As a primary care physician in a patient-centered medical home, I need actionable solutions for my chronically ill patients.

When a chronic patient wasn’t getting better, I turned to Best Doctors to seek answers virtually from expert specialists:

- Patient is a 65-year-old woman with episodes of skin irritation, light-headedness and gastrointestinal discomfort.
- I was unable to identify triggers or patterns of these episodes, so I submitted the case to Best Doctors for review.
- The Best Doctors clinical team synthesized my patient's case and identified a nationally recognized specialist to assess it.
- The Best Doctors specialist assigned to my case reviewed my patient’s medical history, symptoms and diagnostics.
- He provided differential diagnoses, recommendations and treatment options, all in a well-written and researched report.

The response was exactly what I needed – concise, informative, and full of details and steps that I could easily follow. Constructing such a well-researched report in my busy practice would be near impossible, but with Best Doctors, I received an excellent report in less time than referring my patient to a specialist. Most practices can identify a few challenging cases where this virtual service would be helpful.

In today's medical home practice model, Best Doctors gives me the power to improve outcomes for my chronically ill patients.

Dr. Messics is presently a member of the Best Doctors PCMH Advisory Council.

LEARN MORE at www.bestdoctors.com/MedChi
Features

Introduction
Mark G. Jameson, MD, MPH

Commentary on 2014 Legislative Agenda
Stephen J. Rockower, MD

MedChi's 2014 Legislative Agenda

Maryland Physicians Lead New Quality Improvement Initiative: Innovative Pilot Program Tackles Hypertension Control in the Ambulatory Setting
Karen Kmetik, PhD

Community Tailored Partnerships That Work: Implementing New Models of Primary Care in the State of Maryland
Niharika Khanna, MBBS, MD, DGO

Transforming Communities to Support Health: Highlights from Maryland's Community Transformation Grant
Donald Shell, MD, MA, Vanessa W. Harris, MD, Sara Barra, MS, Erin Penniston, MSW, Jeff Norris, PhD

Bug Bites: A Maryland Menu
Mark G. Jameson, MD, MPH

Departments

President’s Message
H. Russell Wright, Jr., MD

CEO’s Message
Gene Ransom, III, Esq.

Editor’s Corner
Bruce M. Smoller, MD

Word Rounds
Barton J. Gershon, MD

Personal Perspective
Tyler Cymet, DO, FACP, FACOFP

The Last Word
A New Year's Resolution That Doesn’t Require a Gym Membership

H. Russell Wright, Jr., MD

Most of us make New Year’s resolutions of one type or another. Our lists of New Year’s resolutions are often longer than our holiday shopping list. To spend more quality time with our families. To lose weight. To work less. To volunteer more. Does this sound familiar? What’s the status of these New Year’s resolutions come mid-February when the holiday decorations have been put away and it’s cold outside?

I want to recommend a New Year’s resolution that will truly make a difference. A resolution that will help you, your practice, and your patients, and it doesn’t cost what a gym membership does.

Resolve to become a better constituent. As with losing weight, being a better constituent does require behavior modification. We weren’t born knowing how to be a good constituent. Even though we may have learned about the three branches of government in eighth grade, these lessons didn’t come with a how-to manual. We certainly didn’t learn about the importance of grassroots activism in medical school. I assure you, however, that it’s really not difficult.

The Maryland General Assembly convened on January 8. Until mid-April, we have a chance to affect legislation that impacts our practices and our patients. Whether you have five minutes or five hours, you can use your medical knowledge together with your experience in the trenches to improve the environment in which we practice every day, and make a difference for your patients on a public health issue.

What Can You Do in Five Minutes?

You can become familiar with MedChi’s 2014 Legislative Agenda. The 2014 Legislative Agenda is included in this issue (see pg. 11). You will note that MedChi’s focus is on advocating for physicians, patients, and public health.

Tort reform, improving Maryland’s payment climate, the scope of practice of physician extenders, step therapy, and dispensing will be some of the hottest issues in this session. Share this agenda with your medical colleagues and encourage them to join MedChi so we can be better advocates for physicians and patients. Making others aware of the importance of grassroots involvement makes you a better constituent.

You can send an email or make a phone call to your delegates or senator when MedChi and/or your component send you a legislative alert about a bill that MedChi is opposing or supporting. (To learn who your delegates are, go to the Legislative Action Center at www.medchi.org/law-and-advocacy. Put in your home address, and, like magic, your district’s three delegates and senator will appear.) There will be a sample email that you can personalize with your own experiences related to the bill. Once you hit “send,” you will feel the sense of involvement. You will have just become a better constituent.

What Can You Do in Five Hours?

You can testify at a committee hearing. Let our lobbying team or your component executive know of your interest and expertise on a topic, especially if it is included on MedChi’s Legislative Agenda. Providing compelling testimony is a key ingredient of an effective legislative strategy.

You can participate in your component society’s lobby day. Find out when your component society is going to Annapolis to meet with your county’s delegation. A list of component lobby days is included in this issue of Maryland Medicine (see pg. 10). The day starts with a legislative briefing at MedChi, at which talking points will be provided about each bill, followed by individual meetings with legislators at which you share your perspective on these bills. Face-to-face communication and ongoing relationships with legislators are the cornerstones of being a good constituent.

You can make a difference in five minutes or five hours between now and mid-April when the session concludes. It’s cheaper than an unused gym membership, and just as satisfying knowing that you are a better constituent and a MedChi Legislative Team Member.
From Tobacco to Tanning Beds—
It’s About Children and Cancer

Every winter as the Maryland General Assembly prepares to reconvene, MedChi has a robust legislative agenda that fits our mission as the foremost advocate for physicians, patients, and the public health of Maryland. For the last few years, the public health piece of that agenda has focused on children. This year will be no different, as we work on issues related to tobacco cessation and childhood obesity.

One issue that we have been working on for several years—tanning bed use by minors—recently resulted in a nice win for Maryland’s public health. With strong advocacy from MedChi, the Maryland Chapter of the American Academy of Dermatology and the Maryland Chapter of the American Academy of Pediatric Physicians, the Maryland Department of Health and Mental Hygiene (DHMH) finalized revisions to the form that tanning facilities must use to obtain consent from a parent or legal guardian before a minor may use a tanning device. State law enacted in 2008 prohibits tanning facilities from allowing minors to use tanning devices without written consent from a parent or legal guardian. A new stronger form will be required as a result of that law that took effect on December 15, 2013.

After several public hearings, the Maryland Council on Cancer Control voted to amend the consent form to include the following statements.

"Indoor tanning can cause skin cancer. Skin cancer can be fatal. To reduce the risk of skin cancer, the American Academy of Pediatrics recommends that children under 18 never use tanning devices."

At its September 2013 meeting, the Council on Cancer Control unanimously supported the language, and the Maryland DHMH announced it would accept the recommendation.

The new form requires presentation of an official government-issued identification as part of the verification process. A parent may use this form to consent to a single visit or to multiple visits to a tanning facility, and the parent’s consent will be considered valid and effective for a period of up to six months. This is much stronger than the previous consent form, and it is possible this ruling could be challenged in court by the Maryland Indoor Tanning Association.

MedChi worked hard with other medical societies to advocate for a complete ban for minors, and continues to support that policy. However, this incremental change to the law does improve children’s health through forced parental involvement, and we should see reduced use of tanning beds and reductions in melanoma cancer indications.

This session as we look to public health concerns, we also will be focused on tobacco issues and childhood obesity. Again, it is about children. Reducing access to tobacco and helping children make smart choices about sugary drinks will improve public health. MedChi has a long history on tobacco issues as the manager of Smoke Free Maryland, and as an early supporter of the Indoor Air Act and higher tobacco taxes. One in three children in Maryland are overweight or obese. We are currently working on several grants with partners to raise awareness about the obesity epidemic, following the leadership shown by the Maryland Academy of Pediatric Physicians.

We will release more details on MedChi’s obesity and tobacco legislative initiatives after the legislative session begins in January. MedChi spends a lot of energy and time advocating on payment issues and tort and health system reform, but clearly we have not and will not forget our role as the foremost advocate for the public health of Maryland.

A MESSAGE FROM MEDCHI’S PRESIDENT-ELECT

In the changing structure of today’s healthcare system, new relationships and redefined responsibilities are moving physicians into new roles and ways of practicing medicine. New administrative procedures affect the choice architecture available for physicians and patients.

With these changes occurring, MedChi is working to focus on issues that impact patients, physicians, and the medical profession, issues that will define physicians in the future.

Starting with the September issue of Maryland Medicine, MedChi will focus on the evolving role of physicians within the healthcare system.

We need your help and input!

What issues do you think are going to have the greatest impact on the practice of medicine? What fears keep you up at night as a physician (besides being on call)? Please share your ideas and concerns as we proactively address the topics of importance in the ever-changing healthcare landscape.

Tyler Cymet, DO
President-Elect
president-elect@medchi.org
"When it comes to Meaningful Use, athenahealth did all the legwork... and then they made it easy for me to do."

-Dr. Reavis Eubanks

This is how Dr. Eubanks got paid for Meaningful Use.

After practicing medicine 35 years, Dr. Reavis Eubanks knew it was time for an EHR. As a solo physician, he needed an easy transition and an effective way to begin earning up to $44,000 in Medicare incentive payments.

athenahealth helped Dr. Eubanks go from paper to payment in just six months. His practice received guidance every step of the way, and enjoys proven, cloud-based services, including:

- Best in KLAS EHR*
- Free coaching and attestation
- Seamless clinical workflow
- Guaranteed Medicare payments**

In 2012, an industry-leading 96% of eligible athenahealth providers attested to Stage 1 Meaningful Use. And we're ready for Stage 2.

As a Professional Association of Health Care Office Managers member, you may qualify for an 8% discount on our cloud-based practice management, EHR and care coordination services.

Visit athenahealth.com/MSMS or call 800.981.5085

*Ambulatory EHR (1-10 physicians), as reported in the 2012 Best in KLAS Awards report
** If you don't receive the Federal Stimulus reimbursement dollars for the first year you qualify, we will credit you 100% of your EHR service fees for up to six months until you do. This offer applies to HITECH Act Medicare reimbursement payments only. Additional terms, conditions, and limitations apply. This discount offer is available to any medical practice that: (1) is comprised of physicians who are all members of the Professional Association of Health Care Office Managers; (2) signs an initial contract for athenaOne™; (3) if it qualifies for the free implementation offer, pays a deposit of $1,150 per MD, which will be credited back to that practice after it goes live on all contracted services; (4) uses athenahealth's online implementation process if it has six or less providers; and (5) goes live on athenaCollector™ within six months of the effective date of the contract. This promotion may not be combined with any other promotional offer and may be modified or canceled at any time at athenahealth's sole discretion. Additional terms, conditions, and limitations apply.
There is a house near my home whose Christmas decorations make me feel happy. In fact, I worry each year that the house has been sold, or the occupants have decided to take a vacation at Christmas, such that the lights would not go up as they do each year around the first of December. I know that other houses have prettier or more stately designs, but this particular house just makes me feel good when I look at it. It’s a bit like abstract expressionist painting...the abstract artist doesn’t care if you love her picture or hate it...as long as it arouses passion. Neutrality is anathema to them. I am even tempted at various sentinel times of the year to leave a little note in its mailbox exhorting its occupants to remember me (whom they do not know) come December and not to forget to decorate. True to the spirit of the season and the magnanimity of the occupants, the lights have gone up...giving me a reason to go a little out of my way each night. Some people have a drink at 6:00, some watch the Simpsons. I have my lights.

I mention this because there is ample reason to need cheering up for us physicians. I was going to use the phrase “of late,” but that is not true...the assault on medicine as we know it has been going on for a while now. I would say it’s getting old, but I know it’ll get older still a year from now, and two and three.

I just returned from the AMA interim meetings at National Harbor. It was not a cheery place. Oh, the hotel was cheery, but the news was not...from the SGR bouncing ball to the threatened massive do-over of ICD-10 (to which we will devote our next issue), the news was not only not cheery, but depressingly scary. ICD-10 changes will sock each physician who has invested in EHR reportedly between twenty-three and eighty thousand to retool. Allegedly, doctors have received notices that bridge loans may be necessary, as the government may not be ready for prime-time reimbursements “for a while.”

The local newspapers are once again vying for the award for who can come up with the greatest doctor, while running op-ed pieces by all manner of consultants spouting all manner of doctrinaire half-truths.

MedChi on the state level, other state societies, and the AMA on the federal level are trying diligently to work with the Congress and state legislators to try to inject some sanity and truth into a process in which too often ignorance and bureaucratic nonsense are the rule.

And the insurers...well, being from New York, I will just say “ lugedaboudit!” and I am sure you will know what I mean.

There are, of course, reasons to be sanguine, but they involve our patients and our actual work. I used to, in this space, at this time of the year, quote Moonlight Graham from the movie “Field of Dreams.” The sentiment he expresses—that being a baseball player for five minutes and a doctor for fifty years is not a tragedy; being a doctor for five minutes would be, and that is as true today as it ever was. It is, however, getting progressively more difficult to find the sentiment expressed by Dr. Graham amid the chaff of regulations, insurer duplicity, and just plain nutty philosophy that hovers around us. Talk about the cloud!

This issue of Maryland Medicine will be in your mailboxes soon after the holiday season, when the Maryland legislature is beginning its session, and the warp and woof of medical politics will be in full operation. It will once again be open season on sanity. For the next several weeks in December, however, as things wind down for the holiday season (even though Chanukah threw us a curve and tried to muscle in on our cranberries and stuffing), I will try to close off my umbrage centers, wind down my revved-up ire, and just enjoy what really is a nice time of year, for some peace. Oh, and by the way...those lights are on, and they’re just great!
CRISP is a non-profit health information exchange organization serving Maryland and the District of Columbia.

**Encounter Notification Service (ENS)**
Be notified in real time about patient visits to the hospital, qualify for transitional care reimbursement

**Query Portal**
Search for your patients’ prior hospital and medication records

**Direct Secure Messaging**
Use secure email instead of fax/phone for referrals and other care coordination

To learn more about these free services, please contact Darlene Millner, Sr. Provider Outreach Coordinator: darlene.millner@crisphealth.org or (877) 95-CRISP
www.crisphealth.org
Introduction

Mark G. Jameson, MD, MPH*

Traditionally, winter heralds a full schedule of patient visits, high hospital admission rates, and excess mortality nationwide largely caused by respiratory illnesses. In addition to the busy daily schedule, 2014 promises to bring significant changes that will impact every physician. The Affordable Care Act and Maryland Connection coverage begins this month. Also, as of press time, the Sustainable Growth Rate was set to expire on January 1, 2014. Additionally, the Stage 2 Meaningful Use Criteria begin in 2014. Last, but hardly least, the ICD-10 commences on October 1, 2014.

With the background of a hectic schedule and forthcoming tectonic changes in medical practice, this issue of *Maryland Medicine* looks at several topics pertinent to the practicing physician.

The General Assembly enacts important regulatory, practice, and public health laws each year. No matter one's own personal, professional, or political views, it is important to stay informed of current legislation. In this issue, we present the MedChi Legislative Agenda for the upcoming Maryland General Assembly, along with commentary by Dr. Stephen Rockower.

Practicing settings are changing significantly. The solo practitioner exists only in history books. Currently, about half of all physicians are now employed. In the near future, the number of graduating nurse practitioners and physician assistants will equal and surpass the number of graduating medical students in the United States. Three articles that explore the topic of new models of health care delivery in Maryland are featured in this issue.

Despite longstanding effective treatment, hypertension remains a significant public health issue. Karen Kmetik, PhD, writes about a pilot project run by Johns Hopkins and the American Medical Association to improve detection and management of high blood pressure. The concept of a patient-centered medical home has assumed new importance and urgency. Dr. Niharika Khanna writes about the role of the University of Maryland in the Maryland Learning Collaborative component of the Patient Centered Medical Home. Community approaches to improving health are now in the forefront of healthcare. Dr. Donald Shell and colleagues, of the Maryland Department of Health and Mental Hygiene, discuss a grant from the Centers for Disease Control and Prevention for transforming healthcare in communities.

On a lighter and somewhat whimsical note, in an article titled "Bug Bites: A Maryland Menu," I review infectious diseases, highlighting each region of Maryland.

We thank our readers for devoting their valuable time to reading *Maryland Medicine.*

*The views expressed are strictly those of the author and do not represent those of the Washington County Health Department or the Maryland Department of Health and Mental Hygiene.*
2014 Legislative Agenda
MedChi’s Legislative Marching Orders

Stephen J. Rockower, MD

MedChi has been very active in formulating its Legislative Agenda for 2014. Discussions have been held across the state with physicians and activists to crystallize our plans to foster healthy living, promote fairness in tort reform, and ensure Marylanders have access to highly trained and appropriately regulated practitioners of the healing arts.

Although our overall agenda is presented here (see pg. 11), a few points need to be highlighted:

- We continue to advocate for patients’ access to appropriately trained and licensed physicians and physician extenders.
- We continue to support efforts to limit the unending delays in malpractice cases by repeated continuances for lack of a certifying physician.
- We continue to oppose efforts to increase the caps on damage awards.

MedChi also is continuously monitoring and commenting on efforts to change the Medicare Waiver system. Maryland is the only state that has an all-payer system of hospital finances, overseen by the Health Services Cost Review Commission (HSCRC). The federal government is reviewing this system, and MedChi’s own Gene Ransom and Willarda Edwards, MD, will be working on an advisory council to shape the future of health care financing in Maryland.

Numbers matter, and we need your help. MedChi is always looking for physicians to serve on the Legislative Council and to help in our efforts to promote and advocate for physicians and their patients. Contact the chair of the Legislative Council (Dr. Gary Pushkin, gpush@comcast.net, or Dr. Brooke Buckley bmbuckley@hotmail.com) to lend a hand. You can also help by being a “Doctor of the Day” during the legislative session in Annapolis. Contact Stephanie Wisniewski, swisniewski@medchi.org, for more information. We need to work together for the betterment of all.

Stephen J. Rockower, MD, is an orthopædist practicing in Rockville, MD. He is president-elect of Montgomery County Medical Society, and co-chair of MCMS’ Legislative Committee. He also is a subcommittee chair of the Council on Legislation for MedChi. He can be reached at drrockower@cordocs.com.

2014 PHYSICIANS’ HOUSE CALLS ON ANNAPOLIS

During the 2014 legislative session, MedChi’s component medical societies will assemble at MedChi’s Annapolis office to hold their annual legislative meetings, and then visit with their county legislative delegations. Please join your component society in Annapolis to visit with legislators to discuss issues important to MedChi physicians. For more information about any of these lobby days, please call MedChi’s Annapolis office at 410.539.0872, ext. 6001.

<table>
<thead>
<tr>
<th>MedChi Alliance</th>
<th>February 5, 2014</th>
<th>8:00 am</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baltimore County</td>
<td>February 26, 2014</td>
<td>8:00 am</td>
</tr>
<tr>
<td>Baltimore City</td>
<td>February 26, 2014</td>
<td>8:00 am</td>
</tr>
<tr>
<td>Harford County</td>
<td>February 26, 2014</td>
<td>8:00 am</td>
</tr>
<tr>
<td>Anne Arundel County</td>
<td>March 3, 2014</td>
<td>5:00 pm</td>
</tr>
<tr>
<td>Prince George’s County</td>
<td>March 3, 2014</td>
<td>5:00 pm</td>
</tr>
<tr>
<td>Howard County</td>
<td>March 3, 2014</td>
<td>5:00 pm</td>
</tr>
<tr>
<td>Montgomery County</td>
<td>March 18, 2014</td>
<td>8:00 am</td>
</tr>
<tr>
<td>Students and Residents</td>
<td>March 24, 2014</td>
<td>5:00 pm</td>
</tr>
</tbody>
</table>
The mission of MedChi, the Maryland State Medical Society, is to serve as Maryland’s foremost advocate and resource for physicians, their patients and the public health. To that end, MedChi is working on the following objectives during the 2014 General Assembly Session:

**AS AN ADVOCATE FOR PATIENTS:**

**DEFEND THE SCOPE OF MEDICAL PRACTICE SO PATIENTS ARE SEEN BY A PHYSICIAN:** MedChi will fight to ensure that all patients have access to physicians and that physician extenders have appropriate training and physician oversight. The new federal health reform law will place unprecedented demands on the health care system as thousands of newly insured individuals seek physicians. It is important that these new patients find physicians and that non-physicians do not use this as an opportunity to increase their scope of practice without adequate education and training.

**PROTECT MEDICAID AND THE UNINSURED:** MedChi will work with the Medicaid program to incentivize physician participation and to protect the integrity of the Medicaid program with respect to eligibility, benefits and physician payment, including the protection of enhanced E&M reimbursement for all physicians who serve the Medicaid population. MedChi will also work to ensure that the Medicaid program can accommodate the influx of new patients who enrolled through the ACA implementation and that an adequate safety net remains for those individuals who remain uninsured.

**REFORM UNFAIR INSURANCE PRACTICES:** MedChi will work to reform unfair insurance practices by supporting initiatives which:
- Prohibit carriers from terminating a physician contract because a patient seeks the care of an out-of-network physician.
- Require health insurers to honor a physician directed therapy or medicine regardless of the insurer’s normal “step therapy.”
- Prevent workers compensation insurers from limiting a physician’s right to dispense medications to an injured worker.

**AS AN ADVOCATE FOR PHYSICIANS:**

**STRENGTHEN MEDICAL LIABILITY REFORM:** MedChi will continue to strongly oppose trial lawyer attempts to increase the “cap” on damages in medical malpractice cases and to abolish the defense of contributory negligence; support efforts to establish a pilot project for specialized health courts and to limit repeated continuances in medical malpractice cases; and otherwise work to protect and strengthen the legal liability environment for physicians in Maryland.

**ENHANCE PHYSICIAN PAYMENT AND INSURANCE REFORM:** MedChi will continue its efforts to improve Maryland’s payment climate with these initiatives:
- Broaden Maryland’s Electronic Health Records (EHR) law to require that monetary incentives apply to all physicians, not just primary care physicians, extend the law until at least 2017, and work to increase connectivity to CRISP.
- Educate Legislature on the need to remove sunset from the Assignment of Benefits law.
- Work to assure that gain-sharing mechanisms and other payment mechanisms for incentivizing broad system reform are developed through a stakeholder process that includes broad physician participation and have a positive impact on physicians.
STRENGTHEN CRIMINAL LAW: Support increased criminal penalties for an individual who assaults a physician, nurse, health care worker, or emergency medical services provider in the course of delivering emergency medical services.

AS AN ADVOCATE FOR PUBLIC HEALTH:

MAKING MARYLAND A TOBACCO FREE STATE: MedChi will advocate for continued increases in the Tobacco Tax in order to discourage smoking and to help fund the expansion of Medicaid and increased physician reimbursement. MedChi will also support legislation prohibiting the sale of tobacco products by businesses which provide health care or dispense medications.

PROTECTING MARYLAND’S CHILDREN: MedChi will support initiatives to protect children including:
- The support of initiatives including legislation to address childhood obesity with an emphasis on proactive programs in Maryland schools.
- The support of efforts of the Maryland Department of Health and Mental Hygiene to decrease minors’ use of commercial tanning beds.

ENDING HEALTH DISPARITIES: Continued support of legislative and regulatory initiatives to reduce health disparities such as Health Enterprise Zones.

Toxic Chemical Exposure: MedChi will support the adoption of policies and regulations that provide a physician who is treating a person suspected of exposure to toxic chemicals access to information regarding the chemicals and will oppose efforts to restrict a physician’s ability to appropriately use the information to protect the public health and prevent further exposure.

OTHER REGULATORY / LEGISLATIVE ISSUES

The Medicare Waiver: Maryland is the only state with an all-payer system of hospital finance, which is overseen by the Health Services Cost Review Commission (HSCRC). In an effort to modernize this system, the Department of Health and Mental Hygiene has been meeting with stakeholders to revise Maryland’s model proposal to the Centers for Medicare & Medicaid Services for new payment models. MedChi and several physician organizations identified priorities and concerns in a 2012 letter and DHMH released a new final draft application for the waiver in September. MedChi opposed any bundling of physician professional fees, supported limiting the waiver’s applicability to facility fees for the first five years, pointed out that the proposal omits a funding mechanism for the physician loan assistance repayment program, and recommended a stakeholder process that addresses gain-sharing mechanisms and other mechanisms for incentivizing reform with broad physician representation. On October 9, 2013, the HSCRC announced an Advisory Council to work on the implementation of the waiver. MedChi CEO Gene Ransom and Past President Willarda Edwards, M.D., were nominated to serve on the Council. The proposed Waiver Application presents opportunities for positive reform and improved cost trends and quality outcomes and ultimate success relies on a balance of competing interests. MedChi will continue to be a leader on this issue.
Maryland Physicians Lead New Quality Improvement Initiative
Innovative Pilot Program Tackles Hypertension Control in the Ambulatory Setting

Karen Kmetik, PhD

"Improving Health Outcomes: Blood Pressure" (IHO: BP) is an initiative led by the American Medical Association (AMA) in collaboration with the Johns Hopkins Armstrong Institute for Patient Safety and Quality and the Johns Hopkins Center to Eliminate Cardiovascular Health Disparities. IHO: BP is designed to improve care for patients by developing and disseminating a model for better detection and management of high blood pressure.

Mitchell Gittleman, DO, PhD, whose primary care practice is one of five clinical sites participating in IHO: BP, is no stranger to research. The Salisbury, Maryland, solo practitioner was a research scientist before becoming a primary care physician. Excited to be part of a research-driven initiative designed to help him improve blood pressure control for his patients with hypertension, Dr. Gittleman says, "Hypertension is the single most common chronic medical condition for which I see people. I see several thousand patients in my practice, and a couple thousand of them have hypertension as at least one of their diagnoses."

More than 30 Million Patients Within Reach

The IHO: BP initiative is focusing initially on the population of patients who have hypertension and a usual source of medical care, but whose blood pressure is still too high. This group includes more than 30 million Americans. To extend the impact of its efforts, the AMA is a partner in the U.S. Department of Health and Human Services "Million Hearts" initiative, which seeks to have 10 million more Americans get their high blood pressure under control by 2017. By marshaling the physician community, the AMAs aim is to help meet and surpass this goal.

As part of the first phase of IHO: BP's work, the AMA and Johns Hopkins are engaging five clinical practice sites in Maryland and five in Illinois. Collectively serving more than 60,000 patients annually, heart disease and stroke led to more than 200,000 preventable deaths in the United States in 2010, according to the Centers for Disease Control and Prevention. Lack of access to preventive screenings and early treatment for high blood pressure was one of the major contributors.

Heart disease and stroke led to more than 200,000 preventable deaths in the United States in 2010, according to the Centers for Disease Control and Prevention. Lack of access to preventive screenings and early treatment for high blood pressure was one of the major contributors.

Designed to Address Real-World Problems

"Real-world patient-physician experiences provide researchers with valuable information that often can't be obtained in an academic environment," Dr. Gittleman said. "Their results can be difficult to translate into practice. Real-world application needs to be done. That's why I'm participating in this project."

The concept of translating research into practice (TRIP) is very familiar to Peter Pronovost, MD, PhD, FCCM, senior vice president for Patient Safety and Quality and director of the Armstrong Institute for Patient Safety and Quality at Johns Hopkins Medicine. Dr. Pronovost is renowned for his work reducing the deadly infections associated with central line catheters in the acute setting.

"We are eager to apply what we know about TRIP and culture change and to collaborate with ambulatory care teams to evolve our knowledge," Dr. Pronovost said. "Physicians want to provide the best care possible; they are very busy and need systems to make it easy to achieve blood pressure control. Working together, and partnering with patients, we can help physicians achieve higher rates of control for their patients in a way that fits with the individual clinic's context, culture, and workflow."

To achieve that goal, additional leadership and expertise comes from Lisa Cooper, MD, MPH, FACP, professor of medicine and director of the Johns Hopkins Center to Eliminate Cardiovascular Health
Disparities, one of ten National Institutes of Health funded Centers for Population Health and Health Disparities. Dr. Cooper has developed interventions that enhance patient-physician communication, improve blood pressure, and reduce health care disparities. One of the center's studies, Project ReD ChiP (Reducing Disparities and Controlling Hypertension in Primary Care), an ongoing, multi-level system quality improvement project, is informing the IHO: BP effort with valuable lessons learned from six community primary care practices.

"It Was a No-Brainer"

Another Maryland physician who is helping lead the way is Willarda V. Edwards, MD, MBA. A past president of the National Medical Association and MedChi, The Maryland State Medical Society, she has had plenty of experience with organized medicine. This is Dr. Edwards' first time participating in a prototyping project to translate research into the clinical setting. "Hypertension and its ramifications have always been part of my office care," said Dr. Edwards, whose practice is in Baltimore. "When the AMA teamed up with doctors in Maryland, it was a no-brainer when they said they wanted to help us be effective in treating patients with hypertension."

Dr. Edwards said she gleaned important data from the pilot, even before it officially launched. During the screening process to determine which practices were a good fit for the project, the clinical sites were asked for data on the percentage of their hypertension patients whose blood pressure is under control.

"The act of gathering those stats was important," she said. "You're treating patients every day with hypertension...do you really know if they are under good control? ...this project made me look back." The experience of gathering data led Dr. Edwards to ask another question: "How many other doctors are not looking back?" "This project means doctors will get a better perspective on what is effective, what is not, and how to improve," she said.

"According to our readings," Dr. Edwards said, "we're doing pretty well, with more than 70 percent of our patients' blood pressure controlled." As a participant in the pilot program, with its goal of blood pressure control rates of at least 90 percent, Dr. Edwards' goal is to do even better.

The AMA's Goal: Spurring Collaboration, Engagement, Results

"Our colleagues in Maryland are helping the American Medical Association galvanize a new, bold professional movement in pursuit of healthier people, better health care, and lower health care costs," said AMA President Ardis Hoven, MD.

Noting that the AMA is in a "unique position because we reach physicians in all practice settings and specialties," Dr. Hoven said, "we can bring them together with communities and public and private sector organizations to prevent and to achieve measurable improvements in health outcomes."

This hypertension pilot is part of a new AMA strategic focus area called "Improving Health Outcomes," or IHO. The AMA is focused on cardiovascular disease (starting with hypertension) and Type 2 diabetes (starting with prediabetes) because these conditions cause enormous suffering and death, add significant costs to the U.S. economy, and impact millions of patients and nearly all physicians. (Visit ama-assn.com/go/improveoutcomes to learn more.)

The AMA and Johns Hopkins will take what they learn from the IHO: BP pilot practices and their communities to improve workflows in clinical care environments, and then use a community-based approach to spread hypertension improvement to more practices regionally and nationwide.

Dr. Gittelman is pleased to be part of the first phase of a national movement. In addition to being in primary care, he is also medical director of MedChi's Lower Shore ACO, so he is focused on the value he can bring to his colleagues.

"We as doctors are an interesting breed of human beings, in that we don't believe anything until we see the evidence," said Dr. Gittelman. "Study results hold a lot more water when your colleagues are the ones doing the research. So my opinion is that doctors in smaller towns are more likely to believe something if they see other like-minded doctors are involved, as opposed to thinking it doesn't apply to them because the study was done at a major institution."

"My colleagues can say, 'If Dr. Gittelman can do it, I can do it, too,'" he said.

For information about participating in Phase 2 (i.e., applying best practices from the pilot phase) of this project to optimize hypertension control, contact AMA's Director of Improving Health Outcomes Strategies, Donna Daniel, PhD, at donna.daniel@ama-assn.org.

Karen Kmetik, PhD, currently serves as Group Vice President, Health Outcomes, at the American Medical Association. She can be reached at Karen.kmetik@ama-assn.org.
Community Tailored Partnerships That Work
Implementing New Models of Primary Care in the State of Maryland

Niharika Khanna, MBBS, MD, DGO

The Patient-Centered Medical Home (PCMH) is a model of primary care delivery designed to strengthen the patient-clinician relationship by replacing episodic care with coordinated care and a long-term healing relationship. It can lower costs of care through its focus on the person and patient self-management and engagement, rather than on the disease. PCMH encourages teamwork and coordination among clinicians and support staff to give patients better access to care and to take a greater role in making care decisions. Key PCMH components include understanding patients' preferences and culture, shared decision making between patient and clinician, and patients' willingness to establish and work toward personal health goals.

Maryland Multi-Payer Program

The Maryland Multi-Payer Program (MMPP) for PCMH was established by the Maryland Health Care Commission (MHCC), pursuant to Maryland Legislative Resolution HB929/SB855 enacted in April 2010. The MMPP established the Maryland Learning Collaborative (MLC), housed at the University of Maryland School of Medicine Department of Family and Community Medicine, to provide educational and logistic support to develop advanced primary care models, in transformation of primary care practices to PCMH and implementation of the advanced primary care model. The MLC functions as a catalyst for within-practice changes, interfacing with state government, insurers, identifying and highlighting the role of the PCMH in the changing Maryland healthcare environment, and workforce training. Five commercial insurance carriers—Aetna, CareFirst, Cigna, Coventry, United—and public insurers Medicaid and Tricare participated to provide fixed transformation payments toward the advanced primary care model. One-third of fixed transformation payments are dedicated to the development of embedded care management teams to provide comprehensive, coordinated primary care. The components and functions of the Maryland Learning Collaborative are presented below.

The MLC is led by a family physician and a group of committed primary care physicians and nurses, drawn from

Advanced Primary Care Model in the Maryland Learning Collaborative:

- Practice transformation to Patient-Centered Medical Home recognized by NCQA
- Primary care teamwork, leadership training, and communication skills development
- Practice champions and care management teams to focus on health-related outcomes
- Integrating health information technology platforms into care process, including registry tool use and linkages to the state's health information exchange
- Patient self-management of chronic disease and population health

Figure 1: Maryland Learning Collaborative Functions for the Maryland Multi-Payer Program for PCMH
the two academic centers in Maryland. The MLC ultimate goal is threefold: (1) to transform primary care practices to PCMH, (2) to retrain a primary care workforce in specific skills essential to the advanced model of primary care, and (3) to deliver high-quality patient-centered care, supported by an innovative payment model. The leadership workgroup provides ongoing support to the MLC, and guidance is additionally provided by a steering committee comprised of representation from the local specialty societies and other stakeholders to develop interactive collaborative educational sessions where skill building and peer education occurs. Two-way communications using emails, teleconferences, web channels, and live meetings helps to maintain a continuous conversation between MLC leadership and the practices.

The first step of the MLC educational and technical support is to transform each primary care practice to a PCMH recognized by the National Committee for Quality Assurance (NCQA). Building on this basic structure is the embedding of care management teams who accomplish the task of enpanelment, enable access to care that is coordinated, comprehensive, and continuous between ambulatory and inpatient care transitions. The MLC acts as a catalyst for peer engagement and education with fifty-two primary care practices and 340 primary care practitioners in the state, leading to a variety of changes in practices, in patient care delivery, and in developing forums for expert and peer interaction with practitioners and primary care staff.

All fifty-two participating practices are NCQA recognized as PCMH; all use electronic medical records to operationalize the core concepts of PCMH: teamwork, leadership, enhanced communication among teams, and self-management by patients.

Maryland has participated as a mentee state in the AHRQ sponsored IMPaCT program in the group led by the state of North Carolina and supported by NASHP. Participation in such a peer group has worked as a catalyst to greater interactions between MLC and state entities.

### Advanced Primary Care Model Supported by the Maryland Learning Collaborative

The program includes fifty-two practices in a statewide distribution, with 340 primary care practitioners providing care to 250,000 patients in seventeen of the twenty-four Maryland counties. To develop an advanced primary care model that is capable of its goals, the MLC engaged and educated fifty-two selected practices to transform to PCMH with recognition using national standards such as NCQA. All fifty-two practices are now recognized by the NCQA at Levels 2 and 3. In addition, all fifty-two use Electronic Health Records, and about half the practices are actively receiving data from the Health Information Exchange for Maryland (CRISP Health) through the Encounter Notification System.

Within the practices re-organization includes leadership identification, team establishment and building, communication strategies, and systematically implementing care management. Patient centeredness includes redeveloping procedures to provide team based care to all patients; specifically, chronic disease management in high risk–high opportunity patients and population management to promote disease prevention in all patients. Key elements of the Maryland advanced primary care model are the streamlining of specialist interactions, reducing unnecessary hospital and

### Profile of Participating Practices

There are fifty-two practices in the MLC, representing a mix of rural, semi-rural, urban, and suburban practices. There are thirty-five parent organizations for the fifty-two practices, each with one to four practice sites. Practices are statewide, diverse, and range from small to large systems of care, hospital-owned, practitioner-owned, federally qualified health centers (FQHCs), and academic practices.

PCMH teams are enabled by education and teamwork training to develop a process for patient care that is based on the acquisition of practice specific data to stratify patients by disease or use patterns. Emergency Department use specifically for ambulatory sensitive conditions is a specific area of intervention for which PCMH teams can develop methods of intervention as exemplified in the algorithm in Figure 2 on page 19.

Further, the intensity of care management is linked to the severity of disease and to the history of hospital and

### Table 1: Participating Practice Profile

<table>
<thead>
<tr>
<th>State Region</th>
<th>Hospital-Owned</th>
<th>Practitioner-Owned</th>
<th>Solo or &lt; 2 practitioners</th>
<th>FQHC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baltimore Metro</td>
<td>7</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Northern</td>
<td>9</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Eastern</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Southern</td>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Emergency Department use. Thus, a practice could choose to stratify patients using the example provided in Figure 3.

Care management in a PCMH allows better management of chronic disease, population management, and disease prevention. In addition, care management in the MLC creates an embedded practice personnel who receive training and participate in skill development activities.

The MLC has actively engaged and provided education and technical expertise to, fifty-two practices. Specific educational offerings have been in skill development in the advanced primary care model and workforce development area. Dissemination of evidence-based standards of care by the MLC has been effective in engagement and education of Practice Champions and Practice Redesign Teams in a train-the-trainer mode to develop new learning and skills, to disseminate to the rest of their practices. In addition, the MLC has provided training in patient-centered efficient care, such as leadership, teamwork, practice transformation, and in core competencies such as motivational interviewing for care managers and advanced directives for physicians, practitioners, and care managers. To date, more than 90% of practices have consistently ranked our collaborative offerings as excellent or very good.

As PCMHs become more efficient and provide greater access to their patients, an essential next step is to ensure that interactions with the healthcare system are optimized to deliver continuous care to our patients. Further, to accomplish several of the tenets of the proposed healthcare reform, it is critical to develop communities of solution to meet the need for a high-functioning and coordinated healthcare system, and to support the PCMHs.

A learning collaborative is critical to the implementation and spread of new technologies and workflows to provide workforce training and to operationalize the tenets of new models of care. To redefine the delivery of primary care and to develop advanced models of cost-efficient care, it is necessary to transform practices to patient-centered medical homes and to retrain the primary care workforce.

To transform the delivery of primary care in particular, there is an opportunity for the MLC to gather informed stakeholders to develop training, learning, and new skills. Healthcare reform goals are achievable with the streamlining of interactions between policy and healthcare practice with amendments that support the delivery of health care that is coordinated, continuous, comprehensive, collaborative, and patient centered.16,17

Nibarika Khanna, MBBS, MD, DGO, is an Associate Professor in the Department of Family and Community Medicine at the University of Maryland School of Medicine, and Director, Maryland Learning Collaborative for the Multi-Payer Program for Patient Centered Medical Home. For a complete list of references, contact 301.921.4300.

References:


Strengthen Your Immunization Efforts with

Atlantic Health Partners

As the nation’s leading vaccine buying group for practices of all specialty and sizes, we are proud to continue our support of MedChi, The Maryland State Medical Society and offer its members:

- Lowest prices and best terms for Sanofi and Merck vaccines including Fluzone
- Adult Immunizations and Medicare Part D Vaccine Program
- Discounts for medical and office supplies
- Reimbursement support and advocacy
- Patient Recall Program Discount

Contact Atlantic at 1-800-741-2044 or info@atlanticlealthpartners.com
www.atlanticlealthpartners.com

SAVE THE DATE
Join MedChi, BCMA and BCMS for the 2014
Shamrock Expo

Thursday, March 13, 2014
2:00 p.m.-7:00 p.m.
Crowne Plaza Hotel, Timonium, MD

Educational Programming and Workshops followed by a Happy Hour Trade Show... All with a fun St. Patrick’s Day theme!

Network with your colleagues and friends, learn about new products and services for you, your practice and beyond, and enjoy a green food, beer, games, prizes and more. And there’s no cost to attend!

For more information:
www.medchi.org/expo
800-492-1056 x5308

Get Certified Online

4Med™ Professional Training and Certifications

EHR, HIT, MU, ICD-10, HIPAA

Meet Your Compliance Training Needs Today
CEU, CME, AHIMA & College Credit Available

SPECIAL DISCOUNT FOR MEDCHI MEMBERS.

During checkout, use coupon code MEDCHI to receive 20% off.

Visit: www.4medapproved.com/education/medchi for more information.
Transforming Communities to Support Health

Highlights from Maryland’s Community Transformation Grant

Donald Shell, MD, MA, Vanessa W. Harris, MD, Sara Barra, MS, Erin Penniston, MSW, Jeff Norris, PhD

Background

Every 33 minutes, one person in Maryland dies from heart attack, stroke, or other cardiovascular disease. While cardiovascular disease is a statewide problem, it is of particular concern in rural areas, where more than half of rural jurisdictions—including Caroline, Dorchester, Garrett, and St. Mary's counties—have heart disease mortality rates higher than the state median (171.4 per 100,000 persons). In Kent, Talbot, and Worcester counties, minorities are disparately affected.

Obesity (compounded by poor nutrition), a lack of physical activity, and tobacco use are preventable chronic disease risk factors and major public health concerns.

Approximately 12% of Maryland youth ages twelve to nineteen are obese, and two-thirds of adults are overweight (38%) or obese (27.6%). In the majority of Maryland's rural counties, ethnic minorities, youth, and adults, are disproportionately affected by obesity. While Maryland is one of nineteen states and U.S. territories showing small declines in obesity among low-income preschoolers from 2008 to 2011, Maryland's overweight and obesity prevalence rates for this population are higher than the national prevalence rates of 32.2% and 31.1%, respectively. Higher rates of childhood obesity may have long-term implications, as children who are overweight or obese as preschoolers are five times more likely than normal weight children to become overweight or obese adults.

Tobacco use is the leading cause of preventable deaths attributed to cancer, heart disease, stroke, and respiratory diseases. Secondhand smoke causes an estimated 46,000 premature deaths from heart disease each year in the United States among nonsmokers, and tobacco use currently results in $96 billion in tobacco-associated medical costs each year. In Maryland it is estimated that tobacco use leads to an average of 6,800 premature deaths annually and more than 3,500 years of life lost.

Within the Community Transformation Grant (CTG) nineteen rest-of-state county population, 17% of adults are current smokers, which is higher than the 15.2% of adults who are current smokers in Maryland. Both of these rates are above the Healthy People 2020 target of 12%. Almost half (44%) of high school students in Maryland have tried cigarette smoking. In six of the seven CTG designated rural counties, the prevalence of underage youth smoking is higher than the statewide rate of 14.1%, and cigar smoking is just as prevalent as cigarette smoking among youth.

Community Transformation Grant Explained

Community-based nonclinical policies and strategies to address recognized health risks associated with obesity, tobacco use, and physical inactivity can account for as much as 80% of the overall health improvements of a population. The Community Transformation Grant (CTG) was created to foster community-based nonclinical policies and strategies that have the potential to improve population health outcomes. The recognition of the role of nonclinical community and population based interventions to improve the health and well-being of the public is growing.

To improve control of hypertension and high cholesterol, the Maryland Department of Health and Mental Hygiene (DHMH) was awarded in September 2011 a Centers for Disease Control and Prevention (CDC) CTG to expand tobacco-free living, facilitate active living and healthy eating, and support clinical and community preventive services. The CTG is supported by the Prevention and Public Health Fund, which was established by the Affordable Care Act as a national funding source for prevention and public health, to improve health outcomes and to enhance healthcare quality.

Maryland's CTG supports efforts among the state's nineteen smaller jurisdictions, with a total population of 1,900,000, including a rural population of more than 300,000. Under the terms of the federal grant requirements, Baltimore City, Baltimore, Anne Arundel, Prince George's, and Montgomery counties were excluded. Maryland was one of fourteen "rest of state" awardees, excluding large counties with populations greater than 500,000 (these larger counties had the opportunity to apply separately).

DHMH's CTG programs facilitate collaboration between state agencies (e.g., aging, agriculture, education, housing and community development, planning, and transportation), local health departments, local health improvement coalitions, Minority Outreach and Technical Assistance (MOTA) organizations, and local government agencies. Together, these entities work to establish new ways to improve the health of Marylanders by focusing on prevention and advancing health equity through policy, environmental, and systems changes.

CTG programs aim to develop indoor and outdoor smoke-free areas, promote opportunities for physical activity, and increase the availability of fresh fruits and vegetables to create environments where patients will more easily be able to comply with lifestyle modifications recommended by their physicians. In partnership with DHMH, the University of
Maryland Baltimore’s Institute for a Healthiest Maryland supports stakeholder efforts by providing evidence-based resources for program development and implementation, coordination of training, program evaluation and support, and dissemination of CTG outcomes and successes.

CTG Implementation

Tobacco-Free Living
Maryland has made significant progress in increasing smoke-free environments and reducing secondhand smoke exposure. Multiple county governments have adopted smoke-free properties and parks. Most recently, Hagerstown’s City Park and eighteen additional city-owned parks implemented a smoke-free policy. The Cecil County Health Department provided onsite tobacco cessation classes for residents and employees to support the Elkton Housing Authority’s July 2013 smoke-free policy implementation. As a result of this policy, 472 residents are now protected from secondhand smoke exposure. To reduce cigar smoking in youth, the “Cigar Trap” flavored cigar cessation campaign messages have been incorporated in health education classes at CTG participating schools.

Active Living and Healthy Eating
The goal of CTG early childcare and K–12 initiatives is to establish a climate, through policies and practice change, that supports physical activity opportunities early in life and before, during, and after the school day. Turning off screens in childcare centers, increasing opportunities for walking and biking to school, facilitating teacher-led incorporation of physical activity breaks into classroom instruction, and promoting establishment of physical activity clubs efforts are underway across the state of Maryland. Multisector discussions focus on the additional benefits of physical activity that extend beyond health outcomes. A 2010 CDC meta-analysis revealed a positive association between school-based physical activity—primarily through recess and classroom activities—and academic achievement. The Allegany County Health Department provides technical assistance to eighteen childcare providers, caring for more than 235 children located in Title I catchment areas, to provide healthier food and increase physical activity levels.

In Somerset County, Maryland’s jurisdiction with the highest youth obesity prevalence, community partners are transforming environments to establish safe spaces for physical activity. In the City of Crisfield, multisectoral partners worked to restore a beach and outdoor activity area damaged during Hurricane Sandy in 2012. The collaborative efforts to provide physical activity opportunities included fundraising, replacing sand, repairing the dock, and installing safety ladders and life preservers on the dock. Locally, certified swimming instructors provided a youth water safety program and taught basic swimming and water and small boat survival skills. The City of Crisfield also provided transportation to the water safety program. Today, volleyball nets and play equipment have been installed, and grills are available for healthy cookouts. Communities are collectively responding and working to establish opportunities to increase physical activity.

CTG active living and healthy eating initiatives include providing evidence-based worksite wellness and best practice resources to Healthiest Maryland Businesses (HMB) participants. To date, 173 businesses employing an estimated 260,000 Marylanders have signed on to HMB and are learning how to improve the health...
of their employees. In the general popula-
tion, the CTG “Healthy Stores” initiative is 
training small store owners, in eight coun-
ties, to stock and sell healthy food items to 
patrons, without losing profits.

CTG Next Steps

CTG implementation efforts will con-
tinue to engage community members and pro-
essionals—physicians, school systems, 
parks and recreation, business owners, and 
childcare providers—to support healthier 
environments. CTG policy, systems, and 
environmental change approaches will 
stimulate the creation of healthier environ-
ments where patients live, work, and play.

This article was supported by Cooperative 
Agreement #5US8DP003497-03 from the 
Centers for Disease Control and Prevention. 
Its contents are solely the responsibility of the 
authors and do not necessarily represent the 
official views of the Centers for Disease Control 
and Prevention.

Donald Shell, MD, is the director of 
the Cancer and Chronic Disease Bureau 
in the Prevention and Health Promotion 
Administration of the Maryland Department 
of Health and Mental Hygiene. Dr. Shell 
is board certified in family medicine and 
completed a primary care sports medicine 
and adult fitness fellowship at Marshall 
University. He completed his medical train-
ing, including medical school and residency 
at Howard University in Washington D.C.

Vanessa Walker Harris, MD, is the med-
cal director of the Center for Chronic Disease 
Prevention and Control at the Maryland 
Department of Health and Mental Hygiene. 
She is board certified in Internal Medicine 
and Endocrinology and Metabolism. She 
completed her medical training, including 
medical school, residency and fellowship at 
the Johns Hopkins University School of Medicine.

Sara Barra, MS, is the Chief of 
Epidemiology and Special projects in the 
Center for Chronic Disease Prevention and 
Control at the Maryland Department of 
Health and Mental Hygiene. She monitors 
and coordinates health policy and planning 
activities that address chronic disease and its 
risk factors in the State of Maryland. Ms. 
Barra completed her master of science in 
epidemiology at the University of Maryland-
Baltimore, Baltimore, Maryland.

Erin Penniston, MSW is the Community 
Transformation Grant (CTG) Program 
Manager in the Center for Chronic Disease 
Prevention and Control at the Maryland 
Department of Health and Mental Hygiene. 
She earned her master's degree in social work 
at the University of Maryland, Baltimore 
with a concentration in management and 
community organization and a specialization 
in child, adolescent, and family health.

Jeff Norris, PhD, is a research statistician 
in the Center for Chronic Disease Prevention 
and Control and serves as the Community 
Transformation Grant evaluator at the 
Maryland Department of Health and Mental 
Hygiene. He completed his doctorate degree at 
the University of Florida and has extensive 
experience as a public health analyst.

The authors can be reached at 
410.767.5780.

References:
1. Maryland Behavioral Risk Factor 
2. Maryland Behavioral Risk Factor 
3. Maryland Youth Tobacco Survey, 
2010.
FINDING THE RIGHT TALENT JUST GOT EASIER!

Take a closer look at the MedChi Career Center...

You will discover an online resource for recruiting qualified healthcare professionals that you won't find anywhere else. MedChi, The Maryland State Medical Society created the MedChi Career Center to provide employers and job seeker professionals in the field with a better way to find one another and make lasting and fruitful career connections.

FOCUSED, QUALIFIED TALENT POOL Online job boards are more common than ever. Our targeted database is made up solely of professionals that are dedicated to sonography issues. Their membership provides them opportunities to develop their careers and enhance their skills through peer interaction, clinical resources and other programs.

ENHANCED EXPOSURE Comprised of nearly 300 leading healthcare associations, MedChi's partnership with the National Healthcare Career Network (NHCN) increases your reach to a larger database of industry-specific resumes. The NHCN brings industry employers a REAL return on investment for all of your hiring needs.

RESUME SEARCH ACCESS MedChi's network partnership gives you direct access to resumes that have been posted directly to MedChi Career Center and resumes posted to other job boards in the network, eliminating the need to go from site to site for recruiting needs. Our growing resume database shows that the MedChi Career Center is fast becoming THE destination for professionals in the industry.

STATE-OF-THE-ART TECHNOLOGY MedChi’s Network Wizard allows you to truly comprehend how your job will be distributed throughout the NHCN. Our technology compiles a list of job boards in which your posting will appear before you make a purchase, allowing you to post with confidence.

Create your employer profile and start posting jobs today at CAREERS.MEDCHI.ORG!
Bug Bites: A Maryland Menu

Mark G. Jameson, MD, MPH

Maryland is geographically categorized into four regions: central, eastern shore, southern, and western. Each region has its own history and traditions, and most doctors practice within a single locale. The purpose of this article is to highlight local aspects of, and Maryland’s contributions to, a selected disease in each of the four regions of Maryland: Histoplasmosis in western Maryland, Lyme disease on the Eastern Shore, malaria in central Maryland, and Vibrio parahaemolyticus in southern Maryland. While each disease appears throughout Maryland and beyond, geographic and demographic factors of each region serve as an imprimatur for its local appearance.

Maryland Medicine is not a clinical journal, and the information presented is not intended as a clinical guide. References such as the Infectious Diseases Society of America guidelines (www.idsociety.org/ids_practice_guidelines/) or clinical journals can be accessed for diagnostic and treatment purposes.

Central Maryland: Malaria

By its sheer enormity, malaria will always occupy a special place in medical practice, no matter what one’s specialty. Half of the world’s population lives in regions where malaria is transmitted. More than 219 million cases occur annually, with 660,000 deaths among children five years of age and younger. Four Nobel Prizes have been awarded for research related to malaria.

In 2011, the latest year for which nationwide statistics are available, the Centers for Disease Control (CDC) reported 1,925 cases of malaria in the United States, all but five of which were imported. It was the largest number of cases since 1971. Maryland mirrored that trend in 2011, with its highest total in recent records (128 cases).

In the United States, of the 1,920 cases of imported malaria, 70% occurred among persons visiting friends or relatives abroad. Of the U.S. imported cases, 75% occurred among U.S. residents and 25% among residents of other countries. Of note, 57 cases occurred among persons claiming to have followed a CDC recommended chemoprophylaxis regimen. Among 122 U.S. civilian children for whom chemoprophylaxis history was known, only 50% took a recommended regimen and only 12 reported adherence. Thirty-seven cases occurred in pregnant women, only one of who adhered to chemoprophylaxis regimen. Sixty-six percent of the U.S. cases were hospitalized. Among men and women in the U.S. military, there were 91 cases, the highest since 1993.
Many physicians consider malaria a Third World disease with which they do not have to contend. However, malaria regularly presents in the central Maryland region, which claims three international airports and an international harbor. In 2012 Maryland reported 112 cases of malaria (consistent with the more than 100 cases reported each year in Maryland), a 40% increase from five years ago. Baltimore City, Baltimore County, Montgomery County, and Prince Georges County accounted for 88% of the reported cases.

Perhaps difficult to believe in 2014, a century ago, parts of Maryland were endemic for malaria. A malaria map of the United States in 1912 clearly includes parts of southern Maryland and the Eastern Shore. Today, malaria is mostly an imported disease (except for an unusual incident discussed below). A vector mosquito for transmitting malaria, *Anopheles quadrimaculatus*, is indigenous to Maryland and remains the most common species in the eastern United States, and thus there remains a constant risk that malaria could be reintroduced. The Maryland Department of Agriculture conducts surveillance for mosquitoes. Although trapping is done late May through October for surveillance and also in response to complaints and to assess need for spraying, trapped mosquitoes are not routinely tested for malaria.

Between 1957 and 2011, in the United States 63 outbreaks of locally transmitted mosquito-borne malaria occurred. In these outbreaks, local mosquitoes that became infected by biting persons carrying malaria parasites from endemic areas then transmitted malaria to local residents.

In August 2002 Plasmodium vivax malaria was diagnosed in two teenagers in Loudoun County, Virginia, who lived one half mile apart. One patient visited friends directly across the street from the second patient. The area was about 7 miles north of Dulles airport. (Anopheles mosquitoes typically have a range of less than 1 mile.) Neither person had traveled outside the United States or had risk factors for malaria. Both patients were treated and recovered. Mosquito traps placed in the area captured Anopheline mosquitoes as expected, but none tested positive for malaria.

In September, mosquito traps were placed in response to complaints of nuisance mosquitoes. The traps captured two *Anopheles quadrimaculatus* female pools in Loudoun County, and one female *Anopheles punctipennis* in Fairfax County, each of which tested positive for *P. vivax*. In response, additional mosquito traps were set in the general area. Two *Anopheles quadrimaculatus* female pools collected in Montgomery County tested positive for *P. vivax*. The Montgomery county testing site was on Selden Island, which lies in the Potomac River between Maryland and Virginia. At the time the island was privately owned and used primarily as a sod farm for grass. None of the employees of the farm were found to have symptoms or malaria.

The CDC deemed the cases to be locally acquired. A team from the Uniformed Health Services University of Health Sciences also investigated the incident. The results were published in the *Journal of the American Mosquito Control Association* in 2005, as the first demonstration of Plasmodium-infected mosquitoes collected in association with locally acquired human malaria in the United States.

Although occurring more than a decade ago, the 2002 incident demonstrates the continued risk of malaria caused by an increase in immigration, global travel, and the predominant local presence of Anopheles mosquitoes.
Clinical controversies, laboratory testing confusion, medication shortages, an antitrust investigation. The list goes on. How could a miniscule tick and microscopic spirochete conspire to cause such consternation? Since it was originally described in Lyme and Old Lyme, Connecticut, in 1977, Lyme disease has become the most common vector borne disease in the United States, with about 15,000 reported cases annually.

Even with 25 years of experience and a substantial number of cases, controversy persists. In 1995, the CDC issued recommendations for interpretation of serologic tests for Lyme disease, yet misunderstanding endures. In 2008, the Connecticut Attorney General launched an antitrust investigation against the Infectious Diseases Society of America’s process for writing the 2006 Lyme disease guidelines. (An independent review of the guidelines recommended no changes, and no charges were ever filed.) In January 2013, the Food and Drug Administration reported a nationwide shortage of some forms of Doxycycline, a primary treatment for Lyme disease. In June 2013 the CDC issued recommendations for patient care during the Doxycycline shortage. The shortage has since been resolved.

In 2012 the three Maryland counties with the highest rate of reported Lyme disease were Kent, Queen Anne's, and Caroline. The reported rate in some Eastern Shore counties is higher than the rate for the state of Connecticut. (Although the reported rate is high on the Eastern Shore, the total number of cases is much lower than in Connecticut, reflecting the fewer number of people living on the Eastern Shore). If not for a quirk of discovery, timing, and location, Lyme disease could potentially have been named Denton’s disease or Queenstown’s disease. Surprisingly, Garrett County reported no cases in three of the past four years. Montgomery County has the highest number of reported cases, but the large population reduces the rate to the mid-range of all Maryland counties. Although the number of reported cases is increasing nationwide, Maryland is experiencing a decline. In 2012, Maryland had 1,651 reported cases, a decline of nearly one-third from 2007. Perhaps Lyme disease has become so commonplace it is now underreported.

Local Aspects of Prevention of Lyme Disease

Effective prevention of Lyme disease has proven elusive, but not for lack of effort. Preventing Lyme disease is primarily an individual task. There are no community preventive measures, such as spraying acaricides (tick pesticides), largely because of concerns about the environment. In contrast, communities spray periodically for mosquitoes in response to local conditions such as arbovirus.

Two primary prevention interventions of local interest are residential acaricide application and deer applied acaricide at bait stations. According to the CDC, Lyme disease is commonly acquired by exposure to infected ticks near the residence, through recreational or leisure activities, or property maintenance. Tick exposures are highest where a residential lawn borders woods, walks, and plantings. Residential acaricides are usually sprayed once in the yard in May or June, targeting the nymphal I. scapularis tick. An autumn application for adult black-legged ticks may also be done. Typically, the yard perimeter is the targeted site where the lawn meets any wooded area, plantings, or stone walls.

Maryland is a site of a CDC research project evaluating the effectiveness of a single springtime application of an acaricide in a residential setting. In 2011 and 2012 nearly 700 households in Baltimore, Harford, Howard, and Carroll counties were enrolled to randomly receive a single application of a commercially available
acaricide or placebo on their yards in the spring. Measured data points included (a) follow-up tick drags (dragging the lawn for ticks), (b) surveys of number of ticks attached or crawling on residents, and (c) monitoring residents for tick borne diseases. The data are being analyzed, and results have not been published as of press time. Additional studies are planned.

Interestingly, Permethrin is one chemical acaricide commercially available to home owners in Astro® or Ortho® products that can be purchased at garden centers. Permethrin also has human applications for treatment of scabies and lice.

Another primary prevention approach is to apply acaricide to deer. Maryland is also a site of a U.S. Department of Agriculture research project applying an acaricide to deer at bait stations. A bait station using corn as bait is constructed so that the deer must rub against an acaricide applicator as they feed. A site at the Goddard Space Flight Center reported a 98% reduction in free-living nymphal-blacklegged ticks. Studies have also been conducted at Loch Raven in Baltimore County and Gibson Island.
Southern Maryland: Vibrio Parahaemolyticus

Vibrio parahaemolyticus is the leading cause of shellfish-associated gastroenteritis. *V. parahaemolyticus* is a curved, gram-negative bacillus with a single flagellum classified as a non-serogroup O1 Vibrio cholera. It is a halophilic, or salt-requiring, bacteria. *V. parahaemolyticus* naturally inhabits marine and estuary waters, especially brackish waters. *Vibrio* infection is associated with consuming uncooked shellfish, particularly oysters. The most common clinical manifestations are watery diarrhea, cramping, nausea and vomiting, and fever and chills occurring within 24 hours of ingestion. It is often a self-limited illness lasting up to three days. Severe disease may occur in persons with immunocompromising conditions. Treatment is not necessary in most cases, but antibiotics are indicated for severe or prolonged cases.

Most infections can be prevented by thoroughly cooking seafood, especially shellfish and oysters. *Vibrio* do not change the appearance, taste, or color of oysters or clams. Only thorough cooking destroys the bacteria. Although best known as a foodborne infection, more than 20% of cases nationwide are skin infections that occur when an open wound comes in contact with *V. parahaemolyticus* in water or when people cut or scrape their fingers on crabs or clam shells. The resulting skin infection may lead to skin breakdowns or ulcers. People with compromised immune systems are at higher risk for severe infections. Thus the old adage, “salt water heals a wound” is not always true.

An estimated 4,500 cases occur in the United States annually, but the actual recorded cases number about 200 because of underreporting. One reason *V. parahaemolyticus* is underreported is that a special culture medium is required for growth in the laboratory. The bacteria requires TCBS agar (thiosulfate, citrate, bile salt, and sucrose). The lab should be notified if the physician is suspicious of *V. parahaemolyticus* so the appropriate medium can be used.

The counties of southern Maryland (Anne Arundel, Calvert, St. Mary, and Charles) have more than 1,500 miles of shoreline and 38 beaches. Given that *Vibrio* is ubiquitous in marine waters, exposure to the organism is inevitable. The southern counties accounted for almost half of the 53 reported cases in 2012. There has been a 60% increase in reported cases in Maryland over the past five years. In 2011, the last year for which national statistics are available, Maryland reported 34 cases, making it the seventh highest state nationally and the third highest on the Atlantic coast.

*V. parahaemolyticus* are naturally occurring in the Chesapeake Bay and its tributaries. Pollution is not considered a contributing factor to water levels of *Vibrio*. Indeed, beach water monitoring programs test for E. coli and Enterococcus, and not *Vibrio*. The most important factors in the growth of *V. parahaemolyticus* are water temperature, salinity, and chlorophyll content. Correspondingly, more than 70% of the cases occur in the summer months.

The National Oceanic and Atmospheric Administration (NOAA) monitors *V. parahaemolyticus* in the Chesapeake Bay and issues three-day, fourteen-day, and seasonal forecasts for use in education. The models developed by the NOAA are still considered experimental in nature and are not used in beach closure decisions. There is no known threshold water level that determines risk of *Vibrio* infection.

Many physicians undoubtedly consider reporting diseases to the health department to be a needless chore of no benefit to the patient. While this may occasionally be true, it is also true that public health officials can trace the source of shellfish, test the oyster beds for *Vibrio*, and consider closing an oyster bed, thus preventing public exposure. However, the case for closing oyster beds is somewhat unsettled, as large outbreaks have occurred when counts of *V. parahaemolyticus* from the implicated site were low.
Western Maryland: Histoplasmosis

Among the multitude of mandatory microbiology mnemonics in medical school is the phrase, “Histoplasmosis capsulatum does not have a capsule.” This memorable, if utterly useless, recitation is just one of the unique features of this organism. Histoplasmosis, commonly shortened to “Histo” in medical parlance, is endemic to the Potomac River valley. The fungus grows in the soil and is enriched by bird and bat excrement. Birds are not infected by the fungus and do not transmit the disease. When the soil is disturbed, spores can be inhaled causing infection in the lungs.

Persons in certain dust-generating occupations, such as construction or farming, are at risk for acquiring Histoplasmosis. Mild pulmonary symptoms may resolve without treatment, and more serious pulmonary symptoms may present as pneumonia. In endemic areas, 10% to 25% of HIV-infected people will develop disseminated Histoplasmosis.

Although found throughout Maryland, the presence of Histoplasmosis in western Maryland is highlighted here because of the large number of studies conducted on Histoplasmosis in this region.

In 1991, the last article on Histoplasmosis was published by our predecessor, the Maryland Medical Journal. The 1991 article described what was then a relatively new phenomenon, disseminated Histoplasmosis in AIDS patients. Today, Histoplasmosis is established as the most common endemic fungal infection in humans in the United States.

Histoplasmosis

Endemic in Maryland
Not spread person to person
Consider in travelers returning from overseas who engaged in dust-generating activities
Immunosuppressed patients at risk for disseminated disease

In the 1960s and 1970s, Maryland initiated several important studies establishing the prevalence of Histoplasmosis infection. Histoplasmosis testing of lifetime resident Montgomery County high school students reported 71% had been infected. In Frederick County, 42% of sixth grade students reacted to histoplasmin, as did 55% of high school students in Washington County. A study of Navy recruits revealed that more than four epidemiologic investigators became ill with Histoplasmosis following collection of the bat guano.

More recently, outbreaks of Histoplasmosis have been reported in neighboring Virginia and Pennsylvania among travelers returning home from church mission trips to South America. The travelers had been renovating churches and engaged in dust-generating activities, such as cleaning indoors and outdoors, and electrical and plumbing activities. The overall attack rate was 61%. Physicians should consider the possibility of Histoplasmosis among patients presenting with pulmonary symptoms returning from travel abroad.

Histoplasmosis is not a reportable disease in Maryland, and thus no prevalence or incidence rates are available. Maryland Health Services Cost Review Commission data report only three hospital discharges in Maryland from 2010 to 2012, with a principle discharge diagnosis of Histoplasmosis. Thus, it appears that Histoplasmosis is primarily treated on an outpatient basis.

The Eastern Shore of Maryland is occasionally in the route of hurricanes.
as they spiral up the east coast with their attendant flooding. While no reports of increased fungal infections related to flooding in the United States exist, there is anecdotal evidence. Theoretically, infection with fungal species that contaminate buildings, occupants, and the environment could occur. The CDC advises that while Blastomycosis is a potential problem because it can cause serious disease even in persons with normal host defenses, Histoplasmosis is unlikely to be increased as a result of fungal contamination after major hurricanes or floods.

From the Mason-Dixon line to Point Lookout, from Assateague Island to Backbone Mountain, Maryland physicians must be vigilant for a unique melding of regionally prominent and globally associated diseases.

"The views expressed are strictly those of the author and do not represent those of the Washington County Health Department or the Maryland Department of Health and Mental Hygiene.

Information for this article is in part from public domains, such as the Centers for Disease Control and Prevention, U.S. National Library of Medicine, the National Oceanic and Atmospheric Administration, and the Maryland Department of Health and Mental Hygiene websites.
Eponymic Infections

Barton J. Gershon, MD
Editor Emeritus

In 1975, Mrs. Polly Murray contacted the Connecticut State Health Department, concerned about a puzzling illness. Two of her four children had developed Juvenile Rheumatoid arthritis (RA), which she thought was rather unusual. In addition - and quite incredibly - Mrs. Murray then discovered that there were 39 other children within her village (population 4,000 residents), who had also been diagnosed with Juvenile RA. After Mrs. Murray had made repeated attempts to provoke interest in this extraordinary circumstance, Dr. David Snyderman of the health department became curious and shortly thereafter consulted Dr. Allen Steere, a rheumatologist at Yale University.

Dr. Steere began an investigation that resulted in the discovery of twelve additional cases of Juvenile RA in adults. Several of these patients recalled experiencing a peculiar annular rash. The rash appeared similar to skin reactions noted in some European patients, who had developed a tick-borne disease. The cause of arthritis in the Murray children and others within their community was ultimately identified: a tick known as *Ixodes scapularis*. A bite from this tick had injected a spirochete into its victim, later identified by bacteriologist Willy Burgdorfer and subsequently named for him: *Borrelia burgdorferi*. The disease, as you may already have surmised, is known for the town in which it was first discovered — Lyme, Connecticut — and is known as Lyme Disease. [The genus Borrelia is named for the French biologist, Amédée Borrel (1867-1936).]

Eponyms are titles of objects that begin life as a proper noun - names of people, places, institutions, etc. - only to be lowered in time (Greek *epi*: "upon" and *onyma*: "name," that is "giving one's name to something"). Examples such as "ritzy" for hotelier Cesar Ritz, "bloomers" for suffragette Amelia Bloomer, "sandwich" for John Montagu, the Earl of Sandwich, "melba toast" for operatic soprano Dame Nellie Melba, "hermetic" for the Greek god Hermes, "derringer" for its inventor Henry Deringer, and "shrapnel" for its inventor General Henry Shrapnel.

Many infectious diseases have received eponymic designations, either from their place of discovery, or for the scientists who first identified the responsible organism. For example, there is a village in Greene County, New York, approximately 25 miles south of Albany, where a febrile illness appeared in 1948. The illness was thought to have been poliomyelitis, but was later found to be caused by a virus in the Picornavirus family. This virus, like that of the Polio and Echo virus, is an enterovirus — found within the intestines of infected patients. It was later named after the town in which it was discovered: Coxsackie, New York, and is therefore known as the Coxsackie virus. [Picornaviruses are extremely small RNA viruses. Their name derives from Spanish *picc*, "10^-12," i.e. one trillionth, as in a picosecond. (Pico plus RNA, plus virus = picornavirus). Echovirus is an acronym for enteric cytopathic human orphan virus. When first identified, no known illness was associated with the virus; therefore, the "orphan" status. Arbovirus is an acronym for arthropod borne — diseases, which are those transmitted by ticks, mosquitoes and other arthropod vectors. Arthropod stems from Greek *arthron*: "a joint" plus *pous*: "foot" — so named because these organisms have jointed or segmented feet. (Podalic version, podagra, and podiatry also stem from *pous.*). Robovirus is an acronym, signifying rodent borne disease. Corona virus is named for the halo or crown that surrounds the organism, as seen under the electron microscope (Latin *corona*: "crown"). Coronaviruses are one of the agents causing the common cold, but are also the cause of the Severe Acute Respiratory Syndrome (SARS). The Coronary Arteries, likewise, derive their name from Latin *corona*, since they encircle the heart like a crown.]

In 1933, an acute illness developed within the population of a small Danish island located in the Baltic Sea. Symptoms included fever with severe chest discomfort, later called Epidemic Pleurodynia. The etiology of this illness was finally established as a Coxsackie B infection, and the disease was named for Bornholm, the island on which it arose — Bornholm's Disease.

Another illness named for its site of origin is Tularemia, caused by the deadly gram-negative *Francisella tularensis*. The disease was first recognized in Tulare County, California, south of Fresno. That county is best known for Sequoia National Park, which is situated within its borders. [Francisella derives from Edward Francis, an American bacteriologist (1872-1957).]

Bunyaviruses comprise a family of RNA viruses, many of which cause hemorrhagic fever and are highly lethal. One of the deadliest members of this family is the Hantavirus, responsible for Hanta Fever, boasting a mortality rate of up to 55%. The name Bunyavirus is derived from the village of Bunyamwera in eastern Uganda where the type species was first isolated. The Hantavirus is named for its initial place of detection, along the Hant River in South Korea.

The Ebola virus, responsible for a dangerous form of hemorrhagic fever, is named after the place where the first outbreak of this disease occurred, along the Ebola River in The Democratic Republic of Congo. Lassa Fever, similar to Ebola, causes an acute hemorrhagic fever with high mortality. It was named after the town of Lassa, Nigeria, where the first cases of this disease were identified. Marburg virus, responsible for another form of deadly hemorrhagic fever in humans as well as other primates, was named after the city where the initial cases were discovered — Marburg, Germany.
Many microorganisms are named after scientists who first identified them. Albert Ludwig Sigesmund Neisser (1855-1916), a contemporary of Paul Ehrlich and August Wasserman, discovered the gram-negative coccus responsible for gonorrhea. That organism was accordingly named for him: Neisseria gonorrhoea. Another gram-negative coccus, within the same genus, is responsible for a severe form of meningitis, and was named: Neisseria meningitidis. [Gonorrhea] was actually misnamed. Originally, it was believed that the urethral discharge, a major symptom of the disease, resulted from the emission of sperm; thus Latin gonos: “seed” plus rhein: “to flow” – “a flowing out of seed or sperm.” Rhein may be seen in such terms as menstruea, rhinorrhea, diarrhea, seborrhea, steatorrhea, and leucorrhea – each of which is associated with the discharge of a liquid or viscous fluid.

Theodor Escherich (1857-1911) was a German pediatrician who discovered a gram-negative anaerobic bacterium in fecal samples. The organism was therefore named Escherichia coli. Many Escherichia organisms are non-pathogenic; however, some of the subtypes can cause gastroenteritis and urinary tract infections. One especially serious clade of E. coli may cause a severe enterohemorrhagic disease resulting in a hemolytic-uremic syndrome and many fatalities (EHEC: enterohemorrhagic Escherichia coli).

Daniel Elmer Salmon (1850-1914) was a veterinarian who devoted his life to the study of animal diseases. Theobald Smith, a pathologist working as research assistant to Salmon, discovered an organism that he believed to be the cause of hog cholera. He named it Salmonella cholerae suis in honor of his mentor. Currently, there are over 1,000 serotypes of Salmonella organisms that have been linked to food contamination and gastroenteritis. In addition, Salmonella typhi is the cause of Typhoid fever, a disease also spread by the fecal-oral route. The term typhoid derives from typhus plus the Greek ending oides “similar to or like” - it is “Typhus-like” in its appearance and symptoms.

Typhus, in turn, derives from the Greek for “smoke”; ancient physicians believed the disease arose from noxious vapors. [Malaria is named in similar fashion, from Italian mala: “bad” plus aria: “air,” stemming from the conviction that the illness was caused by the miasmatic fumes arising from fetid swamps.] Typhus is caused by Rickettsia typhi, Procaezekii, or tsutsugamushi. The genus Rickettsia originates from Howard Taylor Ricketts (1871-1910), an American pathologist who discovered the ticks Dermacentor variabilis and D. andersoni, which are vectors for Rocky Mountain Spotted Fever - an illness caused by Rickettsia rickettsii. Ironically and tragically, Ricketts died of Typhus while investigating an outbreak of that disease in Mexico.

Many diseases derive their names from men and women who pioneered the nascent field of microbiology and infectious diseases. Names such as Kiyoshi Shiga (1871-1957), David Bruce (1855-1931), Alberto Leonardo Barton (1871-1950), and Joseph Lister (1827-1912), for whom Shigelllosis, Brucellosis, Bartonellosis, and Listerioses derive their names, are but a handful of those trailblazers. As one studies infectious diseases and their microorganisms, it is helpful to recall that they may owe their names to a village, a river, or a person.

These are the eponyms of infectious diseases.

Barton J. Gershen, MD, Editor Emeritus of Maryland Medicine, retired from medical practice in December 2003. He specialized in cardiology and internal medicine in Rockville, Maryland. If you are interested in purchasing a copy of Word Rounds: A History of Words (Both Medical and non-Medical) and Their Relationships to One Another by Dr. Gershen, please contact Flower Valley Press, P.O. Box 83925, Gaithersburg, Maryland, 20883, or www.amazon.com.
Today's Physician: Knowledge Worker or System Professional?

PERSONAL PERSPECTIVE

Tyler Cymet, DO, FACP, FACOFP

Do medical schools currently train the type of professional that will be needed in the future? Physicians often hear that they are over-trained, too expensive, and independent. Graduate medical education (GME) training programs have often indicated that newly coated physicians do not have the level of expertise or the type of skills expected. The response from the graduate medical education community has been to increase the length of the training period for new physicians, which further raises the cost of training. Understandably, students are increasingly unhappy at the tremendous cost of training and the debt load they are burdened with post-graduation.

When given the choice, healthcare companies have recently been opting for other ways of providing care. Increasingly, we see alternative clinicians used to provide the services that were once under the exclusive purview of a physician. Today's healthcare companies seem to believe that a team, instead of a solo physician, can perform any medical treatment differently and more cost-effectively. For example, rather than pay for a specialized physician employee, fast tracts sections of emergency departments often use physicians assistants and nurse practitioners in situations that used to call for physician-only staffing. These trends are on a collision course with the current system of graduate medical education, which requires four years of college, followed by four years of medical school, and then three to seven years of residency before a student can decide whether to enter specialty fellowship. This system is not only frustrating and time consuming, but is being questioned more and more and by different stakeholders in the process. This outdated system has become obsolete in terms of creating the right amount of physicians, now have become shared decisions. Today, being the most experienced physician does not and will not automatically grant the authority to act. Increasingly, that authority will be a team decision that includes many different professionals.

As America develops a new system of healthcare, physicians want to be actively involved. Physicians have the knowledge, and the skill—they are the experts in health care. To continue to be effective, currently practicing physicians need to keep working within the system. It is time for physicians to look at their role critically and strategically. If they want to continue in their role as leaders in health care, physicians need to adapt to new environments.

The healthcare system is changing. As the system becomes more business focused, being associated with the brightest and most expensive provider may not be the best positioning for the physician as a professional. The argument that "the business of medicine has no business in medicine" may sound good, but amounts to nothing more than an irrelevant philosophical argument within a system that is quite obviously run by business.

Physicians are proud to fulfill the role of the protector of the patient. They hold that role to themselves, even as it is increasingly being taken away by the business of medicine. They now are forced to share this role, and in the future it will increasingly be a joint responsibility. Every action taken and every treatment given is being counted and measured for cost-effectiveness. Decisions that previously were physicians' alone
EMPLOYMENT

CLINICAL PHYSICIAN, STAFF:
Excellent opportunity for Internist/Family Practitioner at Maryland's DHMH State psychiatric hospital in Carroll County. The position will provide clinical services to patients who are mentally ill, chronically ill, or developmentally disabled. The physician is responsible for inpatient services, i.e., evaluation, treatment and after care planning. This position is available for evenings, nights, weekends and holidays. Applicants must be licensed by the Maryland Board of Physicians to practice medicine under Maryland State Law. If interested, send a CV and MD state application (MS-100) along with a letter of interest to: Dr. Shahida Siddiqi, Director of Medical Services, Springfield Hospital Center, 6655 Sykesville Road, Sykesville, Maryland 21784. For questions call 410.970.7120. Springfield Hospital Center is an EOE.

FREE LUXURIOUS BEACH CONDO FOR FULL TIME, PART TIME OR SUMMER EMPLOYMENT AT OUR MODERN URGENT CARE CENTER.
Friendly, yet exciting fast-paced atmosphere. Our urgent care center is well-staffed and equipped with x-rays, labs, EKG, pharmacy, and always staffed with physicians, nurses, medical assistants, and radiology technicians. We offer a luxury condo, tennis, pool and salary with paid malpractice, flexible schedule and more. NO HMO and NO ON CALL. Enjoy some fun and sun at the beach. Watch the sunsets and enjoy the crabs on the boardwalk. Contact: Dr. Victor Gong, 75th St. Medical, 410.524.0075, vgongmd@gmail.com

JOHNS HOPKINS-TRAINED DIAGNOSTIC RADIOLOGIST NEEDS PART-TIME EMPLOYMENT OR CONTRACT. Long-term experience in plain film reading & CT scanning. No need for employee benefits except malpractice coverage. Call 410.823.9197 &or rsindler@outlook.com.

LEASE/SUBLEASE/SALE

FOREST HILL: Office space available in a quiet professional building. Includes utilities, phone, copy, fax machine, receptionist area, waiting room, and parking. Two examination rooms and all other necessary accommodations for an MD (sink, closets, file areas, etc.). Part-time availability (1-3 days a week). Please contact Dr. Schmitt at 443.617.0682 or Dr. Legum at 410.852.0582.

FREDERICK: Medical Office space available to share. Approximately 2000 sq. ft. Bright and modern office located at intersection of Guilford Rd. and New Design Dr. Waiting room, Front desk and Physical Therapy equipment available for use. Perfect space for an internal medicine/family practice looking to expand in the Frederick area. Hours of use and rent are negotiable. E-mail inquiries to hollyford@smartmed1.com.

SILVER SPRING, DOCTOR'S MEDICAL PARK. Georgia Ave at Medical Park Dr. Close to Holy Cross Hospital, 1/2 mile north of #495. 3 building medical campus totaling 95,000 sq. ft with over 100 practitioners and Clinical Radiology's HQ. 2 suites from 110 sq. ft. avail. Call Steve Berlin at Berlin Real Estate, 301.983.2344 or steve@berlinre.com.

SILVER SPRING/WHEATON: Lower your overhead expenses by subleasing or sharing medical office space. Luxurious penthouse suite with 3200 square feet, 7 treatment rooms, surgery center, equipment and staff available. All medical specialties welcome. Call: 301.949.3668.

MEDICAL OFFICE BUILDING

3,556 sq. ft. Easton, MD. 4 offices, 4 exam rooms 2 baths. Assessed at $711,200. Appraised at $625,000. Offered at $425,000. Contact Ray Stevens @Oxford Commercial, 410.310.6060. ore@goeaston.net.

Today’s Physician ...
continued from page 32

References:

off the mark.com by Mark Parisi

tickS IN SHEDDING SEASON

Reprinted with permission by offthemark.com.
Professional protection with a home field advantage.

The only medical professional liability insurer created by Maryland Physicians for Maryland Physicians.

There's a reason why more Maryland Doctors place their trust in the team at MEDICAL MUTUAL than in any other insurance company: no other insurer can match our winning record. When it comes to defending good medicine on our home turf, we're aggressive, we know the Maryland courtrooms, and we know the Maryland legislature. As a Doctor owned and directed company, we understand your needs and concerns better than anybody else. It all adds up to the strongest defensive strategy for your practice and professional reputation.

MEDICAL MUTUAL

Liability Insurance Society of Maryland

225 International Circle | Hunt Valley, Maryland 21030
410-785-0050 | 800-492-0193
MedChi Insurance Agency, Inc.
Established by Physicians for Physicians

We know how to diagnose and treat your insurance & financial needs

Property & Liability:
• Medical Malpractice
• Workers Compensation
• Medical Office Insurance
• Employment Practices Liability
• Directors & Officers Liability
  Bonds (Fiduciary/Fidelity/ERISA)
• Personal Insurance (Home, Auto, Umbrella)

Employee Benefits:
• Medical, Dental, and Vision Coverage
• Group Life & Disability
• Section 125/Flex Spending Accounts

Find out if your medical practice is adequately insured

Call us today to schedule your “no-obligation” insurance and financial review.
410.539.6642 • 800.543.1262