

To Fellow Pediatric Caregivers at Hot Topics IN PEDIATRICS – 2017

Our third annual HTP17 is in the books and I hope you all enjoyed it and got home safely!

Whenever I go to a medical conference, I take illegible notes of each talk and later share some of the pearls with my colleagues back home (who cover my patients while I am away). Perhaps they are humoring me, but they seem to find it helpful. This year I typed (ok I cannot type – I dictated using dragon) my notes and thought I would also share them with our valued attendees.

Obviously, some pearls for me will be just a “duh, I already know that” for many of you and some topics I left out may have been your most valuable take home messages! Remember, the slides for the talks are all available for 3 months at [http:// www.nemconfsyllabus.com/HTP2017.html](http://www.nemconfsyllabus.com/HTP2017.html) password: htpmickey

Any errors in these notes are certainly my fault and not the speakers. None of the speakers have seen or vetted these notes! Disclaimer: *always fact check each piece of medical advice and follow the standards of medical practice in your community.*

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G** THESE POINTS AND PEARLS ARE ROUGHLY IN ORDER OF THE CONFERENCE BUT DO GET A BIT RANDOM, SOMETHIMES BIZARRELY SO – ESPECIALLY WHEN THROWING IN SOME OF DR. STOCKMAN'S CASES AND PEARLS!

To best minimize renal scarring with febrile UTIs in young children, start the antibiotics within 48 hours. Bacteria without pyuria is insufficient to diagnose a UTI. So... we always need a urinalysis to go with the urine culture to diagnose a UTI. ALWAYS

While the NCAA requires sickle cell trait testing for all college athletes, the Sickle Cell Disease Association, the HHS and the American Society of Hematology *does not agree with this at all*. Sickle cell trait is NOT a common cause of sudden death in athletes. The goal should be to

reduce the risk of exertion related rhabdomyolysis for ALL athletes by insuring proper rest and access to hydration fluids, plus following heat guidelines. Sickle cell trait does not affect acceptance to the service academies. (*Editor's Note: - spinning classes are also associated with dangerous rhabdomyolysis*)

Consider tonsillectomy to cure ANY age child with fever episodes lasting a few days with clockwork periodicity while completely fine in between even if there are no other symptoms (so for PFAPA and incomplete PFAPA).

Per the LEAP study –YES introduce peanut products by six months for babies with mild eczema. IF severe eczema, maybe closer to 4 months, after allergy testing (*Editor's Note: – I send ALL babies with SEVERE eczema to the pediatric allergist first before peanut introduction. When intro the peanut product at home – never as the first solid, and give a wee bit first and wait 10 minutes until more. Pretty much ALL my babies get peanut products by 6-7 months now.*)

Per the EAT study, early intro of egg products may reduce egg allergy by 65% (*Editor's Note: give baked egg first THEN scrambled later. The EAT study numbers were too small to comment on early sesame, wheat and whitefish intro but likely makes sense there too.*) (*Editor's Note: Redux: I am not wasting precious whitefish on an infant, plus it is so salty!*)

With prolonged fever, a normal ESR and CRP is very reassuring. Use 100.4 F or 38 C as fever no matter what the method! And for parents who say their child and whole family “run cold” so 99.5 is a major fever – please – really?

There is a whole group of uncommon inflammasomopathies, including FMF, that have a genetic mutation causing fevers. They are sometimes treated with anti -Interleukins.

The MMWR is the Bible of emerging diseases.

Most emerging diseases are established zoonoses and are NOT caused by new organisms or sudden dangerous mutations of existing organisms. Rather, they are existing pathogens they gain access to new subjects or populations – like Zika did.

Zika hopefully is burning itself out so, as with many of these emerging diseases, the vaccine may not be needed. (*Editor's Note: sexual transmission of the Zika virus, especially its longer survival in semen and vaginal epithelium, is a scary twist to me.*)



While the meningococcal type B vaccine has only a B recommendation, versus the more established meningococcal ACWY vaccine with an A rec, **Men B accounts for 50% of new cases so the Men B vaccine is just as important!**

We are starting to see some herd immunity in the HPV vaccine where, if a certain threshold of girls gets the vaccine, the rate in the boys is going down even if their immunization rates are not as high.

Children do not get vaginal yeast infections! Vulvovaginitis can be treated with sitz baths using just water, as well as good hygiene and cotton underwear. Consider a bacterial culture for vaginal discharge that's persistent. Always consider a vaginal foreign body. (Like an entire Polly Pocket doll OR Barbie shoe OR the top of a lava lamp – but toilet paper is by far # 1)

If you can get a tampon in but not out, rule out a septate hymen.

If you can't get a tampon in at all in a teen who does menstruate, consider a micro perforate hymen.

LARCs are by far the most effective method of birth control. (*Editor's Note: but abstinence beats all!*)

Labial adhesions can be treated with betamethasone 0.05% ointment until open and then continue with emollients like Aquaphor, sometimes until puberty, to prevent recurrence. The old standard of using estrogen creams may not be worth the side effects.

Suspect endometriosis with severe cyclical or chronic pelvic pain that is more than just menstrual cramping. The earlier the diagnosis the better the prevention of life long-suffering.

Refer if menses are greater than three months apart.

Know your age of consent in your state. In Delaware, it is 12 (!)



Fluoride varnish inhibits tooth demineralization, enhances remineralization and inhibits bacteria.

It reduces child cavities by 30 to 35%.

The first sign of cavities in children is usually a white spot or line at the gum line, as opposed to fluorosis which are white spots on multiple areas of the teeth. These early cavities progress to brown cavities. (*Editor's Note: Fluoride varnish twice a year does NOT cause fluorosis*)

Child cavities most common in the upper incisors THEN in the first molars of the mandible and then the maxillary molars. Lower incisors the least since they are the most protected by saliva.

The Smiles For Life Curriculum Course 6

<http://www.smilesforlifeoralhealth.org/buildcontent.aspx?tut=584&pagekey=64563&cbreceipt=0> is a great way to learn about fluoride varnishing. Fluoride varnish is recommended by USPSTF and the AAP agrees. The goal is always to get them into a dental medical home. The Fluoride varnish CPT code is 99188. All state Medicaid except Indiana covers varnish twice a year. Delaware Medicaid pays \$21.75. In one area, private insurers pay from zero to \$18. Some ped caregivers charge what Medicaid pays upfront for privately insured and let parents submit to insurance themselves or use their health savings account.

Fluoride varnish single doses 0.25 ML 5% NaF cost \$1.52 to \$1.90 per dose. One such is D-Lish from Darby Dental Supply, Memphis Tennessee. (*Editor's Note: – Vanilla Cupcake flavor a favorite*).

Photo screening is recommended yearly from age one until they can do the Snellen at four or five. Also good for some children with cognitive delay, hyperactivity, language barriers, or extreme shyness.

Spot Vision by Welch Allen can cost about \$6,000 with a five-year warranty. The Go-Check Vision cost about \$100 per month per device.

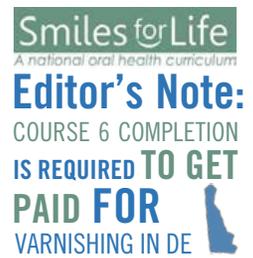
CPT code 99177 for the instrument-based and 99174 for the Go Check, the latter includes remote ophthalmology analysis backup Reimbursement has been about \$ 8 - 10 for Medicaid and 0 to 38 bucks for private insurance. Some privates claim that it's already bundled in.

The US Caesarean Section rate was 5% in 1970 and 32% in 2013. Some studies show the sweet spot for the lowest maternal and infant mortality would a rate of about 19%. In OB private clinics in Rio de Janeiro, Brazil, the C-section rates approach 92%!!!!

The new pegylated Factor VIII for hemophilia has a 50% increased half-life - in the future, there may be weekly routine prophylaxis starting in early childhood.

Exposure to 100 dB sound levels, which is typical at a loud rock concert or when using earbuds at maximum levels, **will decrease hearing after just 15 minutes.** One solution is wearing earplugs or new-hi-fidelity earplugs at concerts.

There's also the 80/90 rule for teens. Listen to iPod like device 80% of max volume (about 90 decibels) a maximum of 90



minutes per day max. Newer noise isolating earphones in noisy environments can also reduce the decibel pounding on teen eardrums.

One study showed diluted apple juice to work even better than oral rehydration fluid for rehydration of diarrheal illness, likely because the ORT is so unpalatable for some children. Also, early ondansetron (generic Zofran) and even early yogurt can be helpful for vomiting and diarrhea. There is no objective evidence that that probiotics help! (*Editor's Note: Yes, a study was done, but dilute apple juice still not a first choice in diarrhea and, if prolonged, cutting back on dairy still makes sense to me!*)

Psychiatry has the lowest risk of recurrence of malpractice claim of all medical specialties. Pediatrics is the second lowest. Internal Medicine is the highest. (*Editor's Note: where does that leave Med/Peds?*)

Abraham Lincoln was a medical malpractice lawyer. He termed the phrase “wouldn't have a leg to stand on”. In THAT case, he defended the docs.

The United States Preventative Services Task Force (USPSTF) 2016 statement DOES NOT support screening for lipids in children under age 20. They cite a lack of evidence of effectiveness. The UK also does not recommend this screening. However, the NHLBI National Heart and Lung and Blood Institute (NHLBI) DOES support screening all between 9 and 11 years and again between 17 and 21 years. As we know, so does the American Academy of Pediatrics. Most pediatric caregivers in the US DO NOT do this. (*Editor's Note: I do not routinely do this in the younger ages unless there are risk factors - perhaps that will be a good subject for a Hot Controversies next year!*)

Morning nausea in a teen (who is not pregnant!) that lessens over the day is almost always a manifestation of an anxiety disorder. It coincides with the natural peak of cortisol in the morning. It often is accompanied by a headache and early satiety.

Eosinophilic esophagitis causes dysphagia and can mimic reflux – it is diagnosed by endoscopy. Besides steroids and diet changes, Montelukast (Singulair) can often help.

Iberogast (which is a combination of nine herbs) has shown promise for functional dyspepsia. As has acupuncture and Relief Wristbands.

Stool Calprotectin and ESR are excellent screens for inflammatory bowel disease. (*Editor's Note: my practice has picked up multiple children with Crohn's disease with an elevated stool calprotectin despite normal ESR/CRPs and no blood in the stool. I love the stool calprotectin test!. Unfortunately sometimes the insurance coverage of this test is spotty.*)

Babies 1 to 3 months of age cry about two hours a day and 4 - 6 months olds at least an hour a day. Probiotics may help with colic.

Spitting up is common in young babies - GE reflux is usually NOT the cause. Before reaching for antacids, avoid the seated position in babies and make sure they are not overfed (even in breastfed babies) AND that there's no smoking exposure. **Also, change the formula to hydrolysate ones or have the breast-feeding mother stop all dairy BEFORE trying reflux medication.** Lactose-free formula rarely helps since lactase deficiency very uncommon in babies!

PPIs were ineffective in multiple studies in babies but it's use has gone way up. PPI risks include fractures and increased infections like C. difficile and pulmonary. In adults, PPIs have been linked to dementia and early death.

If use PPIs more than two or three months in a row on anyone and decide to stop you MUST wean off slowly to avoid rebound hypersecretion.

There's been a four-fold increase in the incidence of dogs with marijuana intoxication in Colorado since recreational pop was legalized. Two dogs died.

Catechins in green tea may improve cognitive function in Alzheimer's and Down syndrome.

Early introduction of glutes DOES NOT prevent later celiac disease. There is no window of tolerance. Breastfeeding also does not seem to affect the chance of getting celiac disease.

The incidence of celiac in the sibling of a celiac child is 15%. It is 85% in an identical twin. In evaluating high risk children, if an HLA-DQ2 and HLA-DQ8 are both negative, it virtually excludes the possibility of celiac disease ever. If one or both are positive, you can do a celiac IGA TTG test every 2 to 3 years.

Cannabinoid Hyperemesis Syndrome CHS can affect regular users of marijuana with early morning nausea initially, and then the hyper-vomiting stage. Those affected will have normal gastric emptying, as compared to cyclic vomiting syndrome where it will be delayed. **A very specific history point in CHS is that hot showers or baths seem to give some relief.** Recovery from CHS can take weeks or months after stopping cannabis – it is often misdiagnosed for a long time.

Pediatric patients with chronic pain syndromes often have Type A personalities and are high achievers, more often female. Pain can be in one limb or all over and there is often headaches, fatigue, and/or abdominal pain. Remember the mind-body connection and that physical therapy is key. Minimize discussing the pain during treatment.

Epilepsy is two or more Unprovoked seizures. After a first unprovoked general seizure, a good history and physical and EEG is usually all that's needed. If it's a focal seizure, then also consider an MRI

Absence seizures starts after age 4 and is not just staring – **there is a COMPLETE behavioral arrest.**

Most breath holding spells are benign and need reassurance, but if particularly striking get an EKG to rule out prolonged QT syndrome and an EEG if there is a particularly prolonged loss of consciousness. Stereotypies of headbanging, hand flapping, rocking, or nodding, especially when excited, is completely normal.

Consider prescribing Diastat for seizures (even if febrile) if the seizure is longer than five minutes OR if the child lives in an isolated or rural area.

Tics peak at 11 to 13 years, male more than female. It really is frontal lobe disinhibition so there is also increased risk of ADHD, OCD and anxiety. Cognitive Behavioral Intervention for Tics (CBIT) Habit reversal therapy can really help.

To prevent migraine headaches, consume weight in pounds ounces of fluid daily (max 100 oz. per day) Exercising five times a week and, of course, good sleep hygiene, are also key.

A written headache prevention and treatment plan helps! The acute treatment plan may include:

1. Ibuprofen 10/kg (but no more than 15 days a month to avoid medication headache).
2. Ten to twelve ounces Gatorade or PowerAde right away (but not G2 or propel and avoid artificial sweeteners)
3. A triptan - nasal sumatriptan is a good choice. Can use up to twice a week.

Riboflavin Vitamin B2 200 - 400 mg per day for migraine prevention, can take it forever. It can turn your urine orange. Consider the CBT therapy for migraine

To prevent Developmental Dysplasia of the Hip (DDH), Hip US at 4-6 weeks for risk factors especially breech in the third trimester. Later in infancy, the Ortalani and Barlow not as sensitive as decreased abduction of the hips. (*Editor's Note: DDH can develop LATER in infancy and early hip US does not r/o later DDH - unilateral toe walking should also make you think of DDH. Missed DDH is a top pediatric malpractice claim. Document hip exams well and include exam of gait when older!*)

Unilateral hearing loss hurts language development. Hearing from just one functioning ear is not good enough!

Any hearing loss in newborns MUST be confirmed with ABR and interventions started before six months of age. Also, genetic consults for all of them.

Newer protocols require a CMV PCR tests on ANY young infant with decreased hearing including appropriate infectious disease consult when positive.

Variable strabismus is NOT normal after four months of age.

Two common congenital strabismus syndromes:

1. Duane syndrome where the upper lid retracts and that eye turns in when move side to side. (in pure 6th nerve palsy there is no retraction of lid)
2. Brown syndrome which is the inability to elevate the affected eye when it is adducted

Early IV fluids DECREASES the risk of renal failure in hemolytic uremic syndrome.

The FODMAP diet stands for Fermentable Oligosaccharide Disaccharide Monosaccharide and Polyols. IF trying this diet for G.I. issues then no lactose, fructose, fructans, galactans, and polyols (like sorbitol in sugarless gum). Really requires a nutritionist to assist.

Flag football has way less serious injuries than tackle football BUT more injuries overall, mostly minor finger injuries.

College football was brutal and lethal in the old days. **Between 1900 – 1905, 45 college football players died from acute injuries playing football.** Rule changes and Teddy Roosevelt saved the sport back then.

The composer Friedrich Chopin may have had cystic fibrosis.

Canadians with cystic fibrosis have a 44% lower risk of death than US citizens with cystic fibrosis. An average Canadian with CF live about 10 years longer, to about age 50. The difference is mostly in US patients with Medicaid. No difference with CF and US private insurance. Access to lung transplant a big factor.

Do not irrigate ear canals to remove wax if the child has had a tube in that eardrum within the last 18 months. (*Editor's Note: For MUCH more on earwax, see Podcast Pediatricians on iTunes or podcastpediatricians.com episode 13: Earwax is Lit.*)

Cognitive delay/intellectual disability increases the risk of excessive earwax.

Total sugars are naturally occurring sugars in an edible product. Added sugars are those used in processed foods or added separately. Most common added sugars are sucrose or high fructose corn syrup.

Added sugar increases cardiovascular disease risk. Children under two should not get ANY added sugars. Older children should get no more than 25 g per day, which is 6 teaspoons of sugar. (*Editor's Note: In the 1960's Big Sugar bribed their way into not sharing blame for heart disease risk along with fat/cholesterol. The truth was always out there*)

Salt intake per day in adults should be less than 1500 mg, but most Americans get over 3400 mg of salt per day. The amount of salt in lasagna in a popular restaurant chain was over 2500mg, way more than in large French fries (154mg) OR a quarter pounder (730mg) at McDonald's.

The six most common high salt foods are:

- bread and rolls
 - cold cuts/cured meats
 - pizza
 - poultry
 - soup
 - sandwiches
- *Giraffes are cool*



Three types of orthostatic intolerance:

1. **Neurally mediated syncope**, which includes vasovagal and breath holding. 1-6% hospital admits, 1% of ED VISITS—Cost billions/year!
2. POTS postural orthostatic tachycardia
3. Orthotic hypotension from neurogenic conditions like Parkinson's

Syncope is abrupt, with a loss of consciousness and decreased tone. It may have a prodrome of pallor, sweating, nausea, abdominal discomfort, yawning and/or sighing. There may be hyperventilating and a change in vision and/or hearing. A good history and PE is usually all that's needed, plus an EKG.

Syncope triggers can include pain, emotions, post exercise, swallowing, defecation, coughing, sneezing laughing. Try to avoid triggers and hydrate.

PER the very droll British Professor Sutton: Tell patients who have predisposition to SYNCOPE that when they feel it coming on to sit or lay down, AND do isometric exercise like linking their hands and pulling them apart. OR tightening legs against each other while sitting. The reverse Trendelenburg position helps, but avoid if wearing a skirt.

Avoid beta blockers in kids for syncope.

Think of POTS if heart rate goes up over 30 when standing with no significant change in blood pressure. POTS patients often slender females that appear sick and have some anxiety. Dizziness may be constant, also breathing issues, chest pain, palpitations, Abd pain and fatigue. (*Editor's Note: – that is a pretty broad range of symptoms! Many kids diagnosed as POTS around me end up at CHOP or MAYO for extended periods. I think POTS would deserve its own lecture next time– perhaps by a neurologist since they often seem to have a different take/approach than cardiology!*)

Up to 25% of adult with POTS can become disabled. School-age kids diagnosed with POTS often end up homebound schooled for a time. POTS is associated with median arcuate ligament syndrome, Autoimmune diseases, Ehlers Danlos, eating disorders AND acute deconditioning.

Neuropathic POTS is the most common subtype and they often have purplish hue to legs upon standing. Treatment can include Ted hose, leg elevation, increased water and salt PLUS, again, EXERCISE.

Hyperadrenergic POTS have high baseline heart rates that rise sometimes to 130-180 without hypotension. They can be jittery and look pale/pasty and have increased sympathetic nerve activity (may have high serum NE).

OK there was a talk on reading EKGs. (*Editor's Note: HATE reading EKGs, and, also, neonatal jaundice*)

Keep it simple stupid: Rate Rhythm Axis, P-wave for each QRS, ST & T wave changes.

ST and T-wave changes are often worrisome.

Pericarditis is the most common cardiac ideology of chest pain in pediatrics.

Garlic breath DOES NOT result from having garlic in your mouth. The garlic odor is in the exhaled air from your lungs after the garlic is metabolized in the gut and gets to the lungs through the bloodstream. Certain foods can blunt this garlic being metabolized to the lungs – they include fresh apples and lettuce. That's why you do not get much garlic breath after eating a Caesar salad.

OK lastly, but importantly, my quick review of Disney World Rides 2017. Been coming here since 1973.

The Magic Kingdom retains its magic and nothing beats the light and firework show from Main Street. This year Moana was added, in all her glory. The Haunted Mansion holds its charms 44 years later.

Ellen's Energy Adventure in Epcot closed August 13. I went on this ridiculous & cheesy half hour ride one last time. It starred Ellen DeGeneres, Alex Trebek, and Jamie Lee Curtis plus a cameo by Kramer from Seinfeld. So awful that it's good. Looking forward to the Guardian of the Galaxy rides that will replace it!

The Great Movie Ride also closed August 13th, which is a travesty! This wonderful animatronic classic movie tour of the Wizard of Oz, Alien, Casablanca, Mary Poppins and many more is now gone, forever. Arrgh

Lastly, the Pandora World of Avatar is great, especially if you're into horticulture. It is even more magical at night. The River journey was a bit of a snooze, but the Flight of Passage is awesome, especially if you get the fast pass, which somehow, we did. (No ride is worth 150 minutes on line!) However, if this is supposed to be the Disney answer to Harry Potter's World of Wizardry, it falls way short. BUT the new Star Wars themed land under construction at Hollywood Studios should be spectacular.

See you July 26th – 28th, 2018 back at Disney's Grand Floridian for HTP 2018!

Please send your comments and suggestions to admin@hottopicsinpediatrics.org! Hope you got some flu vaccines in your offices by now!

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Hot Topics in Pediatrics