>
<td>4.64 / 3.64-</td>
<td>$157.82</td>
<td>$123.75</td>
<td>5.21 / 3.96</td>
<td>$177.14</td>
<td>$134.74</td>
</tr>
<tr>
<td>99214</td>
<td>2.99 / 2.17</td>
<td>$101.65</td>
<td>$73.90</td>
<td>3.38 / 2.37</td>
<td>$115.13</td>
<td>$80.58</td>
</tr>
<tr>
<td>99222 (initial hospital day moderate)</td>
<td>3.80</td>
<td>$94.00</td>
<td>4.14</td>
<td></td>
<td>$96.80</td>
<td></td>
</tr>
<tr>
<td>50200</td>
<td>16.66 / 4.03</td>
<td>$606.97</td>
<td>$143.58</td>
<td>20.12 / 4.40</td>
<td>$684.48</td>
<td>$149.73</td>
</tr>
</tbody>
</table>

Federal Affairs Update - Pediatric Nephrologists: 
Sign Up for Medicaid Payment Increase

The Affordable Care Act includes a historic investment to expand access to Medicaid for children, and we want to make sure you know about it. As of January 1, Medicaid payment rates are raised to at least Medicare rates for primary care and immunization services.

An American Academy of Pediatrics (AAP) analysis of billing data estimates that pediatric nephrologists stand to receive an average 44.8 percent increase in Medicaid revenue as a result of the increase. But you must sign up with your state to receive these increased payments.

Board-certified pediatric nephrologists (certified by the American Board of Pediatrics) automatically qualify for the payment increase. However, eligible pediatricians must sign up to receive it. States may have their own reasonable deadlines for pediatricians to sign up (“self-attest”) for the increase, and many of these deadlines are happening within the next month. Pediatric nephrologists who are not board certified by ABP can also be eligible and self-attest if at least 60% of their Medicaid services for the previous year are for the primary care services specified for the payment increase.

There is still time for you to apply. If a pediatrician signs up by the state's deadline, the Medicaid payment increase will be retroactive to January 1. Pediatricians and other eligible physicians who apply after a state's deadline will still receive the increase in payment moving forward; it just will not be retroactive to the beginning of the year. For this reason, all eligible pediatricians are encouraged to sign up as soon as possible.

The increase applies to E/M and immunization services and runs from 2013-2014. The Academy will aim to extend the provision into a permanent investment in children's health.

Sign up to receive the increased payments

1. Sign up for the increased payments with your state. Visit [www.aap.org/medicaidpaymentincrease](http://www.aap.org/medicaidpaymentincrease) for an interactive chart that includes state self-attestation forms and other resources on where your state stands.

2. If your state does not yet have a form or other means for you to apply, contact your [state AAP chapter’s executive director](mailto:stateAAPchapter@executiveoffice) or [speak to your state Medicaid office](mailto:speaktostateMedicaidoffice) to learn of your state’s plans for implementing the payment increase and how to sign up as soon as possible.

Questions?

If you have questions on how the increase will take effect in your state, please do not hesitate to contact the AAP Division of State Government Affairs at stgov@aap.org or (800) 433-9016 ext. 7799. Learn more about the payment increase at [www.aap.org/medicaidpaymentincrease](http://www.aap.org/medicaidpaymentincrease). We’ll include updated fact sheets, a state specific status chart and other resources/articles here.

If you have questions about subspecialty eligibility for the increase, please contact James Baumberger in the AAP Department of Federal Affairs at [jbaumberger@aap.org](mailto:jbaumberger@aap.org).
Upcoming Meetings

NKF 2013 Spring Clinical Meetings
April 2-6, 2013
Orlando, FL

Pediatric Academic Societies Meeting
May 4-7, 2013
Washington, DC
http://www.pas-meeting.org/2013DC/Schedule/Program_Information.asp

ISN World Conference of Nephrology 2013
May 31, 2013 - June 4, 2013
http://www.wcn2013.org/

Moving Beyond Pediatric Incontinence - The Challenges of Transitional Care
June 6-8, 2013
Toronto, Canada
http://www.cepd.utoronto.ca/bpi/

International Workshop on Developmental Nephrology
June 24-26, 2013
Edinburgh, Scotland
http://www.ipna-online.org/iwdn/

16th Tri-Annual IPNA Congress
August 31–September 4, 2013
Shanghai, China
http://www.ipna-online.org/2012/03/ipna-congress-2013-shanghai/

AAP National Conference and Exhibition
October 26-29, 2013
Orlando, FL
http://www.aapexperience.org/

Kidney Week 2013
November 5-10, 2013
Atlanta, GA
http://www.asn-online.org/education/kidneyweek/

Pediatric Academic Societies Meeting
May 3-6, 2014
Vancouver, Canada
http://www.pas-meeting.org/2013DC/future_meetings.asp
Volunteers Needed

One of the goals of the Executive Committee is to increase its level of communication with and participation of Section members. As a result, we are currently looking for members who might be interested in serving to:

- Contribute to the Section Newsletter or assist in identifying members and content for future newsletter articles.
- Review existing or develop new articles directed at parents for the Academy's parent website at http://www.healthychildren.org/english/health-issues/conditions/genitourinary-tract/Pages/default.aspx
- Write an article for the Focus on Subspecialties column in AAP News regarding pediatric nephrology topics. Examples of past articles can be accessed at: http://www2.aap.org/sections/nephrology/Focsubspecarticles.htm
- Participate in the Section Nominations Committee. The Committee is responsible for identifying candidates to serve on the Section on Nephrology Executive Committee and creating the election ballot. Individuals serve for two years or two election cycles.
- Participate on the Henry Barnett Awards Committee. Individuals serve a two year term.

Please contact Suzanne Kirkwood at skirkwood@aap.org if you are interested in serving in any of the above positions or have additional questions.