Scholarly and Community Health Projects
from the Class of 2014
Vitamin A Supplementation in Countries with Endemic Deficiency and Impact on Maternal Mortality -- Vitamin A deficiency is an important public health issue in low-income countries. Supplementation is known to improve all-cause mortality in young children. The WHO currently recommends supplementation during pregnancy and lactation in areas of endemic deficiency (where night blindness occurs). Only recently has the effect of vitamin A supplementation on maternal mortality been more closely examined after a study in rural Nepal found a 44% reduction in maternal mortality. Review of current literature which is summarized as a Help Desk Answer for the Family Practice Interest Network (submitted for publication) showed that vitamin A or beta-carotene supplementation during pregnancy in areas of endemic deficiency does not appear to improve maternal mortality. There is good evidence to suggest reduction in maternal anemia and night blindness.

Haiti Orphanage Health Outreach

Scholarly Project:
Vitamin A Supplementation in Countries with Endemic Deficiency and Impact on Maternal Mortality -- Vitamin A deficiency is an important public health issue in low-income countries. Supplementation is known to improve all-cause mortality in young children. The WHO currently recommends supplementation during pregnancy and lactation in areas of endemic deficiency (where night blindness occurs). Only recently has the effect of vitamin A supplementation on maternal mortality been more closely examined after a study in rural Nepal found a 44% reduction in maternal mortality. Review of current literature which is summarized as a Help Desk Answer for the Family Practice Interest Network (submitted for publication) showed that vitamin A or beta-carotene supplementation during pregnancy in areas of endemic deficiency does not appear to improve maternal mortality. There is good evidence to suggest reduction in maternal anemia and night blindness.

I couldn’t ask for better family, friends and colleagues to surround me during the last three years. Thank you for your unconditional support and mentoring. You are all amazing!

– Karina
Haiti Orphanage Health Outreach

My Community Health project was inspired by my time in the small mountain community of Fond Blanc, Haiti as part of my Global Health Pathway rotations. My husband’s non-profit started working in partnership with an orphanage there in early 2013. Their focus has been on construction of a new church and improving the well being of the approximately 50 children living and going to school there. I first traveled to Fond Blanc in July 2013 to spend time at a nearby clinic and start identifying potential areas where I could contribute at the orphanage.

It was evident early on that there was no system for routine well-child care or record keeping. It was also unclear how these children were faring in regards to nutrition, disease prevalence, education and other outcomes compared to the surrounding community and countrywide statistics. In preparation for my trip I audited a Global Health Principles course through UW that required me to create a detailed country profile summarizing much of this data. My background research, along with my exposure at the clinic helping with primary care and their malnutrition program provided a great context to start framing my approach to projects at the orphanage.

I decided to focus my community health project on creating systems for monitoring the health of the children within the orphanage and providing basic care given the lack of easy access to a formal clinic or trained staff. I organized “clinic afternoons” during which our team collected height, weight and arm circumference measures, as well as pictures and brief social and medical histories of the children. With this information I created an orphanage record for each child to continue logging their growth and any major events in their lives. The children were also started on a biannual de-worming schedule given the high prevalence of intestinal worms and parasites in the area.

I hoped to use this base of information to start comparing the children at the orphanage to both WHO growth charts and to Haiti statistics. This proved difficult because we realized early on that getting accurate information, specifically about ages was difficult. Many of the children clinically appeared well, but would plot far off of the curve for their reported ages. Unfortunately, better records are hard to come by and still a work in progress. While the children are generally smaller than WHO standards, they fare much better than the surrounding community that suffers from high rates of severe child malnutrition and secondary disease. There were only a few children with concerning clinical findings for which we were able to start arranging follow-up care. The majority of concerns were quite basic-fungal skin infections, viral URIs, headaches and other common pediatric problems. I used these observations to organize a kit of high-yield medications and other health supplies that could be easily restocked, along with instructions in English and Haitian Creole for the long-term adult staff to utilize.
My work in Haiti thus far is just the beginning of a much longer commitment to the orphanage and community of Fond Blanc. The brief five weeks I spent there over the last year was only enough time to scratch the surface of understanding this beautiful, but struggling culture. My husband’s organization is currently establishing full-time staff at the orphanage to oversee the beginning stages of larger community collaboration and outreach. This will allow for consistency in the projects already underway and fostering of deeper relationships with our Haitian colleague to ensure we remain aligned with their visions. My long-term goals include expanded malnutrition and primary care outreach based on, and possibly collaborating with, existing successful models already on the ground in Haiti. Many of these projects combine public health with education initiatives, which happen to be a high priority of my husband’s foundation. We began the initial stages of networking around these areas on our most recent trip in March and are excited to continue brainstorming what this might look like in Fond Blanc. I am eager to continue my involvement in these efforts as I move into the next stage of my career and life after residency.
A Family Practice Inquiry Network (FPIN)

Help Desk Answer: “What is the evidence for pelvic floor rehabilitation during and after pregnancy in the prevention of stress urinary incontinence?”  -- Pelvic floor muscle therapy (PFMT) is effective for preventing and treating urinary incontinence (UI), especially if initiated during pregnancy (SOR: A, systematic reviews). PFMT started in the post-partum period may not have an effect on urinary incontinence (UI) in primiparous women evaluated after six months (SOR: B, based on a single high-quality RCT). There is minimal risk involved in PFMT as a treatment for UI.

Community Health Project:
Advance Care Planning Promotion at Northeast Clinic

Scholarly Project:
A Family Practice Inquiry Network (FPIN) Help Desk Answer: “What is the evidence for pelvic floor rehabilitation during and after pregnancy in the prevention of stress urinary incontinence?”  -- Pelvic floor muscle therapy (PFMT) is effective for preventing and treating urinary incontinence (UI), especially if initiated during pregnancy (SOR: A, systematic reviews). PFMT started in the post-partum period may not have an effect on urinary incontinence (UI) in primiparous women evaluated after six months (SOR: B, based on a single high-quality RCT). There is minimal risk involved in PFMT as a treatment for UI.

Many thanks to my family, friends and co-residents for all their support during residency, and to Irene Hamrick for her enthusiasm and mentorship in geriatrics!

— Ann

Ann Barry Braus returned to Madison after earning her B.A. in Biology from Carleton College in Northfield, Minnesota, and her medical degree from the University of Rochester School of Medicine and Dentistry. She has served as a volunteer lab assistant in Tanzania, an English Language teaching assistant in France, and a resource educator at the OHSU Salvation Army in Portland, OR. During medical school, Ann discovered that she enjoyed working with patients of all ages, especially the elderly. After graduating from her Family Medicine residency with UW Madison this summer, she will continue with a one-year UW Geriatrics fellowship. Outside of work, Ann and her husband Nick enjoy traveling and just about any activity that will keep them busy outdoors, including hiking, backpacking, cycling, snowshoeing and skiing. They look forward to sharing these activities with their new daughter, Nora!
Title: Advance Care Planning Promotion at Northeast Family Medicine

Background:

In Wisconsin, an important component of Advance Care Planning is the patient’s selection of a Power of Attorney for Health Care (POAHC) and completion of the POAHC form. Unfortunately, completion rates of these forms are low and even if completed, they are not commonly accessible in patients’ electronic medical records. Lack of a POAHC may hinder the provision of medical treatment that is in line with a patient’s wishes in the event that they become incapacitated and unable to make their own medical decisions. In November 2012, only 6.4% of patients over 65 years old at Northeast Family Medicine clinic had POAHC forms completed and uploaded in their charts, and among adults over 18 years old the completion rate was only 1.5%.

Objectives:

The goals of this project were to:

1) Promote completion and accessibility of POAHC forms among patients >18 years old in the patient panels of Orange team providers at Northeast Family Medicine

2) Promote discussion of patients’ goals of care in the context of their health in order to better assure that their medical treatments are in line with their wishes

Methods:

I devised a clinic flow model which flagged the charts of all patients over age 18 who were being seen for a routine physical exam with an Orange team provider. At check-in, these patients were handed a copy of the Wisconsin POAHC form along with an informational cover sheet which explained the importance of the POAHC form and how to complete it. If patients did not already have a POAHC form uploaded in their electronic medical record, the visit providers were encouraged to take several minutes during the visit to explain the form and encourage patients to complete one and return a copy to Northeast clinic to be scanned into their electronic medical record.

With the help of Dr. Wen-Jan Tuan, database administrator for the Population and Health Sciences Dept, I was able to obtain monthly data on the number of patients in
each Orange team provider's panel who were over age 18 and had a POAHC form on file in their electronic medical record.

**Results:**

The following data show the number of patients over the age of 18 in each Orange team provider’s panel with a POAHC form on file in their electronic medical record compared over the 11 month period during which we implemented this project:

<table>
<thead>
<tr>
<th>Provider</th>
<th>5/22/13</th>
<th>4/22/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ann Braus, MD</td>
<td>12</td>
<td>23</td>
</tr>
<tr>
<td>Russ Lemmon, DO</td>
<td>27</td>
<td>47</td>
</tr>
<tr>
<td>Sarina Schrager, MD</td>
<td>45</td>
<td>50</td>
</tr>
<tr>
<td>Zachary Thurman, MD</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>JoAnn Wagner-Novak, NP</td>
<td>17</td>
<td>16</td>
</tr>
</tbody>
</table>

This doesn’t take into account changes in panel size for each provider but the overall trend was an increase in the number of POAHC forms available in the electronic medical records.

**Conclusions:**

Emphasis on promoting Advance Care Planning at routine preventive care visits can increase the completion of advance directives such as the Wisconsin Power of Attorney for Health Care form. However, simply completing a POAHC form does not necessarily ensure that the designated POAHC will feel comfortable representing a patient’s wishes. Thus, I am also in the process of implementing the Honoring Choices program at Northeast Clinic (an initiative sponsored by the Wisconsin Medical Society). We will be one of several UWMF sites that has a trained Advance Care Planning clinic representative who can meet with patients to:

- Help patients clarify their wishes regarding medical treatments, especially near the end of life
- Aid in completion of POAHC forms and other Advance Care Planning documents
- Facilitate discussions with patients’ designated POAHCs to better communicate their goals of care

In Family Medicine, we are privileged to have continuity with our patients and are in a unique position to help them navigate their medical care throughout all phases of life. Thoughtful Advance Care Planning can have a significant impact upon the quality of life that our patients experience and I hope that we can continue to value this component of primary care at Northeast clinic.
Acknowledgements:

Many thanks to all of the faculty and staff at Northeast clinic who have expressed enthusiasm for this project, including Lou Sanner, Jennifer Edgoose, JoAnn Wagner-Novak, Jean Skinner, Christina Lightbourn and Olga Arrufat-Tobon. Thanks also to Irene Hamrick for her mentorship during my residency, and to Wen-Jan Tuan for his help with the data mining and presentation.
Gender Equity in Ethiopia -- I traveled twice in residency to Addis Ababa, in Ethiopia, where I worked on a project investigating the experience of gender-based violence among women affiliated with the College of Health Sciences at Addis Ababa University (AAU). With my co-investigators, I helped draft a questionnaire that explored women’s experience of physical and sexual violence, as well as sexual harassment and discrimination, in their lifetime and during their tenure at the university. I am also an author of a paper describing the larger collaboration between the University of Wisconsin and Addis Ababa University to promote gender equity through a variety of mechanisms.

Wellness for Kids: Creating an Annual Wellness Day for Lake View Elementary School

Scholarly Project:

Gender Equity in Ethiopia -- I traveled twice in residency to Addis Ababa, in Ethiopia, where I worked on a project investigating the experience of gender-based violence among women affiliated with the College of Health Sciences at Addis Ababa University (AAU). With my co-investigators, I helped draft a questionnaire that explored women’s experience of physical and sexual violence, as well as sexual harassment and discrimination, in their lifetime and during their tenure at the university. I am also an author of a paper describing the larger collaboration between the University of Wisconsin and Addis Ababa University to promote gender equity through a variety of mechanisms.

Jamie Conniff grew up in Connecticut and earned his B.A. in History from Yale University. After spending a year doing research at University of Washington and the Children’s Hospital in Seattle, he traveled back east to attend medical school at Columbia University. There Jamie joined a student advocacy group that provides free and confidential HIV test counseling to anyone affiliated with Columbia University. The unique approach to preventing infection by establishing meaningful, two-way relationships with clients shaped Jamie’s approach to patient care and prevention. In addition to his academic and service interests, Jamie is an accomplished vocalist. At Columbia, he was a member of the Ultrasounds, a medical student a cappella group, and in college he was the first tenor and a manager for the world tour of the Whiffenpoofs of Yale, the nation’s oldest collegiate a cappella group.
Jamie Conniff

Title:
Wellness for Kids: Creating an Annual Wellness Day for Lake View Elementary School

Background:
Lake View is an elementary school in north Madison, four blocks from Northeast Clinic. Like Northeast, the kids there come from all kinds of families and backgrounds. Many have non-English speaking parents, and most grow up in homes where resources are limited; 65% of students qualify for free or reduced lunch. But Lake View benefits from energetic teachers and parents who are committed to helping their kids be healthy. Given their proximity and similarity in focus, a partnership between Northeast and Lake View to support that goal made sense.

Objectives:
Our project within the Northeast/Lake View partnership was to create an annual Wellness Day at Lake View, dedicated to introducing kids to all aspects of wellness – physical mental, and emotional. I worked as part of a team with two other residents and an attending, and together we created a list of activities for kids to rotate through, and then recruited community and department members to organize those activities.

Methods:
We began in 2012 by meeting with Lake View’s principal, Kristi Kloos, to get a better sense of what the school needed. With her guidance, we focused on Wellness Day, and then met frequently to develop ideas for what the day would look like. We created a schedule template, identified areas of health we wanted to emphasize, made a list of activities related to those areas, and recruited community members to assist in developing and organizing those activities.

Results:
We don’t yet have a way of measuring our impact on the health of Lake View’s students, but at the end of the day the students we spoke to had had fun. They’d learned about healthy eating; physical activity; the dangers of smoking; the squelchy wonders of human anatomy, thanks to buckets of organs loaned by the medical school; and had spent hours on their feet outside school walls.

Conclusions:
The ongoing theme as we developed and implemented this project was the importance of community members in creating something that was actually helpful to Lake View. Thanks to Kristi’s input and the hard work of teachers and parents, Wellness Day was successful; without them, we would not have known what Lake View’s kids needed, let alone how to put it together. Going forward, I think we could do a better job of measuring Wellness Day’s effects – putting together formal feedback on what worked and what didn’t, and maybe even developing a way to
measure the effect of Wellness Day on kids’ knowledge of healthy behaviors, to help us make the project fruitful in the long term.

Acknowledgements:
Thank you most of all to Sarina Schrager and Kristi Kloos, who helped to spearhead this project; also to Elizabeth Schaefer and Kelita Fox, my partners in 2013, and to Rachel Lee, who will I hope be carrying this project forward. Thanks to Sagar Shah, Christina Lightbourn, Olga Arrufat-Tobon and others at Northeast who donated time and energy, and thanks to Sam Sharp for her donating her yogi skills. And last, thanks to UW Health for providing funding for Bucky.
Elizabeth Fleming, MD was born in North Carolina, but grew up in Wisconsin. She earned her B.S. in Biology and Integrated Liberal Studies from UW-Madison and her medical degree from the Medical College of Wisconsin. Even though both her parents are family doctors, it was hearing the story of a breast cancer survivor in college that moved her toward a career in medicine. Family Medicine spoke to her because it affords the opportunity to bear witness to patient stories over time.

Liz excelled in the Medical Humanities Track at the Medical College of Wisconsin, and her description of working with her mentor earned her publication in the academic journal *Family Medicine*. Liz also sang with a medical student a cappella group, Chordae Hormonae, and served as a reviewer for the Student British Medical Journal. Along with singing, reading and writing, Liz enjoys being outdoors and exploring other cultures. She joined the Madison program with her husband, Matt Swedlund.

**Gratitude:**

Thank you to my incredible husband Matt, the best partner I could ever ask for.

Thank you to my beautiful son Charlie, who has taught me more about love and joy in these past few months than I thought possible.

Thank you to my dad, who is always there to listen and who taught me that “a day in clinic is like a day catching up with friends.”

Thank you to my most important mentor, my mom, who lives her life with such grace.

Thank you to my sister Sara, who is always there with a hug and a smile.

Thank you to the one who taught me: Be joyful in hope, patient in affliction, faithful in prayer.

— Liz

**Projects Completed During Residency:**

**Scholarly Project:**

A narrative essay published in the May 2014 issue of *Family Medicine*: “The Kumquat, and Other Words for Brain Tumor.”

**Community Health Project:**

Group Diabetes Visits at a Rural Free Clinic, a Community Medicine Project -- Community Connections Free Clinic was started by one of our graduates, Aaron Dunn, MD in Dodgeville, Wisconsin. The clinic staff identified difficulty providing the continuity of care we know is critical to chronic disease management because of variable staffing and the inherent complexity of working with uninsured patients. Tony Weston, MD and I led monthly group visits for 5-7 diabetes patients where we discussed pertinent topics and guided patients through medication and lifestyle interventions to improve their blood sugar control and overall health. I think the most remarkable outcome was how much the patients learned from one another.
The Kumquat and Other Words for Brain Tumor

Elizabeth A Fleming, MD

I arrived at work early Monday morning and hung up my scarf—a sweet reminder of a vacation with her last spring. As I slipped into my white coat I was struck by how comfortable it felt that morning, yellowed at the wrists and blackened in the breast pocket from uncapped pens. My white coat used to feel like armor, stiff and fortifying, but as a second-year resident it felt more like an extension of the doctor I am growing into.  

I had a new patient in the ICU that morning. He was transferred from the regular floor with intermittent hypotension and new abdominal pain. When I started my internal year, our program director told us that our first job was to recognize “sick” and stand alert like a pointer dog. I used to remind myself of this when we waded through the minutia of electrolyte imbalances and antibiotic sensitivities. This patient was sick. His intestines were leaking lactic acid, infarcting as the norepinephrine was being titrated. There was free air on his abdominal film.

That was the morning they told her the differential: metastasis, sarcoma, glioblastoma, pituitary adenoma. My dad called me during rounds to tell me they were back in the hospital. My mom was getting an MRI. She needed surgery. They needed me.

I wanted to sit still, paralyzed, but I finished rounding. I broke each patient into pertinent systems and addressed the relevant problems. I willed myself to feel numb, that familiar protective instinct that I swore I would never learn. The surgeon took my patient to the OR. I answered questions about sedation, antibiotic stewardship, and mechanical ventilator settings. I wrote potassium sliding scale orders. I wanted to talk with the families, but I didn’t have the energy to build the problem lists back into the people lying in front of me. I worried that if I let myself see their suffering, mine would become too unbearable.

Some days are like that as a doctor, but I wish they weren’t. Sometimes I wonder what I was like, before my training taught me to see people in parts, before I learned to compartmentalize myself. There is no textbook on putting those pieces back together. I suppose we need to start with ourselves; I couldn’t focus on rebuilding him when my mom was broken.

In the call room, I took off my white coat and rewrapped the scarf around my neck. I bought it with my mom in Rome where she had practiced her Italian. The shopkeeper smiled when she realized we were traveling, just the two of us. I burst into tears remembering that bright spring afternoon, willing myself back to that Sunday morning at the hairdresser.
to the moment when we stopped to listen to an accordion player serenading the winding alleys outside the shop.

My patient’s family was sitting across from the elevator when I pressed the button. They were curled together on stiff benches, arms on shoulders and hands on knees. Their expressions masked faces of exhaustion from fear and longing to have unanswerable questions brought to light. I recognized that vulnerable expression of suffering that so often brings me back to center during my most sleep-deprived moments. Most days it compels me to sit down and explain as much as I can, even as my pager scolds me for daring to claim the moment for them, for me. But today my face mirrored theirs. I looked at them and wished I could have stayed the doctor that day, but my own growing dread compelled me into the elevator as I tried to suppress the questions that were bursting out of me as tears.

My dad was alone in the room when I arrived. He looked small in his green winter coat sitting in the corner, waiting. He hugged me so tight. They rolled my mom in on one of those hospital beds. She was wearing a hospital gown, but her hair was perfectly styled. We talked about the plum. They told me the surgery would be in a couple of days. They would go in through her nose.

The surgeon told us the tumor was “giant,” but they still hoped it was an adenoma; I wished it was just a watermelon seed that had sprouted. She would need to stay in the ICU. I imagined my mom with a central line and a breathing tube like my patients that morning, doctors breaking her into fixable parts, but to me she was my mom.

I stayed with her that first night before the surgery. Her headache was debilitating as the peapod tendrils twirled. I lay stiffly on a reclined cardiac chair curled up with a scratchy hospital blanket. I listened to her breathing and sang a lullaby into the darkness. We cried together into the open space and smiled at the connection it created between us.

The morning of the surgery we told stories as I quietly willed the knot in my stomach to uncoil. In the surgical waiting area we were given a pager like the ones at restaurant chains. We set it in front of us reverently, glancing at it every few moments and willing it into action. It took 5 hours to carve out the plum and its sprouts, the tumor. When the surgeon came out, triumphant in his paper cap, he glanced down at the pink Pepto Bismol bottle perched in front of us and smiled.

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Health and Wellness Articles for the Belleville Community -- I wrote health articles for the local Belleville newspaper, which covers the Belleville, Moniticello and New Glarus areas. This is a mostly Caucasian, older, rural population. I tried to provide seasonally appropriate information about common health concerns or questions. I took over the project from a graduating senior. In taking it over, I attempted to add feedback from readers and clinic and also tried to make the articles more of a regularly occurring feature in the newspaper. I partnered with other residents and faculty and a UW media specialist to make the articles more diverse, succinct, as well as timely. The impact of my project is hard to measure; perhaps in some small not easily measured way, folks exercised more, ate a little healthier, and learned about their bodies.

Thank you to the residency community for supporting me through challenging times and helping me grow; Michelle Grosch, Kathy Oriel, and Adam Rindfleisch. To Katherine Bonus for teaching me the tools to live life with kindness, and Jonas, for the best-bone crushing hugs. And to my husband for ultimately keeping everything together.

– Lisa
Bells Palsy in the Pediatric Patient: A Case Study

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Abstract

Incidence, work up and treatment differs between the pediatric and adult population with Bells palsy. This article presents a case of Bells palsy in an otherwise healthy 6 yo female, shortly after a tibia fracture. She was treated with a course of steroids and recovered fully.

Introduction

Bells palsy is an acute idiopathic unilateral or bilateral paresis of the facial nerve. The facial nerve is the 7th of the paired cranial nerves and exits the brainstem between the pons and the medulla, courses through the temporal bone in the internal auditory canal and exits through the stylomastoid foramen, terminating in three branches, which provide the motor movement to the face. It also gives parasympathetic function the submandibular, sublingual, and lacrimal glands and taste to the anterior 2/3rds of the tongue (7). The pathophysiology of Bells Palsy is still unknown although studies have recovered herpes virus genes from the affected areas in those with facial palsy, which supports the theory that Bells Palsy could be caused by a reactivation of herpes virus (7). Other theories cite autoimmune damage to the nerve after a viral infection. Facial weakness is in a lower motor neuron pattern, and can be partial or complete. Signs include inability to raise the eyebrows or close the eye on the affected side, flat nasolabial fold and forehead creases and asymmetric smile. This can lead to problems speaking and swallowing, and the need for eye protection. Symptoms are distressing and evolve rapidly, with maximal paresis within 72 hours. Cases of Bells Palsy are much more rare in children, and unlike in adults, work up and treatment options are not as well studied.
Case Presentation

An otherwise healthy 6 yo female comes to urgent care with concerns for right-sided facial droop, slowly getting worse over the past 24 hours. Her mother notices increased tearing on the right side as well. She reports no right-sided facial pain, recent tick exposure, headaches, trouble speaking or swallowing. Five days ago she was diagnosed with non displaced proximal metaphyseal tibia fracture after jumping on the trampoline. The injury was unwitnessed, but she was jumping alone, and thought she hyperextended her leg. There was no report of head injury. Three days prior to presentation, she had been recasted. For pain, she has been taking Tylenol with codiene at home. She was not on any other medications.

Physical exam was remarkable for a right sided facial droop and a lid droop. She is unable to close the right eye completely, and had difficulty raising the right eyebrow. The rest of the HEENT exam, including the ear exam was normal. She was prescribed a 10 day course of prednisone. A lyme disease titer was negative. No other labs or imaging was performed. Four weeks later all symptoms resolved.

Discussion

There are notable differences in Bells Palsy incidence, evaluation, prognosis and treatment between the adult and pediatric population. Incidence increases with age, with most cases of Bells Palsy in those >60 years old and the least cases in those <20 (7). Alternative diagnosis for facial paresis is more common in children than in adults. Less than 50% of cases in those less than 10 years old have Bells Palsy, whereas in adults 70% of those with facial
paresis will have Bells Palsy (1). For this reason, careful differential diagnosis and more extensive evaluation is warranted in the pediatric patient.

Bells Palsy is a diagnosis of exclusion. Children should be examined for infectious, inflammatory, traumatic, malignant, congenital, genetic, and metabolic conditions before attaining a diagnosis of Bells Palsy. The most common cause of facial paresis in children is acute otitis media, unless the child resides in an area where Lyme is endemic, in which case Lyme disease is the most common (3). In Lyme disease facial paresis, Borriela Burgdorferi directly invades the facial nerve. The tick bite is commonly on the head or neck accompanied by swelling and redness of the face preceding facial palsy (3). Other infectious causes include Ramsay Hunt Syndrome, which is caused by a reactivation of varicella, causing painful vesicles to form in the external auditory canal and vestibulocochlear dysfunction (3). Mycoplasma pneumonia infection has also been found in children with facial paresis, and rarely meningitis and Guillian- Barre Syndrome can present as facial paresis (2). Traumatic causes should be considered including birth trauma or temporal bone fractures. Malignant causes include leukemic cell infiltration into CNS, and tumors of the facial nerve (7). Congenital causes include Moebius syndrome, a hypoplasia of the motor nucleus of the facial nerve, which is also accompanied by impairment of eye abduction, and Trisomy 13 and 18 (7). Genetic causes include hereditary muscle disorders and metabolic causes include diabetes, HTN, hypothyroidism and hyperparathyroidism.

All patients with facial paresis should have a complete history and physical to rule out other causes of Bells Palsy. Past medical history, recent illnesses, tick bite history, and history of trauma should be obtained. On physical exam, it is helpful to grade the degree of facial paresis. The House – Brackman facial paralysis scale is a 6 point scale ranging from total paralysis to normal, paying attention to the ability to close the eye, facial symmetry and forehead movement.
In addition to this, it is reasonable to perform otoscopy, blood pressure and CBC on all children, given the higher incidence of paresis secondary to other causes (7). Additional investigation should be considered if the paralysis is complete or if there is no improvement in 3 weeks (7). MRI or other imaging can be considered if there are additional neurological findings, concern for malignancy or trauma. Lumbar puncture should be considered if there are signs of meningitis (3,7).

Treatment for Bells Palsy in children also differs from adults. In adults, studies have supported that early steroid treatment within 72 hours is effective (7). Although it is common for children to be prescribed steroids as a part of treatment, the benefit of steroids has not been proven. A systematic review in 2001 did not recommend routine use of steroids in children with Bells Palsy (5, 6,7). All children should have eye care to avoid corneal abrasions and drying as well as sun protection. Those with Ramsay Hunt syndrome from varicella should be treated with steroids and acyclovir (7).

Children generally enjoy a better prognosis than adults with >90% having spontaneous recovery, most within 2-6 months (1,3, 5). Prognosis is better if the child has a grade 1-2 on the House Brackman scale, and better if some recovery is demonstrated in 21 days (3).

Conclusion:

Bells Palsy is an idiopathic paresis of the facial nerve. In adult populations it is a common cause of facial paresis, but the incidence is much lower in the pediatric populations, thus a broader differential and more extensive work up is warranted in this population. Treatment with steroids has not been shown to be effective in children.
Table 1

House-Brackman facial paralysis scale

<table>
<thead>
<tr>
<th>Grade</th>
<th>Impairment</th>
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</thead>
<tbody>
<tr>
<td>I</td>
<td>Normal</td>
</tr>
<tr>
<td>II</td>
<td>Mild dysfunction (slight weakness, normal symmetry at rest)</td>
</tr>
<tr>
<td>III</td>
<td>Moderate dysfunction (obvious but not disfiguring weakness with synkinesis, normal symmetry at rest) complete eye closure with maximal effort, good forehead movement</td>
</tr>
<tr>
<td>IV</td>
<td>Moderately severe dysfunction (obvious and disfiguring asymmetry, significant synkinesis) incomplete eye closure, moderate forehead movement</td>
</tr>
<tr>
<td>V</td>
<td>Severe dysfunction (barely perceptible motion)</td>
</tr>
<tr>
<td>VI</td>
<td>Total paralysis (no movement)</td>
</tr>
</tbody>
</table>


References

   

   


Clinic Fitness and Lifestyle Group -- My community project is helping with the Verona Clinic 2020 Fitness and Lifestyle Challenge, a project organized by Brian Arndt, MD, Maggie Larson, MD, and Julia Yates, LCSW. Its purpose is to invite 20 patients with the diagnosis of obesity to participate in a 6 month long program that promotes healthy lifestyle changes in the areas of exercise and nutrition. The program involves monthly group sessions, weekly emails with recipes, and involvement of community partners such as a fitness club, grocery store, and insurance providers. I helped with community partner recruitment, monthly meetings, and leading a group session on nutrition. Participants have been setting goals and seeing positive results.

While growing up in small-town Wisconsin, Tom’s parents, both teachers, instilled in him the importance of helping others, serving his community, and, most importantly, the value of education. Tom earned a B.S. in Psychology from the University of Wisconsin – Eau Claire and his medical degree at the UW-Madison School of Medicine and Public Health. As a medical student, Tom volunteered at the Southside MEDiC clinic in Madison, and served on the executive planning committee for the annual Medical Students for Minority Concerns’ health fair to promote wellness and provide free health care screenings. He also found ways to incorporate teaching into his medical school career, giving talks to children in local schools about pertinent health topics through the Doctors Ought to Care (DOC) program, and working as a tutor for first- and second-year medical students. Tom enjoys running, music, photography, and has a special gift for sculpting balloon animals.
Inpatient **TEACH Cards**: Striving toward Practice-Based Learning and Improvement (PBLI)

STFM Annual Spring Conference May 5, 2014

Jennifer Edgoose, MD, MPH
Thomas Hahn, MD
Jennifer Mastrocola, MD
University of Wisconsin – Madison
Caitlin D’Agata, MD
Cambridge Health Alliance Tufts University
Contact info: jennifer.edgoose@fammed.wisc.edu

**Objectives**

- Introduce a novel inpatient curricular tool called TEACH Cards
- Examine how it encourages skills of self-directed and collaborative learning
- Review results of a pilot study
- Try the tool

**How do we teach inpatient medicine?**

At UW-Madison we have two inpatient family medicine services, one at a university-based hospital and another at a community-based hospital.

We maintain a robust census that supports a rich case-based learning environment, but the residents’ evaluations are perpetually clamoring for “more teaching.”

**Question-**

How do we know our learners are gaining knowledge and experience that incorporates the breath and depth of topics required to assure competent, evidence-based inpatient care?

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- One study showed that learners “perceived” high quality teaching from mini-teaching sessions (Torres et al, 2005)
- Most literature revolves around bedside teaching rounds and simulation experiences

**How do we teach evidence-based medicine?**

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- Most studies of EBM education involve intensive training
  - 2 day workshop (Allan et al, 2008)
  - 30 hours of didactic and hands-on teaching (Shaughnessy et al., 2012)
  - 2 week rotational block (Thom et al, 2004)
Can we merge our curricular agendas?

Inpatient topics  EBM

More specific curricular goals

- To cover the core topics the AAFP “Recommended Curriculum Guidelines for Family Practice Residents [regarding] Care of the Critically Ill Adult;”
- To encourage self-directed and collaborative learning and teaching that is appropriate to the level of training;
- To provide explicit and goal-directed mini-teaching/learning opportunities;
- To promote acquisition of EBM skills; appreciating that answers change as new studies arise; and
- To provide advancement in the ACGME Milestones

Where does this fit in the ACGME Milestones?

| TEACH Cards |
| Teaching | Evidence-Based Medicine | And | Clinical topics in the Hospital |

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Hospice
Pronouncement of death

RENAL
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Hypokalemia
Hyponatremia

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Sepsis
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Rhabdomyolysis
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Seizure
Delirium
Meningitis
CVA

GASTROINTESTINAL
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Heart failure

PULMONARY
Pulmonary hypertension
Community Acquired Pneumonia
Pulmonary Embolism
COVIP exacerbation

CVA Background Questions:
- Discuss the use of stroke screening tools and the definition of TIA.
- List the imaging and labs used to evaluate patients with CVA and TIA.
- Discuss risk stratification criteria for evaluating TIA in the outpatient or inpatient setting.

Foreground Questions:
- In patients who have had a stroke, should antiepileptic medications be used for prevention of seizures?
- Write your own PICO question, and try to find the answer.
What are the two groups of questions and where could I find answers?

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American Family Physician
IMI Clinical Evidence
OnTrack
Essential Evidence Plus
UpToDate

What are some uses for the cards?
- To initiate discussion between team members
- To guide independent study
- To create a mini presentation
- To play a game

Answers are intentionally not provided.

Instructions

Try using TEACH cards throughout your rotation.
- A binder called the “Evidence-Based Medicine Primer” is available as a supplement.
- Each question should take no more than ten minutes to research and answer.
- After use of a TEACH card, have your attending or a senior resident complete a “Field Note” card for you so you can get feedback on and credit for the development of your EBM skills.

Field Note for Practice Based Learning and Improvement (PBL-I)

Learner: ____________________ Observer: __________ Date: __________
Describe observation: What TEACH card was used, if any?
Feedback:

How to use the cards:
- Choose a card.
- Divide questions among the group.
- Take 5 minutes to research the answers.
- Take 5 minutes to discuss the answers and resources used.

Instructions

Alternative ways to use cards include:
- Teaching EBM skills
- Independent study
- A guide for teaching or discussion
- Creating a game

TEACH Cards

A PILOT STUDY
Methods

- **Timeline**: December 2013 – February 2014
- **Location**: St. Mary's Hospital Family Medicine Service, Madison, WI
- **Participants**: faculty and fellow attendings, family medicine residents, and medical students
- **Design**: pre and post-survey prospective cohort pilot study of the TEACH Cards
  - Surveys assessed (1) confidence in learning and teaching core inpatient topics and EBM skills and (2) actual EBM skills
  - Post survey queried use of the cards and their utility as a curricular intervention

Methods

- **EBM training**
  - Faculty received a formal presentation on EBM skills and were introduced to the study in September 2013
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  - An EBM primer was available for all users

Results

- Of the 35 eligible participants we had 28 participants (80% participation rate)
  - 1 medical student
  - 8 PGY-1
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  - 7 PGY-3
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“I believe I am learning all the core topics required to care for critically ill adults.”

Mean: 4.00 3.42  p = 0.037

“I can write a PICO question.”

Mean: 3.04 2.42  p = 0.022
Results

• Interestingly, there was no improvement in ability to write a PICO question from a case scenario from pre to post test: about 70% wrote question correctly on pretest
• 84% (pretest) were able to name 3 or more EBM sources vs. 89% (post test)
• Most commonly sited sources were:
  • Dynamed, EE, PubMed and UpToDate
  • UpToDate was sited 61% pretest and 29% posttest

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• Likert scale assessments posttest were uniformly positive regarding the intervention
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  • “Helped teach more on service”
  • “Gave practice with EBM skills”
• Comments of what people thought of the tool
  • “Good questions”
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• Other themes: stimulate discussion, group setting, and PICO/EBM benefit

Conclusions

TEACH Cards offer an innovative inpatient curricular intervention that was favorably received by clinical teachers and learners and improves the perception of teaching of core inpatient topics and EBM skill acquisition.

Future Directions

• Expand number of card topics
  • Adult
  • Pediatric
• Diversify learning environments
  • University-based setting
  • Other institutions
• Incorporate more robust EBM curriculum
  • EBM primer during intern orientation
  • Follow with six-month trial of cards

References

• Thom D, Haugen J, Sommers P, Lovett P. Description and evaluation of an EBM curriculum using a block rotation. BMC Medical Education 2004;4:19.
• AAFP. Care of the Critically Ill Adult. Recommended Curriculum Guidelines for Family Practice Residents. AAFP Reprint no. 291. Revised 6/2011 by John Peter Smith Family Medicine Residency Program.

TEACH Cards

TIME TO TRY A CARD!

Pull out your laptops, smartphones, Ipads, or whatever else you may use when you are running around the hospital...
COMMUNITY ACQUIRED PNEUMONIA

Background Questions:
✓ List the organisms that commonly cause community acquired pneumonia (CAP) in adults.
✓ When is it appropriate to obtain lab studies, and what labs would you order?
✓ Discuss difference in management of CAP in outpatient, inpatient and ICU settings.

Foreground Questions:
✓ In patients with CAP, do antibiotics with or without corticosteroids reduce mortality?
✓ Write your own PICO question, and try to find the answer.

Teaching Pearl:
Discuss the use of the Pneumonia Severity Index (PSI) and CURB-65.
A Family Practice Inquiry Network (FPIN) Help Desk Answer: “Can an osteopathic structural/physical exam and subsequent use of osteopathic manipulative treatment identify and treat musculoskeletal chest pain, and thus potentially reduce hospital admissions related to acute chest pain?” -- On presentation to an ED, people of a certain age with certain risk factors who have any pain in or near their chest will almost certainly be evaluated thoroughly for acute coronary syndrome. Many of these patients, however, will actually just have acid reflux or increased/new anxiety, or muscle/rib pain. My goal was to see if there was any evidence that DO’s (or well trained MD’s) could use their skills to diagnose and treat pain which was actually musculoskeletal in nature, and therefore save time and money for both patients and the health care system. It turns out there is no such evidence (though some chiropractic literature indicates this is a possibility).

Northeast Patient and Family Advisory Council

Scholarly Project:

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Thanks to my wonderful spouse for keeping me fed and loved, my family (both blood relatives who aren’t here, and new Madison-family) for all the support and fun times, and of course to my awesome co-rezzies for going through this experience with me with such perseverance, authenticity, and resilience!

– Taryn
Northeast Clinic Patient and Family Advisory Council

**Background:** The patient population of the UW Northeast Family Medicine Residency Clinic has historically had limited opportunity to provide feedback with regard to clinic operations. Some members of the clinic staff had long identified a need to involve patients in clinic decision making, but a formal method was lacking. UW Health patients at large are represented by a Patient and Family Advisory Council (PFAC) which meets once a month on the far west side of town, but the geographic and demographic makeup of this group does not represent our clinic population well. Clinic, city, and county-wide demographic data were used to help determine the distinguishing characteristics of our patients as a whole; they are more culturally and ethnically diverse, geographically farther from urgent care and hospital facilities than the average Madisonian, and have a somewhat different diagnostic complexities and perspectives concerning health care.

**Objective:** Give Northeast Clinic patients a voice at their neighborhood clinic, as well as make the clinic staff more responsive to patients’ needs. My role: I placed a comment box in the lobby of the clinic for all patients to utilize. Additionally, I polled all clinic staff (faculty, residents, nursing, and administrative staff) asking for suggestions and, as this plan developed, recommendations of patients to form a pilot PFAC for our clinic. I serve as contact person for these patients, set up meeting dates/times, and facilitate meetings. After graduation, I will still temporarily continue to work with the and NE clinic staff/residents to facilitate this PFAC until the group has another clinic staff member/resident to take over as coordinator.

**Methods:** See above. I started by polling clinic staff and then nominated patients regarding their feelings about things to revise at the NE clinic. I then found out we needed permission from the UW Health system-wide Patient and Family Advisory Committee to have our own PFAC, so I presented a proposal at one of their meetings along with reasons why our patients were not well represented on the current committee. I am currently working with the UW PFAC coordinator to develop PFAC orientation guides and training materials, which our NE PFAC group will get to try out!

**Results:** the impact of the NE Clinic PFAC is unclear so far. The council members are eager to be involved, and I anticipate some small improvements in our clinic as well as increased responsiveness to patients and the neighborhood community as time passes.

**Conclusions:** People enjoy having a say in decisions that concern them. The UW requires permission for nearly everything.

**Acknowledgements:** Thank you so very much to Sandy Powers, UW Health Program Manager of Patient- & Family-Centered Care; Dr. Jennifer Edgoose, my academic mentor and personal cheerleader; Dr. Bill Schwab, for putting me in touch with the right people; Wen-Jan Tuan for digging up NE clinic data; and several clinic staff/faculty members (Dr. Lou Sanner, Dr. Kathy Oriel, Dr. David Rabago, Ann O’Connor, JoAnn Wagner-Novak, Maureen VanDinter, Julie
Kurt, Rebecca Martens, Deb Sands, and Tammy Ennis) for providing their perspectives about the clinic, filling me in what has and has not worked historically, nominating patients, and being outstanding in general.
Wingra Nutrition Nights -- As many chronic diseases are influenced by nutrition, focusing more on nutrition education could reduce significant morbidity and mortality. A pilot program was started to determine the needs of the Wingra community, create nutritional resources for patients and educate patients. Two residents and premedical volunteers organized monthly nutritional educational sessions with patients. Healthy snacks were provided. Patients were surveyed after the sessions. Events were held monthly from 2/2014 to 5/2014. Overall, participants reported enjoying the sessions. Our team continues to learn about the community’s needs and we hope to expand this model in the future.

Jenn Mastrocola came to Wisconsin from Connecticut, where she completed both her undergraduate and her medical degree at the University of Connecticut. After earning her B.S. in molecular and cellular biology, she spent two years working as an EMT prior to medical school. During medical school, Jenn’s volunteer experiences shaped her commitment to the underserved and led her to pursue the Urban Service Track, where she improved her skills in cultural competency, linguistics, population health, community resources, and quality improvement. Jenn also served her medical school community by acting as a student mentor, co-leading the FMIG, and by participating in an LCME Self-Study committee with the goal of increasing the number of graduates entering primary care. Jenn also received the honor of being inducted into the Gold Humanism Honor Society and at graduation was awarded the Dean’s Award for Overall Academic Achievement. In residency, Jenn was pleased to continue her work with the Urban underserved by working at Wingra Family Medical Center, a FQHC. She focused on Nutrition and OMT as areas of interest for her Integrative Medicine Pathway. Jenn served as the resident representative to both the UWSMPH FMIG and St. Mary’s Team STEPPS. She enjoyed working with both the Recruitment and Education Committees and was a part of several subcommittees including those focused on the EKG and MICU curricula. She co-created the Intern Survival Guide and worked on the pilot program “TEACH Cards.” Jenn really enjoyed her time as the Wingra Chief resident.

Thank you to all my friends and family - both CT and new WI family :) - for your support! A very special thanks to my husband, Adam - I could not have done it without you! I love you forever.

— Jenn
Inpatient TEACH Cards: Striving toward Practice-Based Learning and Improvement (PBLI)

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<tbody>
<tr>
<td>Level 1</td>
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<tr>
<td>Level 2</td>
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<td>Level 4</td>
<td></td>
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TEACH Cards

T: Teaching
E: Evidence-Based Medicine
A: And
C: Clinical topics in the Hospital

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---

**Field Note for Practice Based Learning and Improvement (PBL-I)**

**Learner:____________________  Observer:____________________  Date:____________________**

**Describe observation:**

What TEACH card was used, if any?

**Feedback:**

1. Important 
2. Incomplete
3. In Progress
4. Late
5. Inappropriate
6. Other (please explain)
7. More than 10 minutes
8. EBM mastery in clinical practice
9. Needs EBM coaching

---

**Instructions**

**How to use the cards:**

- Choose a card.
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- Take 5 minutes to research the answers.
- Take 5 minutes to discuss the answers and resources used.

---

**TEACH Cards**

**A PILOT STUDY**
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Pre-Test

<table>
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<tbody>
<tr>
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Mean: 4.00

Post-Test

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“I can write a PICO question.”

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<tr>
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<td>Disagree</td>
<td>14%</td>
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Mean: 3.04

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Teaching Pearl:
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Fetal Heart Tone Monitoring Tools -- This Quality Improvement project introduced two tools for improving management of fetal heart tone strips. One tool is a five-tier system that breaks down Category 2 further and makes management recommendations for each color-coded tier. The second is an algorithm that incorporates timing and labor progress into management recommendations. After assessing the two tools for consistency, using FHT strips from previous labors at St. Clare Hospital, a presentation was developed to introduce the tools. A survey of current FHT management practices was given before the presentation and will be repeated after a month, to gauge how the introduction of the tools affects nurse and provider practices.

Scholarly Project:
Cervical Cancer Screening Update

Quality Improvement Project:
Elizabeth Matera took a non-traditional route to medicine, earning a B.A. in Literature at Harvard before entering the teaching profession. Elizabeth taught with Teach for America for two years before becoming a Program Director for the organization in Arkansas and Mississippi. Her time with Teach for America in poor, rural settings provided a deep appreciation for the health and educational challenges faced by these communities. Her desire to serve rural communities led her to pursue her medical degree at the University of Louisville School of Medicine in her home state of Kentucky. During medical school, Elizabeth mentored adolescents in exercise and weight loss and volunteered at the student-run free clinic, where access to specialty care and ancillary services was nonexistent. This experience forced her to find creative solutions to providing comprehensive care, something she hopes to build on in residency and beyond. When she has spare time, Elizabeth enjoys reading, film, gardening, hiking, canoeing, kayaking, pottery, and music.
HPV Update

- Elizabeth Matera, MD & Nathan Vakharia, MD
- Faculty Mentor: Bridget Delong, MD

Cervical cancer screening guidelines

- American Cancer Society (ACS)
- American Society of Colposcopy and Cervical Pathology (ASCCP)
- American Society of Clinical Pathology (ASCP)
- U.S. Preventive Services Task Force

USPSTF grade and suggestions for practice

<table>
<thead>
<tr>
<th>Grade</th>
<th>USPSTF recommendations</th>
<th>Suggestions for Practice</th>
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<tbody>
<tr>
<td>A</td>
<td>The USPSTF recommends the service. There is high certainty that the net benefit is substantial.</td>
<td>Offer or provide this service.</td>
</tr>
<tr>
<td>B</td>
<td>The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.</td>
<td>Offer or provide this service.</td>
</tr>
<tr>
<td>C</td>
<td>Note: The following statement is undergoing revision. Clinicians may provide this service to select patients, depending on individual circumstances. However, for most individuals without signs or symptoms, there is likely to be only a small benefit from this service.</td>
<td>Offer or provide this service only if other considerations support the offering or providing the service in an individual patient.</td>
</tr>
<tr>
<td>D</td>
<td>The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.</td>
<td>Discourage the use of this service.</td>
</tr>
<tr>
<td>I</td>
<td>Note: The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.</td>
<td>Read the clinical considerations section of USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.</td>
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</table>

Cervical cancer screening guidelines

- Cervical cancer screening should begin at age 21
  - Women < 21 should not be screened regardless of age of sexual onset (D recommendation)
  - “Recommended screening practices should not change on the basis of HPV vaccination”
  - Note: Guidelines do not apply to special populations (history of cervical cancer, DES exposure, immune compromise)

Screening for ages 21-29

- Cytology alone every 3 years
- HPV testing "should not be used to screen" in this age group (D recommendation)
  - Not as a component of cotesting
  - Not as a primary stand-alone screen

Screening for women ages 30-64

- Cytology + HPV testing (cotesting) every 5 years is preferred (A recommendation)
- Cytology alone every 3 years is acceptable
When to stop screening

- Stop at age 65 for women with adequate negative prior screening (D recommendation):
  - 3 consecutive negative Paps or
  - 2 consecutive negative HPV tests
    - AND
  - No CIN2+ within the last 20 years

- Screening “should not resume for any reason, even if a woman reports having a new sexual partner”

When to stop screening

- Stop after hysterectomy with removal of cervix and no history of CIN2+ (D recommendation)
  - “Evidence of adequate negative prior screening is not required.”

When NOT to stop at age 65 years

- If history of CIN2, CIN3, AIS
  - Continue “routine screening” for at least 20 years “even if this extends screening past age 65”

Screening for cervical cancer

Rationale for Changes

- Natural History of HPV infection and development of cervical cancer
- Epidemiology of high and low-risk groups
- Effectiveness of screening intervals
- Risks of screening
- Utility of HPV Co-testing
Initial Screening – starting at 21

• Natural History/Epidemiology
  – HPV infection is common in adolescent and young women (up to 57% of sexually active adolescents)
  – Cervical cancer is quite rare: 1-2 in 1 million

• Risks of Screening
  – Anxiety
  – Unnecessary procedures possibly leading to adverse outcomes
    • Association of LEEP and pre-term delivery

Discontinuing Screening

• Epidemiology
  – If women have been screened appropriately, the incidence of abnormalities declines as of the fourth decade of life
  – For women with total hysterectomies for reasons other than cervical cancer, there is a very, very small risk of subsequent vaginal cancer
    • One study: 1% of 10000 vaginal cuff smears were positive for abnormal cytology, and these had 0% PPV for vaginal cancer

Discontinuing screening

• Risks of screening
  – Unnecessary procedures
  – Opportunity costs: overlooking more important health care issues during visits for screening or follow-up for abnormal results

Frequency of Screening

• Natural History of Disease
  – 10 to 20 years = duration of treatable phase

• Effectiveness of screening
  – Reduction in incidence of invasive cancer does not change much when the screening interval is increased from 1 to 3 years
  – Addition of HPV co-testing greatly increases sensitivity and allows further increase in screening interval, from 3 to 5 years

Frequency of Screening

• Risks of screening
  – Annual screening doubles to triples the number of additional studies and interventions
  – In one study, 110 women had to have 231 additional interventions to find one case of serious cervical pathology

HPV Co-testing

• <30 years of age: more likely transient HPV infections, leading to unnecessary colposcopies.
• >30 years of age: appears to result in earlier diagnosis of high-grade lesions.
• Negative cytology + negative HPV confers extremely low risk for CIN3 or greater during the next ten years.
• Any HPV screening (with or without Pap smears) increases the number of positive results from screening and the number of colposcopies performed.
Follow-up for Abnormal Results

Definitions

SIL = Squamous Intraepithelial Lesion
CYTOLOGICAL
L = Low-grade
H = High-grade

CIN = Cervical Intraepithelial Neoplasia
HISTOLOGICAL/PATHOLOGICAL

CIN 1 and LSIL
- Mildly atypical cellular changes
- Not considered a cervical cancer precursor
- Usually caused by low-risk HPV types
- 15% will progress and up to 75% will regress spontaneously

CIN 2,3 and HSIL
- High-grade lesions
- Considered true cancer precursors
- Up to 40% of CIN 2 will regress spontaneously

ASC-US and ASC-H
- Atypical Squamous Cells
  - ...of Unknown Significance: changes that are more than reactive but do not meet criteria for Squamous Intraepithelial Lesion
    - 15% lead to diagnosis CIN 2 or greater on biopsy
    - 0.2% lead to diagnosis of cervical cancer
  - ...High-grade lesion cannot be excluded
    - 38% lead to diagnosis of CIN 2 or greater on biopsy
    - 2.7% lead to diagnosis of cervical cancer

Reprinted from Up-to-Date
Cervical Intraepithelial Neoplasia Grade 1 (CIN 1)

- Generally can follow as outlined on ASC-US, LSIL, and HSIL algorithms (pap at 6 and 12 months or HPV at 12 months with follow-up as indicated)
- If colposcopy must be repeated
  - Manage anything greater than CIN 1 accordingly
  - Persistent CIN 1 (at least 2 years) can be treated or followed
  - Colposcopy negative for CIN would go back to cytology/HPV as above

Cervical Intraepithelial Neoplasia Grade 2 or 3

- Excision or ablation of transformation zone
- Follow with one of the following acceptable approaches:
  - Cytology at 6 and 12 months OR
  - HPV DNA testing at 6 and 12 months
- Return to colposcopy if positive either time
- Return to routine screening if negative x 2; screening must be done for at least 20 years after treatment for CIN 2 or 3
Cases for practice

Case #1 - Screening
• 24yo woman in for first prenatal visit 9/27/12 with EDD of 4/20/13
• Last pap smear 6/15/11 – negative

Case #2 - Screening
• 65yo woman in for well visit 9/27/12
• No history of abnormal pap smears
• Last pap smear 9/25/09 – negative

Case #3 - Screening
• 65yo woman in for well visit 9/27/12
• History of ASCUS on pap smear in 2002
• Negative subsequent testing, including pap smears annually through 9/2011

Case #4 - Screening
• 65yo woman in for well visit 9/27/12
• History of CIN 3 on colposcopy and subsequent LEEP in 2002
• Negative subsequent testing, including pap smears annually through 9/2011

Case #5 - Screening
• 35yo woman in for well visit on 9/27/15
• Last pap smear 9/27/12 – negative
• Also had negative HPV co-testing

Case #6 - Screening
• 45yo woman in for well visit 9/27/12
• Total hysterectomy 10/2011 for DUB/anemia
• Had CIN 3 on colposcopy with subsequent LEEP in 2010 and normal pap smear 9/2011

Case #7 – Follow-up
• 34yo in for visit on 9/27/12
• ASCUS with positive HPV 2 years ago
• Normal subsequent colposcopy
• Normal pap smear last year with positive HPV

Case #8 – Follow-up
• 47yo woman with HSIL on pap smear
• Colposcopy done with biopsy showing CIN 1
• ECC is negative

Case #9 – Follow-up
• 28yo woman in for first prenatal visit
• Last pap smear 2 years ago showed LSIL with no follow-up at that time

Case #10 – Follow-up
• 42yo woman with history of
  – ASCUS and +HPV 11/3/2010
  – Negative colposcopy 11/11/2010
  – LSL and –HPV 5/31/11
  – ASCUS and –HPV 1/25/2012
  – LSIL 7/12/2012
Case #11
• 32yo woman with history of
  – ASCUS with +HPV 5/2009
  – Colposcopy with insufficient ECC and negative biopsy 7/2009
  – Pap at the same time normal with +HPV
  – Pap normal with no HPV done 5/2010

Case #12
• 22yo woman with LSIL and +HPV 11/2010
• Colposcopy 12/2010 with no biopsy or ECC, showing likely CIN 1 (in judgment of OB/Gyn)
• Negative pap smear 9/2011
• Pap smear with ASCUS and +HPV 9/2012

References
• American Cancer Society, American Society for Colposcopy and Cervical Pathology, and
  American Society for Clinical Pathology screening guidelines for the prevention and early
  DC, Westra WH, Twora JD, Sepinwall M, Morozilo AB, Franco EL, Skates S, Schiffman M,
  Castle PE, Myers ER; American Cancer Society, American Society for Colposcopy and Cervical
  Pathology, American Society for Clinical Pathology.
• Screening for Cervical Cancer: U.S. Preventive Services Task Force Recommendation
  MPH; and on behalf of U.S. Preventive Services Task Force.
• http://www.asccp.org/Portals/9/docs/pdf/Practice%20Management/ASCCP_Cervical_Cancer
  Screening_Recommendations.pdf?w=zoom=80
I am indebted to my professional colleagues and the many mentors who I have worked with here in this program. My parents have provided unwavering support in every way they can and without that I would not have the opportunities I do now. I am so grateful to my loving partner Carly for her support, inspiration, and tolerance for long working hours and late dinners.

— Mischa
Implementing EKG Learning in Residency Education
Mischa B. Ronick

Background and Rationale:

Accurate interpretation of EKGs is a vital skill for physicians who practice in primary care, hospital-based, or urgent/emergency care settings. Residency training is an essential time for physicians-in-training to develop and implement comfort with this skill. During my intern year I spoke with multiple residents who reported feeling less than confident in their abilities to read EKGs and many expressed an interest in gaining more opportunities to practice during their training. Prior to the introduction of this curriculum, residents primarily read EKGs during their inpatient rotations with quite variable experience, no standardization, and inconsistent teaching. As a result of this, a core group of interested residents (myself and Drs. Liz Kvach, Jenn Mastrocola, and Matt Swedlund) undertook the task of creating and implementing a structured curriculum aimed at increasing resident experience and comfort with reading EKGs.

Process of Curriculum Creation:

Our group met several times in order to discuss how EKG reading and teaching could be better incorporated into busy resident schedules. Fortunately, reading individual EKGs can be done over short periods of time and is not technologically demanding. We capitalized on this and on the regularly scheduled Monday morning reports and aimed to incorporate EKG reading into these sessions. Next, we considered how to identify high yield EKG topics/core competencies. Instead of creating a list de novo we contacted the internal medicine residency program and obtained their core competencies for EKG diagnoses. We reviewed this as well as the diagnoses listed in the ACC/AHA Clinical Competence Statement on Electrocardiography and Ambulatory Electrocardiography (1) in order to create a list of EKG topics to be reviewed in our curriculum. We then drafted a formal proposal to introduce EKG education at the beginning of Monday morning reports and presented this to the Educational Committee and DFM faculty where it was approved. We solicited faculty support and compiled a list of faculty and non-faculty physicians willing to be contacted by residents to review EKGs.

Next we collectively identified online databases with representative EKGs and created a document identifying specific examples of each of the core diagnoses to help presenting residents easily and quickly find teaching examples. I prepared a basic guideline for reading EKGs and it was reviewed and approved by residents and faculty members to be distributed as a reference. This was important in order to provide consistency among residents in reading EKGs, but was not intended to be the only way to read EKGs. We created a schedule assigning specific EKG topics to 3rd year residents presenting Monday morning reports and this was implemented during the 2012-13 academic year.

At the end of that academic year we surveyed residents and faculty members to get their impressions of the curriculum and received supportive feedback. Combined survey results from the 2012-13 and 2013-14 years indicated that 90% of resident and faculty respondents felt the sessions were “helpful” or “very helpful” and 87% reported feeling more confident in their abilities to read EKGs independently as a result of the implementation of the curriculum (see Figures 1 & 2).
At the end of the 2012-13 academic year the core group of interested residents met again and, given the positive feedback we received as well as the infrequency that interns were able to attend Monday morning reports, we decided to pursue implementing a similar resident-taught EKG curriculum at the beginning of Thursday intern education afternoons. This was also approved by the Education Committee and was implemented in the 2013-14 academic year in a similar way as above. We chose to have interns focus on basic rather than particularly complex EKG diagnoses. Because faculty members were not consistently present at the beginning of the intern educational afternoons, we planned to have the physician attending on the St. Mary’s Hospital teaching service attend and act as a resource during these intern-taught teaching sessions.

**Outcome:**

Over the course of two academic years we successfully created and implemented a curriculum of EKG teaching and practice that is resident taught and faculty supported. As outlined above in the figures below it has been welcomed by residents and faculty as a helpful and educational element of weekly teaching sessions and has resulted in increased resident comfort with evaluating EKGs. We did much of the preparation work to establish this curriculum and as a result it can be easily sustained with the assistance of the DFM residency staff and continued in future years. It remains a starting point and could also easily be adapted by future residents or other individuals to meet the changing needs of residency training.

**Figures:**

Figure #1: Percentage of survey respondents who scored EKG sessions on a scale 1-5 (1=waste of time, 3=ambivalent, 5=very helpful, Unk=unknown). Blue bars represent residents, fellows, and faculty evaluating Monday morning report sessions (n=67 for academic years 2012-13 and 2013-14). Red bars represent interns evaluating Thursday afternoon R1 sessions (n=7 for 2013-14 academic year).
Figure #2: Percentage of survey respondents who agreed with the statement: As a result of the EKG sessions I feel more comfortable reading EKGs independently in a structured way (1=don’t agree, 3=ambivalent, 5=completely agree, Unk=unknown). Blue bars represent residents, fellows, and faculty evaluating Monday morning report sessions (n=69 for academic years 2012-13 and 2013-14). Red bars represent interns evaluating Thursday afternoon R1 sessions (n=7 for 2013-14 academic year).

Acknowledgements:
This project was truly the product of a team effort which most heavily involved participation by Drs. Liz Kvach, Jenn Mastrocola, and Matt Swedlund. Dr. John Beasley provided helpful input during the planning stages of this project and ongoing support. The DFM staff, particularly Dan Samuelson who laminated and distributed the EKG reading guideline and Lisa Tiedemann who oversaw and ultimately took over scheduling and who also paged the St. Mary’s Hospital faculty attendings on Thursday to remind them to come to intern presentations.

References:
Andrew Schmitt comes to Madison by way of New York, having earned his bachelor’s degree in Electrical Engineering at Rensselaer Polytechnic Institute before heading to State University of New York Upstate Medical University for medical school. Although he did not enter medical school, or even his clinical rotations, with a sense of which specialty he would ultimately practice, Andrew’s desire to treat each patient as a whole person drew him to family medicine. He connected with the community through medicine and science, whether working at the medical student free clinic or as a science fair mentor to local 5th grade students. During his time in medical school, Andrew also became interested in the link between healthy nutritional choices and the nation’s food culture, farming practices and knowledge of one’s food sources. Outside of medicine, Andrew finds time to make his own beer and wine. He also enjoys restoring and repairing cars, along with racing in autocross competitions.

Andrew Schmitt, MD

Projects Completed During Residency:

Community Health Project:

Verona Clinic Garden

Scholarly Project:

A Family Practice Inquiry Network (FPIN) Help Desk Answer: “What common food additives can cause acute, non-allergic symptoms?”
Verona Clinic Garden

Background: Obesity is a growing epidemic per CDC and WHO data, and healthy lifestyle choices can have a positive impact on many disease processes. Verona is a diverse community with people of a variety of backgrounds – rural farmers, blue collar workers, and young families that have moved in from all areas of the country to work for Epic. Though there is a strong tradition of farming in the Midwest, some patients, particularly those from more urban areas, may not be as comfortable or familiar with fresh produce or gardening.

Objectives: The Verona Clinic Garden was initially started by former residents Patrick McKenna and James Bigham as a method to raise awareness of healthy food choices by modeling a garden, and to offer some fresh produce to patients at the clinic, and hopefully cultivate interest in healthy eating patients of all ages and backgrounds.

Methods: During the first year of my involvement, James Bigham helped with planting, as did Steve Almasi during my second year, as well as some help maintaining the garden from some of the clinic staff. Example recipes were placed in the clinic waiting room for patients as well. I reached out to several potential community partners without success, though I do have some promising leads this year.

Results: Most of the produce grown in the garden was used by clinic staff, but some of the produce grown in the garden was placed in the waiting room for patients to use. Harvest was limited in the first year of my involvement in the garden due to severe drought. In the second year, a wet beginning to the season limited the success of some of the plants. Overall, I think that having recipes and produce available to patients and the garden on display helped raise awareness of healthy food choices and hopefully promoted our clinic as a place that promotes wellness, not just disease management.

Conclusions: While the patients enjoyed receiving produce, yields were limited by the fact that the garden was difficult to care for without a dedicated team of people to ensure regular watering and maintenance, due to its large size and my unpredictable schedule as a resident. Unpredictable weather was a challenge, as was caring for the garden during periods that I was not in clinic often to water. Over the course of this project, I learned that the garden was too large for me to effectively manage on my own. In order to continue the garden and make it more successful, I would recommend recruiting more assistance from fellow residents, staff, patients and/or community partners if able, or limiting the size of the garden so that it is more manageable with a smaller crew.

Acknowledgements: Thanks to Patrick McKenna and James Bigham for establishing the garden, and to Steve Almasi for his assistance in maintaining the garden.
Implementing Reach out and Read at the UW Health Belleville Clinic -- To aid in their development of language skills, children need to be exposed to words, the more the better. Reading can be an ideal way to promote that development. Reach Out and Read is a nationwide organization that works with clinics to give books to children ages 6 months to 5 years at their well visits. We partnered with Reach out and Read to begin offering books to children at their well visits using funding provided by the Belleville clinic. Our application was accepted, clinicians were trained, and we began to distribute books in May 2013. Since then we have distributed nearly 200 books.

---

Thank you to my amazing wife, Elizabeth for helping me through the hard times. Thank you to our son, Charlie, for making me a better doctor through first-hand knowledge of parenting. Thank you to parents, family and friends for putting up with us missing many events due to our resident work schedules over the past 3 years.

Thank you to the residency administrative staff who have kindly guided us through this process. They have offered often needed support, helped us through reams of paperwork, put together schedules for us to help us get the best training possible, and overall helped make it possible for us to get through this experience. You all are amazing!

— Matt
Electronic Medical Record Training Needs for Resident Physicians

Matthew P Swedlund, MD and John W Beasley, MD
University of Wisconsin Department of Family Medicine

Introduction

• Electronic Health Record (EHR) adoption has increased due to potential advantages in patient care as well as government initiatives such as Meaningful Use that reimburses EHR use.
• Training the physician workforce in EHR use has not been well studied, with existing research largely focusing on initial implementation of a new EHR system.
• Few studies have assessed approaches to ongoing training after an initial implementation.
• Much of the existing EHR training involves classroom based sessions led by non-physicians.
• Due to yearly turnover, residents are a population that needs to continually be trained in EHR use and are ideal for studying different training styles.

Methods

Sample
• 65 Family Medicine residents from 9 of the 11 Family Medicine programs in Wisconsin
• IRB exemption was obtained and program directors agreed to allow their residents to be recruited.
• Participants were recruited via email and informed consent was obtained.

Data
• An online survey was used created with the UW Quatrics survey hosting software

Measures

Demographic information was obtained from participating residents.

Survey items assessed satisfaction with formal (traditional, classroom-based) and informal (Q&A, peers, 1 or 1 reThursday sessions) training measured on a 1 to 5 Likert scale in the domains of:
• Efficient electronic documentation
• Placing patient care orders
• Finding relevant patient information
• Efficient inbox management
• Communication with patients and colleagues

Ratings of effectiveness of formal and informal training and whether they wished for more training

Analysis

• Descriptive statistics and chi square testing for significant associations

Results

Table 1: Participant Demographics (n=65)

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<tr>
<th>Program Name</th>
<th>Trainees</th>
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<tr>
<td>Aurora Health Care Program (Hartford) R1 Caho</td>
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<tr>
<td>Aurora Health Care Program (South Milwaukee) R1 Caho</td>
<td>12</td>
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<tr>
<td>Carroll Clinic (University of Wisconsin) R1 Caho</td>
<td>8</td>
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<tr>
<td>Columbia St. Mary’s (Medical College of Wisconsin) R1 Caho</td>
<td>5</td>
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<td>Sinai (Medical College of Wisconsin) R1 Caho</td>
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<td>University of Wisconsin Family Medicine Residency Program R1 Caho</td>
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<td>Wisconsin Institute for Medical Research R1 Caho</td>
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<tr>
<td>Wisconsin Primary Care Residency Program R1 Caho</td>
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Figure 1: Satisfaction with Training

Figure 2: Effectiveness of Formal versus Informal Training

Figure 3: Ratings of Effectiveness of Formal Training in Five Domains

Discussion

Conclusions
• Residents rate informal training better than formal training in all 5 domains studied suggesting that our current training models need to be reevaluated.
• None of the programs had physician-led formal training, however based on comments, that may lead to better training outcomes.
• Increased informal training built into curricula may help improve overall effectiveness of training.
• Inbox management and communication with patients and colleagues in particular are not amenable to formal training based on ratings and comments. This is especially important as we move towards management of panels and populations.

Limitations
• The study population was limited to resident physicians and only 2 different EHRs were represented, so this may not be generalizable.
• Small sample size with poor response rate (36%).

Future Directions
• Further evaluation of training practices is needed, ideally including interventional studies comparing specific training modalities.
• Future work could evaluate patient based outcomes such as effect of training on interacting with patients and EHR in the clinical encounter.

Acknowledgments
This project was supported by a Resident Research Grant (A3RRGG) from the AAFP Foundation as well as a Departmental Small Grant from the UW Department of Family Medicine. We gratefully acknowledge the program directors and residents of the Family Medicine programs who participated in our data collection.

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KEVIN THAO, MD

PROJECTS COMPLETED DURING RESIDENCY:

Community Health Project:
Wausau Area Hmong Community Health Improvement Plan (WAHCHIP)

Scholarly Project:
The Prevalence of Type 2 Diabetes Mellitus in a Wisconsin Hmong Patient Population -- Wisconsin's largest Asian population, the Hmong, may be at high risk for type 2 diabetes; however, there are few population-based studies investigating the prevalence of diabetes in this population. Using data from the University of Wisconsin Department of Family Medicine/Public Health Information Network data Exchange pilot study (PHINEX), this study compared the proportion of Hmong patients diagnosed with diabetes with non-Hispanic white patients. Stepwise multivariate logistic regression was used to control for the differences in age, sex, BMI, and health insurance between the two populations. Our results showed that, despite being one of Wisconsin's newest immigrant populations and coming from an area of the world with low rates of diabetes, the adjusted risk of diabetes in this clinic sample of Hmong patients is 230% higher than their non-Hispanic white counterparts. The results support previous findings of significantly increased diabetes risk in the Hmong of Wisconsin.

I would like to thank my wonderful wife Pa Houa for sticking with me through thick and thin and my four boys Christopher, Adam, Nathan and Noah who have always understood that their father’s profession can be demanding at times. Thank you for forgiving my absences at all the Christmases, birthdays, piano recitals and other family events I missed. Thank you all for your spirit and love.

– Kevin

Kevin Thao grew up in Wausau, WI, and earned his undergraduate, medical and M.P.H degrees at UW-Madison. His interest in improving Hmong health was sparked while a student at the UW School of Medicine and Public Health (SMPH), when he began investigating the health disparities facing that population. Kevin sharpened his research and public health skills during the primary care research fellowship he began before entering residency. During the first year of this fellowship he investigated the prevalence of diabetes in a Hmong clinic population and presented the results of his work at various public health and research conferences including a poster presentation at the North American Primary Care Research Group Conference (NAPCRG) in 2011. Through his residency training he continued working with the Hmong community in various projects promoting health education and improving health literacy, community health advocacy and organization, and health disparities research. Through these projects, Kevin has assessed the overall health status of the Hmong population and determined healthcare disparities and needs. He has shared this information with his colleagues at UW to help others become informed healthcare providers for the Hmong community. After Kevin finishes his residency training he will transition to a faculty position with the DFM’s Aspirus-affiliated residency clinic in Wausau, complete a DFM primary care research fellowship in Madison, and continue outreach work to improve the health of Hmong communities in Wisconsin.
Title: Wausau Area Hmong Community Health Improvement Plan (WAHCHIP)

Background:
This Partnership Development project aimed to establish a new coalition dedicated to developing culturally appropriate, community-driven, evidence-based strategies to reduce the risk and improve the management of chronic disease in Wausau area Hmong community.

The Hmong community of central Wisconsin, one of the state’s largest Asian communities, is currently facing an unprecedented burden of chronic disease. Hmong in Wisconsin face high rates of poverty (University of Wisconsin and Applied Population Laboratory), health illiteracy, and unsafe environments. These factors promote lifestyles that increase the prevalence of obesity, diabetes, hypertension, and cardiovascular disease. Twenty years ago, increased early obesity in Hmong children was reported (Himes et al 1992). More recent research has found significantly higher body mass index in second compared to first generation Hmong, raising concerns of chronic disease in the Hmong community (Franzen et al 2009). Locally, similar patterns have also been seen. In a convenience sample of Hmong adults, many of them living in the Wausau community, 41% had a positive screen for diabetes (random glucose levels above 140) (Her and Mundt 2005). A recent study in Wausau school children found that Southeast Asian students, primarily Hmong, had greater prevalence of cardiovascular disease risk factors than white students. The study noted that within a short period of time Southeast Asian youth developed risk factors equal to or even greater than their white counterparts (Hanlin et al 2009).

Objectives/Methods:
The leaders of the Hmong community are aware of the impact chronic conditions have on the quality of life of individuals and families. Hmong community leaders recognize that the first step in addressing any community issue is to gather a highly motivated, informed group of individuals committed to forming partnerships between key stakeholders within the community and local health and educational entities. The project set the foundation for a long-range plan that includes two phases of coalition work:
1) Develop the Wausau Area Hmong Community Health Improvement Plan (WAHCHIP) according to the findings of the preliminary Hmong community health assessment
2) Implement the WAHCHIP and assess the impact on chronic disease risk factors and management outcomes

Results:
In the Spring of 2014 there was established the first Hmong Health Coalition of Central Wisconsin. The coalition compromises members from diverse backgrounds with representation from the UW DFM, the Wausau Area Hmong Mutual Association (WAHMA), UW Steven’s Point, Aspirus Health, the United Way, the local Hmong community. This new coalition has now defined its mission and vision statement and will continue to work to implement a Hmong community health council comprised of community members who will guide a community needs assessment.

Conclusion:
There is important need to engage key stakeholders in the Hmong community to address health disparities. Once engaged these community members will become passionate champions of health in the community. The Wausau Area Hmong community is ready to address health and organizations such as WAHMA are willing community partners the community health improvement process.
Midwest Access Project Partnership -- The Midwest Access Project (MAP) is a regional center in Chicago for Family Medicine residents to receive training in reproductive health and advanced gynecology. More specifically, it is a site for our residents to gain increased proficiency in options counseling, reproductive technology, ultrasound technique, and placement of long acting reversible contraception (LARC). Given the significant barriers to receive this training such as scheduling, licensing, travel, and cost I created a “how to” guide in hopes that more residents may seek out these important skills and training in the future.

“Chop go mek wel bodi ehn chop na yu mehresin”

Scholarly Project:

Midwest Access Project Partnership -- The Midwest Access Project (MAP) is a regional center in Chicago for Family Medicine residents to receive training in reproductive health and advanced gynecology. More specifically, it is a site for our residents to gain increased proficiency in options counseling, reproductive technology, ultrasound technique, and placement of long acting reversible contraception (LARC). Given the significant barriers to receive this training such as scheduling, licensing, travel, and cost I created a “how to” guide in hopes that more residents may seek out these important skills and training in the future.

Sean Trafficante grew up in Portland, Oregon before heading to New Orleans, LA to learn about jazz. In the process he also earned his BA and MD at Tulane University. While in medical school, Sean’s work at the Daughters of Charity Clinic in the Ninth Ward showed him that helping people learn about their bodies and long-term health practices was the kind of medicine most suited for him. After he graduated from medical school in 2010, he spent a year in Sierra Leone with Doctors for Global Health, providing medical care and developing community-based initiatives to address sexual and gender-based violence. Following graduation from the University of Wisconsin Department of Family Medicine Sean remains committed to addressing the health of underserved populations and developing skills in reproductive health. Outside of medicine, Sean remains transfixed by the music and dance of West-Africa and believes that rhythm is resilience. “The traditional music of West Africa at once connects dance, endurance, meditation and social bonds ... I am blessed it has found me.”

Thanks Dad, for always supporting me when prompted, “Don’t let them make you crazy.”

Thanks Mom, you are with me for every patient.

Thanks Austin, you have a gift and your music has carried me through.

Thanks Mandjou and Maya for teaching me that “time is money.”

Thanks to all of the Wingra and DFM faculty for your commitment to my education over the past 3 years.

— Sean
“chop go mek wel bodi ehn chop na yu mehresin”

- A Nutritional Curriculum-

for Project 1808 Volunteers in Kabala, Sierra Leone

**Background:** This project grew from two sources. The first, was a conversation held by a the waterfall in Kindia, Guinea in 2012 with Nyakeh Moiwai, a university student from Sierra Leone, who was curious about what foods are important to promote long-term health and avoid chronic disease. The second was a collaboration with Project 1808 a Madison, Wisconsin based non-profit organization dedicated to improving community livelihood and technical capacity in Sierra Leone through school, university, and community projects and global partnerships. Beginning in May of 2013 Project 1808 held the first Sustainability Innovation Camp (SIC) for 200 primary and secondary school students as well as adults in Kabala, Koinadugu District, Sierra Leone. The camp was facilitated by 10 University of Wisconsin Madison students and counterparts from University of Sierra Leone. Their aim was to engage the community in critical thinking to generate pragmatic solutions in much needed areas including but not limited to solar energy, water resources, sanitation, waste management, micro-finance, health and nutrition.

**Objectives:** The goal of my project was to develop a nutritional curriculum suited to various education and literacy levels, languages and adapted to the local environment in Sierra Leone that could be used as a tool during the SIC. Inherent in the design was that it could be used by local and visiting volunteers from Project 1808. The materials could then be distributed to student participants and used to teach within the community through a “teaching of teachers” model. The curriculum was adapted from material found within the Hesperian health guide library with collaboration from USL students and Project 1808 course leaders.

**Methods:** There was significant consideration given to language and technology. The final paper document utilizes basic English, Krio and abundant images for ease of comprehension. Additionally, the document is available online through file sharing to promote ongoing curriculum development.

**Results:** The resulting curriculum was utilized in May 2013 at the Kabala workshop and was met with significant enthusiasm. Students and community members expressed considerable interest in specific food with healing capacity. Educators found the document easy to use and well suited to the local environment. The curriculum will be used again in May 2014 at the second workshop. Additions to the curriculum presentation include obtaining local fruits, vegetables, grains and other items to facilitate teaching.

**Conclusions:** Through the collaboration with 1808 the nutrition curriculum generated increased awareness of health and practical problem solving ideas to improve nutrition. Through this process I learned about knowledge transfer and adapting broad ideas about nutrition to a specific situation. Future directions include obtaining data to understand how individual diets may have been changed following exposure to this curriculum. Other possibilities include tracking how proposed solutions generated as a result of the curriculum (ie. school farms, fruit dehydration, improved water quality) are impacting the community.

**Acknowledgments:**

-Nyakeh Moiwa

-Dr. Alhaji Njai

-Linda Vakunta

-Hesperian Health Guides
“chop go mek wel bodi

ehn chop na

yu mehrehsin…”

GO: Good food gives our bodies energy and helps us move, work hard, learn and think well.

GROW: Good food makes a person grow well and stay healthy.

GLOW: Good food makes us bright, makes our skin, hair and teeth beautiful, allows our muscles and organs inside our bodies to work properly and protects us from infections and other health problems.

Much common sickness comes when we do not eat many different foods and do not get the vitamins and minerals we need. By eating many different healthy foods each day, we can prevent many serious health problems.

But not all foods make us healthy. Factory-made foods in plastic contain too much salt, fat, and sugar. These foods can cause or increase health problems like diabetes, heart disease and obesity.

Oiskin chop allman for eat?

1) MAIN FOODS
Most people eat one main low-cost food with almost every meal. This main food gives energy to get through the day and most of the body’s daily food needs (carbohydrate).

- rice
- corn
- wheat (bread, bulgur)
- cassava
- potato
- banana

However, the main food alone is not enough to keep a person healthy.

2) HELPER FOODS
These should be added in smaller amounts to the main food.

GO FOODS Add high energy helper foods (carbohydrates and fats).

- vegetable and palm oils
- animal fat/butter
- avocado
- ground nuts, tree nuts and seeds
- coconut

GROW FOODS Add body building helper foods (proteins).

- beans and peas
- eggs
- ground nuts, tree nuts, and seeds
- meat that is available where you live: large or small animals, birds, fish, shrimp
- milk, cheese, and yogurt

GLOW Also try to add protective helper foods (vitamins and minerals).

- squash
- melon
- peppers and chilies
- berries, including edible wild berries
- mango, papaya, guava, oranges, and other tree fruits
- leafy greens— including potato leaf and cassava leaf
The main foods and 'go foods' give us the energy to run, work and play.

Adapted from advance chapters of New Where There is No Doctor. 2013. Permission granted by Hesperian Health Guides.
Aw ar go eat for get wel bodi?

When possible choose local grains and brown colored grains.
Local rice, wheat, and other grains are most nutritious if their outer skins are not removed during milling. Moderately milled rice and whole wheat contain more proteins, vitamins, and minerals than the white, over milled product. Heavily milled white flour and white rice provide only energy. Grains like millet, buckwheat, and sorghum are even better because they have more protein, vitamins, and minerals.

Avoid factory and packaged foods
Packaged white breads, biscuits, and noodles lack the nutrition found in home-cooked main foods (like porridges and grains). They often have too much sugar, fat and salt.

Smol smol sugar, oil and salt
Sugars and oils give energy, and small amounts of these are needed for health. Too much can lead to problems over time such as rotten teeth, diabetes, heart disease, and some cancers. Too much salt can also raise the blood pressure which can cause stroke.

Eat plenty of protein
You can be just as healthy eating beans, nuts and eggs as you can by eating meat. Plant proteins often cost less than meat to grow or buy.

Eat plenty of fruit and vegetables
Try to eat fruits and vegetables every day. The fruits and vegetables that grow where you live are as healthy as imported ones. They usually cost less or are free. A mix of different colored vegetables and fruits gives a better variety of vitamins and minerals.

Do not buy soft drinks or sweets
These should only be eaten on special occasions. Instead spend your money on groundnuts or eggs.
Get vitamins from food (not from tablets or injections)

Anyone who eats a good variety of foods, including vegetables and fruits, gets all the needed vitamins. Save your money for fresh food— not expensive vitamin supplements. They are needed only in severe deficiency and pregnancy. Getting frequent injections raises the risk of abscesses, hepatitis, and HIV. Here are some suggestions for getting more vitamins, minerals, and proteins at low cost.

-Eat liver, heart, kidney, and blood. These are especially high in protein, vitamins, and iron (for anemia) and are often cheaper than other meat.
-Also fish is often cheaper than other meat, and is just as nutritious.
-Cook vegetables, rice, and other foods in little water. And do not overcook. This way fewer vitamins and proteins are lost. Be sure to drink the leftover water, or use it for soups or in other foods.
-Cooking in iron pots or putting a piece of old iron in the pan when cooking beans and other foods adds iron to food and helps prevent anemia. Also cook with tomatoes.

DE CHOP WE FINE PASMAK KOMOT NAR GROUND.

Aw ar nor go get de new siknes dem?
Diabetes, heart disease and obesity are health problems caused by changes in how people eat and work. They are rare where people still gather, grow, and cook their own food or work as farmers. As more people have less control of their work and get a limited amount of physical exercise (working in factories or in front of a computer, for example) and they rely more on factory-made foods, these diseases become more common. They are not caused by germs and cannot be spread from person to person. They are caused by a lack of activity, unhealthy eating, and increased stress in our lives. Our bodies do not work well in these conditions.

1) DIABETES
Diabetes is a problem in which the body does not use sugars in food properly. It can lead to blindness, loss of limbs, coma, or even death. Diabetes has become extremely common in rich countries like the US, and is now growing more common all over the world. Its food-related causes include eating too much, eating unhealthy foods, and a lack of exercise. Wherever factory-made, white flour and high sugar foods take over, diabetes follows.

2) HEART DISEASE, HIGH BLOOD PRESSURE, HEART ATTACK, STROKE
These are different parts of what is really one health problem. Unhealthy food and a lack of exercise (along with smoking and stress) cause fat to build up inside the blood vessels. As a result, the heart must pump harder to force the blood through these thickened vessels causing high blood pressure. The heart grows tired and weak from all this effort. Blood which cannot flow freely clots up, and the heart, exhausted and without a flow of blood, stops working, causing a heart attack. If this happens in the brain it is called a stroke.

3) OBESITY (WE POSON GET BODI TOO MOS)
To be very fat is not healthy. Very heavy people are more likely to get high blood pressure, stroke, gallstones, some kinds of diabetes, and arthritis in legs and feet. Sometimes being too heavy brings on illness, and sometimes illness may cause you to become too heavy. As our diets change and traditional foods are replaced by processed
foods, especially “junk foods” high in sugar but low in nutrition, people tend to gain weight in ways that are not healthy.

4) TREATMENT AND PREVENTION
There are many things we can do as individuals and in our families to prevent and treat diabetes, heart disease and obesity.

**Exercise:** Fast walking, dancing, sports, or any exercise that speeds up your heart rate for 30 minutes or more a day is needed for every system in your body to function well. Exercise strengthens bones, gives a feeling of energy, improves mood, and helps you live longer. It is an essential way to prevent and treat both diabetes and heart disease.

**Food:** A diet with plenty of fresh vegetables, whole grains, and beans is best both for preventing and treating heart disease and diabetes. SEE PAGES 2-3.

Red meats, dairy, and eggs are healthy foods, but if eaten in every meal or even every day, they make heart disease more likely. So eat them a few times a week or less.

- Sweets and processed foods are not needed at all, and eating them every day can lead to diabetes.
- Fat is needed in small amounts but leads to both heart disease and diabetes if eaten in large amounts. Red meat, palm oil, deep-fried food, and factory foods are the main unhealthy sources of fat. Try to eat less of these. Nuts, avocados, and fish are healthy sources of fat and provide other nutrients too, so are better choices.
- Salt can also worsen heart disease if eaten in large amounts. If you have heart disease or high blood pressure, avoid salty, packaged foods. Canned foods almost always contain too much salt. When flavoring your food, use only a little salt, or use herbs or spices instead.
Diabetes Performance in Practice Module --
The Diabetes Performance in Practice Module through the ABFM consists of introductory materials and an interactive quality improvement development process. Through questionnaires and review of clinical data, I determined that a significant percentage of my diabetic patients weren’t scheduling yearly eye examinations. Therefore, I developed a workflow which placed more emphasis on improving the rate of referral to eye professionals. Review of post-quality improvement comparative reports show 50% improvement in compliance with dilated retinal exams.

Scholarly Project:
Cervical Cancer Screening Update

Quality Improvement Project:
Diabetes Performance in Practice Module --
Nathan Vakharia earned his undergraduate degree in Zoology from UW-Madison and spent time working in research here before completing his medical degree with the UW School of Medicine and Public Health. One of Nathan’s goals in becoming a family physician is to develop meaningful relationships with both patients and their families. During medical school, Nathan completed a longitudinal, community-based service project to improve rural emergency medicine education for family physicians. He served as a co-leader of the Rural Health Interest Group and interned with the Wisconsin Medical Society Foundation where he worked to build relationships with rural healthcare facilities, professional organizations, and educational institutions to spread information about the Wisconsin Comprehensive Life Support Program. Nathan is one of two graduates in the first class of the UW’s Wisconsin Academy for Rural Medicine (WARM) program, which is working to increase the number of physicians who practice in rural Wisconsin.
**HPV Update**

- Elizabeth Matera, MD & Nathan Vakharia, MD
- Faculty Mentor: Bridget Delong, MD

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**Cervical cancer screening guidelines**

- American Cancer Society (ACS)
- American Society of Colposcopy and Cervical Pathology (ASCCP)
- American Society of Clinical Pathology (ASCP)

- U.S. Preventive Services Task Force

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**USPSTF grade and suggestions for practice**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Definition</th>
<th>Suggestions for Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>The USPSTF recommends the service. There is high certainty that the net benefit is substantial.</td>
<td>Offer or provide this service.</td>
</tr>
<tr>
<td>B</td>
<td>The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.</td>
<td>Offer or provide this service.</td>
</tr>
<tr>
<td>C</td>
<td>Note: The following statement is undergoing revision. Clinicians may provide this service to selected patients, depending on individual circumstances. However, for most individuals without signs or symptoms there is likely to be only a small benefit from this service.</td>
<td>Offer or provide this service only if other considerations support the offering or providing the service in an individual patient.</td>
</tr>
<tr>
<td>D</td>
<td>The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.</td>
<td>Discourage the use of this service.</td>
</tr>
<tr>
<td>I</td>
<td>Statement</td>
<td>The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.</td>
</tr>
</tbody>
</table>

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**Cervical cancer screening guidelines**

- Cervical cancer screening should begin at age 21
  - Women < 21 should not be screened regardless of age of sexual onset (D recommendation)
  - “Recommended screening practices should not change on the basis of HPV vaccination”
  - Note: Guidelines do not apply to special populations (history of cervical cancer, DES exposure, immune compromise)

---

**Screening for ages 21-29**

- Cytology alone every 3 years
- HPV testing “should not be used to screen” in this age group (D recommendation)
  - Not as a component of cotesting
  - Not as a primary stand-alone screen

---

**Screening for women ages 30-64**

- Cytology + HPV testing (cotesting) every 5 years is preferred (A recommendation)
- Cytology alone every 3 years is acceptable
When to stop screening

- Stop at age 65 for women with adequate negative prior screening (D recommendation):
  - 3 consecutive negative Pap tests
  - 2 consecutive negative HPV tests
    - AND
  - No CIN2+ within the last 20 years

- Screening “should not resume for any reason, even if a woman reports having a new sexual partner”

When to stop screening

- Stop after hysterectomy with removal of cervix and no history of CIN2+ (D recommendation)
  - “Evidence of adequate negative prior screening is not required.”

When NOT to stop at age 65 years

- If history of CIN2, CIN3, AIS
  - Continue “routine screening” for at least 20 years “even if this extends screening past age 65”

Screening for cervical cancer

Rationale for Changes

- Natural History of HPV infection and development of cervical cancer
- Epidemiology of high and low-risk groups
- Effectiveness of screening intervals
- Risks of screening
- Utility of HPV Co-testing
Initial Screening – starting at 21

• Natural History/Epidemiology
  – HPV infection is common in adolescent and young women (up to 57% of sexually active adolescents)
  – Cervical cancer is quite rare: 1-2 in 1 million

• Risks of Screening
  – Anxiety
  – Unnecessary procedures possibly leading to adverse outcomes
    • Association of LEEP and pre-term delivery

Discontinuing Screening

• Epidemiology
  – *If women have been screened appropriately*, the incidence of abnormalities declines as of the fourth decade of life
  – For women with total hysterectomies for reasons other than cervical cancer, there is a very, very small risk of subsequent vaginal cancer
    • One study: 1% of 10000 vaginal cuff smears were positive for abnormal cytology, and these had 0% PPV for vaginal cancer

Discontinuing screening

• Risks of screening
  – Unnecessary procedures
  – Opportunity costs: overlooking more important health care issues during visits for screening or follow-up for abnormal results

Frequency of Screening

• Natural History of Disease
  – 10 to 20 years = duration of treatable phase

• Effectiveness of screening
  – Reduction in incidence of invasive cancer does not change much when the screening interval is increased from 1 to 3 years
  – Addition of HPV co-testing greatly increases sensitivity and allows further increase in screening interval, from 3 to 5 years

Frequency of Screening

• Risks of screening
  – Annual screening doubles to triples the number of additional studies and interventions
  – In one study, 110 women had to have 231 additional interventions to find one case of serious cervical pathology

HPV Co-testing

• <30 years of age more likely transient HPV infections, leading to unnecessary colposcopies.
• >30 years of age, appears to result in earlier diagnosis of high-grade lesions.
  • Negative cytology + negative HPV confers extremely low risk for CIN3 or greater during the next ten years.
• Any HPV screening (with or without Pap smears) increases the number of positive results from screening and the number of colposcopies performed.
Follow-up for Abnormal Results

Definitions

SIL = Squamous Intraepithelial Lesion
CYTOLOGICAL
L = Low-grade
H = High-grade

CIN = Cervical Intraepithelial Neoplasia
HISTOLOGICAL/PATHOLOGICAL

CIN 1 and LSIL
- Mildly atypical cellular changes
- Not considered a cervical cancer precursor
- Usually caused by low-risk HPV types
- 15% will progress and up to 75% will regress spontaneously

ASC-US and ASC-H
- Atypical Squamous Cells
  - ...of Unknown Significance: changes that are more than reactive but do not meet criteria for Squamous Intraepithelial Lesion
    - 15% lead to diagnosis CIN 2 or greater on biopsy
    - 0.2% lead to diagnosis of cervical cancer
  - ...High-grade lesion cannot be excluded
    - 38% lead to diagnosis of CIN 2 or greater on biopsy
    - 2.7% lead to diagnosis of cervical cancer

CIN 2,3 and HSIL
- High-grade lesions
- Considered true cancer precursors
- Up to 40% of CIN 2 will regress spontaneously
Cervical Intraepithelial Neoplasia Grade 1 (CIN 1)

- Generally can follow as outlined on ASC-US, LSIL, and HSIL algorithms (pap at 6 and 12 months or HPV at 12 months with follow-up as indicated)
- If colposcopy must be repeated
  - Manage anything greater than CIN 1 accordingly
  - Persistent CIN 1 (at least 2 years) can be treated or followed
  - Colposcopy negative for CIN would go back to cytology/HPV as above

Cervical Intraepithelial Neoplasia Grade 2 or 3

- Excision or ablation of transformation zone
- Follow with one of the following acceptable approaches:
  - Cytology at 6 and 12 months OR
  - HPV DNA testing at 6 and 12 months
- Return to colposcopy if positive either time
- Return to routine screening if negative x 2; screening must be done for at least 20 years after treatment for CIN 2 or 3
Cases for practice

Case #1 - Screening
• 24yo woman in for first prenatal visit 9/27/12 with EDD of 4/20/13
• Last pap smear 6/15/11 – negative

Case #2 - Screening
• 65yo woman in for well visit 9/27/12
• No history of abnormal pap smears
• Last pap smear 9/25/09 – negative

Case #3 - Screening
• 65yo woman in for well visit 9/27/12
• History of ASCUS on pap smear in 2002
• Negative subsequent testing, including pap smears annually through 9/2011

Case #4 - Screening
• 65yo woman in for well visit 9/27/12
• History of CIN 3 on colposcopy and subsequent LEEP in 2002
• Negative subsequent testing, including pap smears annually through 9/2011

Case #5 - Screening
• 35yo woman in for well visit on 9/27/15
• Last pap smear 9/27/12 – negative
• Also had negative HPV co-testing

Case #6 - Screening
• 45yo woman in for well visit 9/27/12
• Total hysterectomy 10/2011 for DUB/anemia
• Had CIN 3 on colposcopy with subsequent LEEP in 2010 and normal pap smear 9/2011

Case #7 – Follow-up
• 34yo in for visit on 9/27/12
• ASCUS with positive HPV 2 years ago
• Normal subsequent colposcopy
• Normal pap smear last year with positive HPV

Case #8 – Follow-up
• 47yo woman with HSIL on pap smear
• Colposcopy done with biopsy showing CIN 1
• ECC is negative

Case #9 – Follow-up
• 28yo woman in for first prenatal visit
• Last pap smear 2 years ago showed LSIL with no follow-up at that time

Case #10 – Follow-up
• 42yo woman with history of
  – ASCUS and +HPV 11/3/2010
  – Negative colposcopy 11/11/2010
  – LSIIL and –HPV 5/31/11
  – ASCUS and –HPV 1/25/2012
  – LSIL 7/12/2012
Case #11

- 32yo woman with history of
  - ASCUS with +HPV 5/2009
  - Colposcopy with insufficient ECC and negative biopsy 7/2009
  - Pap at the same time normal with +HPV
  - Pap normal with no HPV done 5/2010

Case #12

- 22yo woman with LSIL and +HPV 11/2010
- Colposcopy 12/2010 with no biopsy or ECC, showing likely CIN 1 (in judgment of OB/Gyn)
- Negative pap smear 9/2011
- Pap smear with ASCUS and +HPV 9/2012

References


- http://www.asccp.org/Portals/9/docs/pdfs/Practice%20Management/ASCCP_Cervical_Cancer_Screening_Recommendations.pdf#zoom=80
A Family Practice Inquiry Network (FPIN) Help Desk Answer: “In patients with dyspepsia that are H. pylori positive, is H. pylori eradication treatment better than proton-pump inhibitor therapy in preventing recurrent dyspepsia/gastritis?” -- Co-authored with Magnolia Larson, MD. Article not yet completed at time of submission for Senior Night. While trials directly comparing H. pylori eradication therapy with proton-pump inhibitor therapy are somewhat lacking, available evidence mostly suggests that H. pylori eradication is more effective than PPI alone.

Sports Physicals for Uninsured/Underinsured in Verona

Scholarly Project:

A Family Practice Inquiry Network (FPIN) Help Desk Answer: “In patients with dyspepsia that are H. pylori positive, is H. pylori eradication treatment better than proton-pump inhibitor therapy in preventing recurrent dyspepsia/gastritis?” -- Co-authored with Magnolia Larson, MD. Article not yet completed at time of submission for Senior Night. While trials directly comparing H. pylori eradication therapy with proton-pump inhibitor therapy are somewhat lacking, available evidence mostly suggests that H. pylori eradication is more effective than PPI alone.

A special thank you to my wife Christie, who has truly been my partner in everything.

— Joe
Sports Physicals for Uninsured/Underinsured in Verona
Joseph Wolfe, PGY-3
Community Health Project, 2013-2014
UW-Madison Department of Family Medicine

**Background:** Pre-participation exams were offered at no cost to students in the Verona area who were identified as either uninsured or underinsured. This was done not only to provide a community service, but also to identify if there were students in the area who would benefit from such a service. The identification of students in need was achieved through collaboration with the Verona High School nurse.

**Objectives:** The primary objective of this project was simply to provide sports physicals for student athletes who lack health insurance, and as such the cost might be a barrier for their sports participation. There were many secondary objectives as well. These included learning how to connect with community resources, working with clinic staff to provide a community service, and learning if there was a need for such a service in this area.

**Methods:** I initially connected with the school nurse at Verona High School in Spring 2013 to see if there might be some students in need of pre-participation exams. She noted that there are often several HS students for whom getting a physical is a challenge due to lack of insurance. There are mass pre-participation exams offered every August in Madison at no cost, but it may be difficult for students from Verona to make this event, and it is only offered once every year. The nurse usually learns about students in need just prior to the beginning of each sports season, particularly before Fall sports. Arrangements were made with clinic staff to provide an after-hours clinic for these physicals at the end of July, and patients could be scheduled by reception. Sports medicine physicians John Wilson, MD and Kathleen Carr, MD offered guidance in this process. Dr. Wilson graciously agreed to provide faculty staffing for the event.

**Results:** Pre-participation exams were scheduled after regular clinic hours on July 22, 2013. There were 6 physicals performed, and included a mix of uninsured and Medicaid patients. Needed vaccinations were provided without a charge. Prior to the Winter sports season, I discussed with the school nurse that free physicals could again be done on an individual basis. Two more PPE’s were scheduled through the school nurse, including a middle school student who was brought to clinic by the school counselor. These were scheduled at the end of the clinic day. The clinic manager later received a call from a school principal about a middle school student in need of a physical, and this again was provided.

**Conclusions:** Providing free pre-participation exams seemed to meet at least a small need in the community. Challenges included getting patients scheduled, obtaining parental consent in some cases, and providing vaccines. It would be helpful if this were a recurring event for which there could be a somewhat formal process established at clinic. Also, if it were an annual or even more frequent event, we could look at how to promote it to some degree to get the word
out and meet the need in the community. Personally, this provided a valuable learning experience where I partnered with both clinic and community resources to serve the community in which I work.

**Acknowledgements:**
John Wilson, MD – faculty staffer, UW Sports Medicine
Thomas Hahn, MD – resident
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Jessi Middaugh – reception supervisor, Verona clinic