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ON THE COVER:
Casey Willimann, MD, an internist and pediatrician with Liberty Clinic, discusses needed vaccinations including HPV with a preteen patient. Dr. Willimann is co-chair of the KC and Wy-Jo Medical Societies’ Vaccination Task Force launching an effort to increase HPV immunization among boys and girls ages 11-12 (story on page 14). Photo by Mike Curtis.
Health Behavior and Education Expert to Speak at KCMS Annual Meeting Sept. 14

Health behavior and education expert Victor Strecher, PhD, MPH, will be the featured speaker at the Kansas City Medical Society’s 135th Annual Meeting on Wednesday, Sept. 14. The meeting will be held at the newly renovated National World War I Museum and Memorial starting at 5:30 p.m. He will discuss how living with purpose contributes to an individual’s overall health.

A professor at the University of Michigan School of Public Health, Dr. Strecher founded the Center for Health Communications Research which studies computer-based interactive communications for health-related behavior change and decision-making. He also founded HealthMedia, Inc., an Ann Arbor-based company that develops and disseminates tailored health interventions for health promotion, disease prevention, behavioral health, and disease management.

Tours of the World War I Museum will be available during the reception. Michael E. Monaco, MD, KCMS member and military medicine history expert, will give mini-presentations on World War I battlefield medicine.

Besides Dr. Strecher’s comments, the meeting will feature presentation of KCMS 2016 awards including Achievement Awards, Friend of Medicine Award and Member Awards. KCMS President Stephen Salanski, MD, will provide an update on the Medical Society’s progress.

For more information and to register, visit www.kcmedicine.org. RSVP deadline is Wednesday, Aug. 24.

William Jewell Students Report on Medical Marijuana Public Policy

As part of their class in Nonprofit Advocacy and Public Policy, graduate students from William Jewell College this spring conducted a research project for KCMS on public policy related to medical marijuana. They presented their report to the KCMS Board of Directors on April 25. To build students’ policy experience, the class seeks local nonprofit organizations for which they can prepare research projects.

The report provided information on current and proposed Missouri legislation concerning medical marijuana, a summary of those supporting and opposing legalization, a scan of existing legislation in several other states, a brief history of marijuana and an overview of the science of cannabis.

Also as part of the report, an informal online poll of KCMS members was conducted via the weekly email newsletter. Of the 110 physicians responding, opinions were divided, with 54 percent saying they would prescribe medical marijuana if it were legal. Regarding what action KCMS should take on the issue, 29 percent said it should actively support legalized medical marijuana, 31 percent said KCMS should actively oppose legalization, and 26 percent said the Society should provide information but take no position.

The full report can be viewed on the KCMS website, www.kcmedicine.org, in the Blog section.
Swing That Hammer
By Charles W. Van Way, III, MD, Editor, Kansas City Medicine

A CHANCE TO CUT IS A CHANCE TO CURE.
~ Surgical Proverb

WHEN YOUR ONLY TOOL IS A HAMMER,
every problem starts to look like a nail.
~ Modern Folk Saying

Medical specialization has been a wonderful thing. It’s taken us from the horse and buggy days of general practitioners to the 21st century of medical wonders. As a child, I had a tonsillectomy in a GP’s office. Today, I practice in a modern medical center, with colleagues who have detailed knowledge about any conceivable medical condition. Today, children or anyone else who needs surgery, will go to a specialist who carries out dozens of such procedures every year.

But, everything has a downside. We are all familiar with the cost consequences of specialization. While 60 years ago a tonsillectomy required only one physician and a nurse to perform, now it may require several physicians and a host of other medical workers. And there is an intellectual problem. The phrase “medical silo” wasn’t around a couple of generations ago. Today, lack of communication among various specialists may have serious and even fatal consequences for the poor patient. For the most part, these things are just part of the price we pay for the benefits of specialization. We recognize that. What is not generally recognized is the ethical dilemma of the specialist.

Back when I first learned these things, medical ethics rested on three principles: autonomy, beneficence (do good), and non-maleficence (do no harm). Lately, a fourth principle has been added: justice. Or social justice, if you prefer.1,2 This fourth principle is at the heart of the specialist’s ethical dilemma.

Simply put, that dilemma is the conflict between the specialist’s desire to do everything possible for a patient, and the limits on what can or should be done.

Simply put, that dilemma is the conflict between the specialist’s desire to do everything possible for a patient, and the limits on what can or should be done. The surgeon’s preference for the scalpel is only one such example. In fact, the surgeon generally is very conscious of the dilemma, and must balance risks of operation against benefits in every case.

Perhaps a more difficult example of the specialist’s dilemma is seen in the intensive care unit. Current techniques of respiratory, cardiac and nutrition support have saved many lives. When intensive care units were being established—and yes, I’m that old—there was fear that many patients would be on permanent life support, unable to recover, yet not allowed to die. At that time, there were wards filled with polio victims on “iron lungs,” so perhaps the fear was justified by extension from what was known. But it didn’t come to pass. Physicians and hospitals balanced the ethical questions involved. These concerned questions of autonomy, benefit and harm, but also and increasingly, the just distribution of resources. Much of our current interest in medical ethics comes directly from the need to confront these issues in the intensive care unit.

The “hammer” here is the intensivist’s knowledge of techniques of life support. This produces a strong desire to use all appropriate techniques in the interest of each patient. That’s a Good Thing, in and of itself. Where it becomes ethically questionable is the failure to relate the technical side of therapy to the larger questions which surround the care of any patient. I should inject a confession here. I am boarded in surgical critical care, and can testify to the temptation to do everything to every patient. One should write about what he knows. This temptation can lead any of us into overtreatment, even into misadventures. The current controversy over extracorporeal membrane oxygenation for respiratory
failure is a great example of the need to continually confront and debate these issues. The debate over ECMO has been going on for at least 35 years in my personal experience, and its place in therapy has not yet been settled.

INTER-SPECIALTY CONFLICTS

Of course, the ethical dilemma is not confined to the ICU. It arises often during inter-specialty conflicts. An internist caring for a patient with, say, intestinal obstruction must decide whether to call in the surgeon or continue to care for the patient. And that decision must often be made daily. Does this affect outcome? A recent paper analyzed 107,000 admissions admitted to hospitals in New York state. The authors found that admission to a medical service as compared with a surgical service doubled the mortality, and increased the length of stay, cost and readmission rate. That was not a randomized, prospective study. But large numbers do have a power of their own. The other side of this particular coin is the tendency of surgeons to regard every patient as someone who would benefit from an operation, as in the quotation above. In the early days of coronary bypass, one such surgeon was criticized for operating on 90% of referrals. Most surgical teams at that time were operating on 30 to 50% of referrals. His defense was that if the cardiologist had referred the patient, then the patient obviously needed surgery, and it was his job to provide that service. The attitude is not limited to surgeons. There are interventionists who have never seen a vessel they would not dilate, and intensivists who view bronchoscopy as something to be done every day in every patient.

The specialist, especially in surgical or interventional procedures, has the most expertise about whether or not a procedure should be done on a given patient. The specialist, then, has an ethical obligation to exercise his or her best judgement, and refrain from intervening when it would not benefit the patient. Fair enough. But all of us have seen bitter conflicts when the referring specialist wants a procedure, and the procedural specialist feels that the procedure is not indicated. This sort of disagreement is fine, up to a point. But it can become unethical behavior if the patient is caught in a tug of war between physicians.

Employment of physicians, such as hospitalists, can be a source of ethical conflict. There is a potential conflict between the interest of the physician’s employer and the interest of the patient. To continue with the example, the use of hospitalists can and usually does lower length of stay, allow earlier interventions, and reduce readmission rates, all of which lower costs and improve care. Yet, a fixed emphasis on, for example, getting the patient out of the hospital quickly, may have adverse longer-term consequences. Such conflicts are by no means limited to hospitalists, and in fact apply equally to physicians employed by large groups as well as by hospitals and health systems.

The ethical conflicts inherent in specialization are real. Ideally, we will all work to resolve them in the patient’s best interest. This is not an argument against specialization as such, but simply a recognition that ethics should continue to be a major part of our medical practice. And remember: your hammer is exceptional. But the problem may be something other than a nail.
Physicians shouldn’t fear population health management. If instead they embrace it, their patients will achieve better health, the practice will be more profitable, and the workload will be better distributed in the office. That was the message Scott Conard, MD, DABFM, FAAFP, a Dallas family medicine physician, brought to KCMS members and guests in a May 10 seminar at the Intercontinental Hotel.

“Whether in a fee-for-service or value-based model, primary care doctors will realize the ‘triple-aim plus one’—the ‘plus one’ being less physician burnout. Don’t wait to get started,” he told the KCMS audience.

Dr. Conard’s journey with population health management began in summer 1996. He was shocked and saddened when three patients, all in their 40s, died suddenly from preventable causes. He was determined to see that this wouldn’t happen again.

“All the warning signs were in the charts. One had what today we call metabolic syndrome; another had Type 1 diabetes; the third was a smoker with borderline cholesterol,” he said. “We didn’t have the mentality then to stratify risk. I set about to reinvent my practice.”

**PROACTIVE OUTREACH TO PATIENTS**

With the help of a friend in the computer systems business, he began compiling data on his patients. By 1998, they began doing proactive outreach to patients who had conditions that needed monitoring. The process spread throughout the 13-doctor practice.

“We were doing population health management and patient-centered medical home then; we just didn’t have those terms for it or the national models,” he said.

Every patient, upon arriving at the office, received a summary of all their previous tests and diagnoses, along with how the patient’s results compare with national guidelines and any recommendations for further action. Medical assistants reviewed the summary with the patient, enabling the physician to focus just on treatment.

“I honestly believe that if I had had this system in place in summer 1996, those three patients would not have died,” he said.

Dr. Conard also relayed the story of an employee of a large aerospace company who had been paid by the employer to come in regularly for check-ups. After he retired, Medicare didn’t pay for these check-ups, so he stopped coming in.

“He then had a heart attack. After that, he couldn’t do his hobby of restoring cars. He got depressed and died,” Dr. Conard said. “The moral of the story is that the employer was able to keep him at work, saved his life for additional years, and when the tragedy of the heart attack did occur, the employer did not have to pay for it – a ‘triple bottom line’ win for them.”

**BENEFITS TO THE PRACTICE**

Besides improving patient health, another benefit of population health management is that this proved to be more profitable for the practice.

“With the medical assistants and nurses doing more, our revenue grew from $90 per visit to $132. The physician was doing less work,” he said. Since the staff was empowered to do more, their morale increased, he added.

“Population health is about making life better for the physician, not busier,” Dr. Conard noted. “Never do anything that someone else can do just as well as you. Figure out how to hand it off.”

Based on his success with his 13-physician practice, Dr. Conard was hired to implement the approach with a 184-office provider. Many positive results were achieved, he noted, including higher compliance with national guidelines, value-based bonuses, maintaining summer volume, a more empowered staff, and keeping patients up to date on their preventive and chronic disease preventive guidelines.

In addition Dr. Conard said he was informed by a large national insurance company that this group was $16 per-member-per-month less expensive overall, and $100 per-member-per-month less expensive for patients with diabetes.

Dr. Conard said the same lessons
can apply to how physicians respond to the changes in Medicare payment coming under the Medicare and CHIP Reauthorization Act (MACRA). “Don’t get angry about this, just go save lives,” he said.

He reviewed for the audience the MACRA timetable: Data collection will begin in 2017; physicians will receive their quality scores in 2018; payment under the new Merit-Based Incentive Payment System (MIPS) and Alternative Payment Models (APM) will begin in 2019.

Dr. Conard concluded, “Population health is about saving lives, making life better for the physician and staff, and creating revenue for the practice. Don’t do it out of fear. Do it for the love of patients and the love of medicine.”

His remarks were followed by a brief panel discussion with Michael O’Dell, MD, KCMS immediate past president; Bridget McCandless, MD, CEO of the Healthcare Foundation of Greater Kansas City and a KCMS past president; and Qiana Thomason, vice president of clinical operations for Blue Cross Blue Shield Kansas City.

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Contact Tom McNeill to learn more. 816.474.4473 | tom.mcneill@keanegroup.com

*Program available to physicians in good standing with KCMS. Discounts subject to underwriting approval.
The biggest news for Missouri this year was the election. The American Medical Association House of Delegates (HOD) held its 2016 Annual Meeting in Chicago June 10-15. David Barbe, MD, of Mountain Grove, Mo., was elected AMA president-elect.

Before his election, he served on the AMA Board of Trustees, and is a past chair. He will serve as AMA president in 2017-18. If you are reading this and are not an AMA member, join now. Missouri’s influence will never be greater than over the next two years. And note, the AMA has kept its dues the same for 18 years!

Last year, Congress finally repealed the Sustainable Growth Rate formula. The substitute was called the Medicare Access and CHIP Reauthorization Act of 2015—MACRA. An article on page 24 of Kansas City Medicine gives considerably more detail about the new legislation. At the AMA meeting, Andy Slavitt, the acting administrator for the Centers for Medicare and Medicaid Services, told delegates that physicians will have significant input to the new regulations and how they will be implemented. To get involved, go to https://breaktheredtape.org, and sign up.

The opioid epidemic continues to kill. The AMA strongly supports the increased availability of naloxone. See Mike O’Dell’s article, elsewhere in this issue. A resolution calls for an end to the notion of “pain as the fifth vital sign,” as well as the use of patient satisfaction surveys which reward physicians and hospitals for overprescribing opioids. And the AMA supports new guidelines from the CDC, although recognizing that guidelines should not replace clinical judgement (http://www.cdc.gov/drugoverdose/prescribing/guideline.html).

**Dysfunctional electronic health record systems** were a significant focus. James Madera, MD, AMA executive vice president, spoke of the “digital dystopia.” The AMA works strongly for better transparency, better functional- and improved ease of use. We know that poor EHRs are a major source of physician stress and dissatisfaction. The AMA is working along several lines to improve the present system. The Kansas Health Information Network was called out specifically as a worthwhile effort to build interoperability into the health system.

The AMA has long been concerned about **gun violence**. Partly in response to outrage over the Orlando nightclub shootings that occurred during the meeting, the HOD passed resolutions calling for universal background checks for all firearms, and to Congress to authorize federally-supported research on gun violence.

The AMA has, after an eight-year revision, approved a comprehensive update of the **Code of Medical Ethics**. It will shortly be available to all on the AMA website.

A number of issues around **testing and certification** were discussed. A resolution passed to do away with the United States Medical Licensing Examination (USMLE) Step 2 Clinical Skills (CS), and its osteopathic equivalent, the Comprehensive Osteopathic Licensing Examination (COMLEX) Level 2-Performance Examination (PE). Medical students and residents have long held these examinations to be expensive, burdensome and of little value.

**Maintenance of Certification** (MOC) continues to be a major issue for physicians. Several resolutions dealing with the modification or even elimination of MOC passed the HOD. Perhaps the most important was a resolution opposing examination-based MOC and maintenance of licensure (MOL). This would completely change current practices, and marks another step in the ongoing AMA effort to reform MOC and MOL.

There is continuing concern about the mismatch between MD and DO graduates and residency places. A resolution called on Congress to fund more residency positions and to investigate alternative ways of funding graduate medical education. As I noted last year in a similar report, “This year, as
many as 1,500 MD and DO graduates from U.S. schools, plus about 3,000 American graduates of international schools, were unable to find residency positions after graduation. There simply aren’t enough jobs to go around.” Unfortunately, the statement is as true this year as it was last year.

As always, the HOD passed many resolutions about small, yet important, issues. Of particular interest was a Missouri resolution supporting inclusion of direct primary care as a qualified medical expense by the IRS. Among other things, this would allow funds in medical savings accounts to fund direct primary care. Other resolutions ranged from banning powdered alcohol, to advocating disposal programs for unused medications, to testing rental properties for radon, and to delaying school start times for teenagers.

Veterans’ care in the VA system must be improved. Such resolutions are routine at the AMA meeting. But they are important. Improving personal and public health in many small ways is important. The AMA is constantly working towards improvement of our health system.

Do you see something that needs to be recognized, or improved? We’ll be looking for new resolutions for the Interim Meeting in November and the Annual Meeting next June. Speak up!

As current AMA President Andrew Gurman, MD, said in his inaugural speech, we must advocate for ourselves. If not us, then who will?

Charles W. Van Way, III, MD, served as KCMS alternate delegate to the AMA Annual Meeting. Rebecca Hierholzer, MD, was KCMS delegate.

Scott Kujath, MD, Receives INMED International Medicine Award

The award recognizes an individual who has made a significant contribution to health in developing nations. Recipients have demonstrated uncommon dedication and endurance in pursuit of this cause.

A vascular surgeon at Midwest Aortic & Vascular Institute, Dr. Kujath frequently serves in Eastern Africa, providing direct medical care as well as pioneering innovative hospice and palliative care in connection with the Living Room, offering dignity and quality of life for Kenyans affected by HIV/AIDS and other life-threatening illnesses.

Dr. Kujath is the chief of vascular surgery at Truman Medical Center and the University of Missouri-Kansas City. He also leads Kansas City’s Mission of Hope Clinic.

Richard Hellman, MD, Honored as Outstanding Clinical Endocrinologist

Endocrinologists (AACE). The honor was given at the AACE’s Scientific & Clinical Congress in May.

The AACE Outstanding Clinical Endocrinologist Award is given in recognition of dedicated and compassionate care provided to patients with endocrine diseases, exceptional knowledge and expertise in the field of clinical endocrinology, and active advocacy of AACE’s mission in both professional and public environments.

Dr. Hellman is the managing partner of Hellman & Rosen Endocrine Associates in North Kansas City. He has been involved with AACE for more than 20 years, joining the AACE board in 1999 and serving as its 16th president in 2007. Dr. Hellman also is a past KCMS president.
Legislative Wrap-Up 2016

STATES ENACT LEGISLATION OF INTEREST TO MEDICINE

KANSAS

By Joshua M.V. Mammen, MD, PhD, FACS
The University of Kansas Medical Center

The Kansas Legislature completed its 2016 session in the early morning hours of May 9. While much effort was spent on the budget, several bills of importance to patients and physicians were considered. As way of background, the Kansas Legislature is organized into a House of Representatives with 125 members and a Senate with 40 members. The legislature is made up of part-time members who meet from January to May of a given year. While the representatives serve two-year terms, the senators serve four-year terms.

VARIOUS HEALTH CARE ITEMS (HB 2615). Gov. Sam Brownback signed into law this bill which combines several topics of interest to physicians:

- **Regulation of charitable health care providers:** The law allows physicians who perform gratuitous medical care to receive one continuing education credit for every two hours of service to indigent patients. In addition, individuals who sign an agreement with the Secretary of the Kansas Department of Health and Environment to provide gratuitous service will be exempt from the liability under the provisions of the Kansas Tort Claims Act.
- **Regulation of acupuncture:** With regards to scope of practice, the law creates regulations for the practice of acupuncture including educational and regulatory requirements that had not been previously in place.
- **Independent practice of midwifery:** Midwives who meet specific requirements will be able to manage routine live births without a collaborative practice agreement with a physician. The authority for this licensure however was transferred from the Board of Nursing to the Board of Healing Arts (the medical board).
- **Joining the interstate medical license compact.** This measure is expected to facilitate quicker and more efficient licensure of physicians in Kansas who already have licenses from other states in the compact. The majority of the other states in the compact currently are in the Midwest or West.

MINORS’ ACCESS TO INDOOR TANNING (HB 2456). After several years of debate, the bill was passed and signed by the governor. The law now simply prohibits the use of commercial indoor tanning facilities by anyone under the age of 18. The regulatory authority is provided to the Board of Cosmetology to fine violators $250 per offense. Opponents of the bill had argued that it infringed on parental rights while supporters advocated that the bill would protect children from a carcinogen similar to the laws that prohibit tobacco purchases by minors. It went into effect July 1.

STEP THERAPY UNDER MEDICAID (SB 402). Also signed by Gov. Brownback, this bill allows the Kansas Department of Health and Environment to use step therapy in Medicaid patients. Step therapy, currently used by many commercial insurers, mandates that physicians first use the least expensive effective therapy prior to commencing a more expensive therapy. In the Kansas provision, patients who have been on a therapy prior to July 1, 2016, and those with multiple sclerosis are exempted. Other provisions exempt patients who are likely to have an adverse reaction, if the drug is unlikely to work due to specific treatment characteristics, or if a different drug (than the cheapest) had previously worked for the condition. The exemptions in the bill were strongly advocated by the medical community.

In all, in the midst of a tense budget debate, the medical community was able to provide input and advice throughout the legislative process on bills that affected patients and physicians. Advocacy bore fruit during this session demonstrating the continued need for physicians and patients to be active and vocal during the legislative process.

Joshua Mammen, MD, PhD, FACS, is an assistant professor of surgery and molecular & integrative physiology and vice chair of research in the Department of Surgery at the University of Kansas Medical Center. He is a member of the KCMS Board of Directors and is chair of government relations.

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MISSOURI
By Jeff Howell and Kenny Jackson, Missouri State Medical Association

Editor’s Note: The following is excerpted from the MSMA end-of-session legislative report.

BILLS THAT PASSED

TELEHEALTH AUTHORIZATION (SB 579). Signed by the governor, this bill gives statutory authority and provides parameters for the use of telehealth services. This includes the establishment of the physician-patient relationship, standard of care, and the use of store-and-forward technologies. It also allows a framework for the use of these technologies in the MO HealthNet (Medicaid) program.

COLLATERAL SOURCE RULE (SB 847). This tort reform effort requires damages be calculated using the actual cost of health care services, rather than the value of those services. It will help suppress high verdicts based on the subjective value, and constrain damages awards to what the plaintiff actually paid for their care. This bill was vetoed, and MSMA expects an override to be attempted in September.

EXPERT WITNESS STANDARDS (SB 591). This bill changes Missouri’s standard in accepting expert witness testimony in most civil lawsuits and brings that standard in line with the federal courts. This was also vetoed.

MAINTENANCE OF LICENSURE PROHIBITION (HB 1816). This prohibits any kind of discrimination against non-board certified physicians by the state.

NALOXONE (HB 1568). Signed by the governor, this bill allows for the sale of naloxone by pharmacists under a physician protocol to individuals and organizations who have a standing order to store and dispense it. It also provides immunity to people who use naloxone on an individual they believe is suffering from an opioid-related overdose.

PEDIATRIC SPECIALTY REIMBURSEMENT BUMP (HB 2011). The state budget wonks found it permissible to earmark approximately $4.4 million in a MO HealthNet reimbursement bump for maternal-fetal medicine, neonatology and pediatric cardiology.

MAINTENANCE MEDICATIONS (SB 973). This bill allows pharmacists to dispense varying quantities of maintenance medications up to the total number of dosage units authorized by the prescriber. This does not apply to controlled substances or initial prescriptions.

COST TRANSPARENCY (SB 608). This will require health care providers to provide patients with a cost estimate when presented with a written medical treatment plan. Further, it requires hospitals to provide the amount charged without discounts for their 100 most prevalent DRGs on an Internet portal.

MEDICATION SYNCHRONIZATION (SB 865). This bill forces health plans to offer services that allow patients to synchronize the fills of their medications without charging an amount in excess of the applicable co-payments.

STEP THERAPY (HB 2029). Among other things, this language requires health plans to provide physicians with a convenient process to request step therapy overrides. Although not as robust as we would have liked, this bill does provide a good framework for future amendments.

INTERCHANGEABLE BIOLOGICS (SB 875). This bill allows a pharmacist to select a less expensive FDA-approved interchangeable biologic product in place of a brand-name product. It also requires a pharmacist who switches a patient to an interchangeable biologic to inform the patient’s prescriber within five days of dispensing.

MEDICAL FREEDOM ACT (HB 1682). This bill prohibits the Board of Healing Arts from conditioning medical licensure on participation in any health insurance plan, public health care system or public service initiative.

PATIENT RESTRAINTS (HB 1862). This allows physician assistants and assistant physicians under a supervision agreement to order patient restraints for a limited time in a mental health facility. APRNs have had this ability for a couple of years.

Jeff Howell is director of governmental affairs and Kenny Jackson is director of legislative affairs for the Missouri State Medical Association. For more information, they may be reached at 800-869-6672, jhowell@msma.org or kjackson@msma.org.
Mind Traps:
The Language of Political Campaigns
WATCH FOR THESE TECHNIQUES OF PERSUASION DURING THE ELECTION SEASON
By Christopher Y. Thomas, Jr., MD

Some years back, my father gave me two volumes of Essays on Liberty, published by the Foundation for Economic Education. The other day I was reviewing Vol. 9 and discovered an article entitled, “Danger: Mind Traps Ahead,” by W. E. Sprague. The article was written several years ago but seems particularly appropriate for the present political situation.

He talks of basic rhetorical techniques that work on the principle that no man can think clearly if he is frightened, angry or in any other way emotionally overstimulated. Such techniques are structured with keywords that invite us to identify with an image that is somehow threatened. The facts are ignored, snubbed or completely obscured. The collective name by which they are known sounds innocent enough. They are called “logical fallacies.” They attempt to short-circuit your power of reason. In this election year, perhaps to a greater extent than usual, we are seeing more and more of these techniques.

APPEAL TO THE PEOPLE (AD POPULUM). Facts are obviated by “image words” so generalized they have practically no meaning. Their aim is to make you defensive, to make you feel “picked on,” and thus forget the facts. As an example: “Which is more important, big business or the little fellow?”

APPEAL TO THE HEART. This means to coax you into ignoring the facts by arousing your sympathy. Example: “Peace and harmony and cooperation are man’s destiny, not competition.” Well … there is much to be said for harmony. But it hasn’t been man’s destiny for the last 10,000 years. Why should it be so in the future? The same could be said for peace. And men generally cooperate when they are beating up other men. This particular appeal works because our emotional network is made up of a collection of more or less standardized and generalized images that we have acquired from childhood. Images such as cooperation and harmony resonate with us. We learned them in kindergarten, didn’t we? They short circuit our reasoning and head straight for our emotions. Only careful, rational thinking can carry us through the vast complexity that is our economy and our nation. These particular logical fallacies are most commonly used by the planners of Utopia in their battle against ideas of free market, private property, individual enterprise and other aspects of a free philosophy.

IT DOES NOT FOLLOW (NON SEQUITUR). Consider the oft-cited connection between “thousands of suffering people” and the absence of national health insurance. There really is no logical connection. There are many ways to ensure that everyone has access to health care. No particular one of them works noticeably better than others, although some do a better job of hiding the costs. Yet, there is an emotional appeal to considering those “thousands upon thousands.” Politicians love non sequiturs. Ask for the facts.

FALSE CAUSE (POST HOC, ERGO PROPER HOC). This one is also beloved of politicians. An example: “The market crashed in 2007, and that’s why our economy hasn’t recovered since.” Here, the speaker is committing a dual fallacy. In her use of the term “the market,” she intends you to react to the image of Wall Street, i.e., business and industry, as being the sole factor. The fact that the economy hasn’t recovered from the Great Recession has nothing to do with why the GR occurred in the first place.

OVERGENERALIZATION (SECUNDUM QUID). This technique has the underlying assumption that trends will continue forever. It’s sometimes called the “entering wedge” argument. “Give them an inch and they’ll take a mile.” As examples, “If you allow automation in industry, you’ll soon have 30 million unemployed,” or, “If you sign a trade pact, all jobs will go overseas.” We as physicians tend to do this a bit too much. “Eat one doughnut, and you’ll die of morbid obesity.” Well, there is some truth to that, but most of us still enjoy the occasional indulgence.

NAME CALLING (TU QUOQUE). This one is particularly common, especially on the farther ends of the political spectrum. Both left and right. Example: “How about the greedy profiteers of capitalism? Look at what they do to initiative.” Or, “Senator (put name
here) is a congenital liar!” Most politicians use this as a counterattack. The “image words” are intended to change the argument, to something entirely foreign to the issue being discussed.

**AUTHORITIES AND STATISTICS.** The appeal to authority is always a good way to reinforce a weak argument from the issue at hand. The phrase, “As Lincoln said,” puts moral authority at your back. But what Lincoln said about a particular topic is usually beside the point. Did Jefferson, or whomever else is quoted, have firsthand knowledge of the facts relating to the topic? Is the topic within his field of special knowledge?

And then there is the spurious appeal to statistics. Physicians are particularly vulnerable to “Our figures prove.” We like to think of ourselves as data driven. When trying to convince a politician, physicians are very likely to quote studies. Unfortunately, what statistics allegedly show about an issue isn’t going to change any politician’s mind. It is really beside the point. Very, very few politicians are also statisticians. Or researchers. Besides … who compiled the statistics, and how?

**DESTROY THE MAN OR SOURCE (AD HOMINUM).** Certainly the most vicious of these mind traps. And a staple of modern politics. Example: When one refers to some of the original premises of liberty as variously stated by the framers of our Constitution, the opponent remarks, “You’d still have us wear silk breeches and powdered wigs.” Or that any man who criticizes wasteful government spending may be assailed as a “tightfisted Scrooge,” or worse. The basic idea is to attack the man, not the issue, especially if the issue cannot be logically defended at all. A similar option, “poisoning the well,” is essentially the same tactic used against groups—political, racial or religious—and sources of ideas such as books and documents or publications. Tactics include, if necessary, the deliberate assassination of reputations by out and out lies. In fact, the closer you come to the truth in your presentation or criticism, the greater risk you run of being attacked.

**FALSE ANALOGY.** It’s obvious that all analogies are false. The best can be said is that some analogies are useful. But the false analogy may be the most troublesome of these mind traps. It is the most difficult to counter. Simply stated, an analogy is a device for explaining one thing in terms of another. It is an absolutely indispensable tool in the process of learning. Analogies are always “like” something but they are not identical to that thing. Hence, in this sense they are always false. But in the sense we are talking about, a false analogy will always contain elements of truth, yet will be overstated, stretched. Here’s an example: “The national budget is just like your household budget.” No, it isn’t. And to try to use that analogy to discuss government finance is just wrong. Above all, remember that an analogy is always a comparison, not a proof.

**APPEAL TO FEAR (ARGUMENTUM AD BACULUM).** This technique is basically a threat. It’s a rhetorical club, held over our heads. We rarely encounter it in this form, though, until its users stand up on the very threshold of their goal. How about something like this: “Where do you stand? With big business or with the people? You’re either for us or against us.” This aims to arouse the emotion of fear above all other emotions. Yet fear is dispelled by knowledge and by specific truths. Herein lies the most effective means of combating “mind traps” of quotes and freeing ourselves from their effects altogether.

Why do all of these mind traps have Latin names? Is that because they’ve been around since the Romans? In a word … yes. They were preserved through the Middle Ages by the study of logic and rhetoric, both of which were carried out in Latin until modern times. People have been using these rhetorical techniques for so long for the simple reason that they work. Unfortunately.

All of the above devices are used much these days by the advocates of government control, government aid and government intervention. Of course, mind traps can just as easily be used against them, if one cares to play such games. Today’s politics may be seen as the end result of both sides using these rhetorical weapons. They can be deadly, and for that reason, we need to avoid playing them. Rather, we do need to combat their effects.

We must learn to recognize the games that appeal not to our reason but to our unreasonable fears and to our emotions. When next you hear an argument that evokes an image and excites fear, ask, “Who said so? And how does he know? What are the facts, the specific facts?” Facts, not dialectics, are the best weapons against these mind traps.

Christopher Y. Thomas, Jr., MD, is a retired surgeon residing in Prairie Village, Kan. He served at Saint Luke’s Hospital and was trained at the Cleveland Clinic. He can be reached at christothomas5342@sbcglobal.net.
During this summer back-to-school period, the Kansas City Medical Society and the Wyandotte-Johnson County Medical Society are asking physicians throughout the greater Kansas City area to join in an effort to immunize preteens and teens against Human papillomavirus (HPV). Kansas and Missouri rank among the lowest nationally in HPV immunization rates.

“The HPV vaccination is about preventing cancer,” said Casey Willimann, MD, KCMS board member and co-chair of the medical societies’ joint Vaccination Task Force, newly formed in June. “We strongly encourage physicians to take a direct approach with patients and present HPV as part of the recommended immunization package for boys and girls ages 11-12,” she added. Dr. Willimann is an internist and pediatrician with Liberty Clinic.

More than 26,000 people across the United States are affected by HPV-caused cancers each year. The most common cancers associated with HPV are cervical cancer among women and head and neck cancers among men. A common misconception is that HPV is linked to sex. While HPV can be spread through sexual contact, it is not the only way to catch the virus.

“HPV-associated cancers are mostly preventable,” said Greg Unruh, MD, task force chair and Wy-Jo board member. He is associate dean for graduate medical education at the University of Kansas School of Medicine. “It’s important that physicians make it a priority to give HPV immunization.”

As of 2014, only 24.8% of girls in Kansas and 28.3% in Missouri had completed all three doses of the HPV vaccination series, according to the Centers for Disease Control. That put Kansas 48th and Missouri 46th; the national average is 39.7%. Among boys, Missouri ranked last in the nation with 11.3% receiving all three HPV vaccination doses; Kansas was 33rd at 19.5%. The national average is 21.6%.

The Vaccination Task Force was established out of concern over these low
immunization rates. Their first target is HPV because of the urgency of the need. The task force met on June 10 and June 22; the June 10 meeting was attended by Melinda Wharton, MD, MPH, acting director for the National Center for Immunization and Respiratory Diseases at the Centers for Disease Control. Her comments inspired the task force.

During July, the Task Force is holding training seminars and disseminating materials to providers throughout the metropolitan area to promote HPV immunization. For more information and links to a host of resources, visit www.kcmedicine.org/vaccination.

HPV IMMUNIZATION RATES
Source: Centers for Disease Control, Estimated Vaccination Coverage Among Adolescents Aged 13-17 Years, 2014.

INTRODUCTION:
“Your child is due for vaccinations today to protect against meningitis, HPV cancers, and pertussis. We’ll give those shots at the end of the visit.”

WHY IS THIS NEEDED:
“HPV vaccination provides the best protection when given at age 11 or 12, which is why I recommend starting the HPV vaccine series today.”

WHY NOW: “HPV vaccine is very important because it prevents cancer. I want your child to be protected against cancer, so I’m recommending we start the first dose today.”

Source: www.immunizekansas.org
On May 5, 2016, the Food and Drug Administration (FDA) extended federal regulatory authority to include e-cigarettes. This has major implications for public health and the tobacco industry. As president of the Kansas City Medical Society, I applaud this FDA action because of its current and future impact on the health of our patients—especially those in the adolescent age groups.

There are two major aspects of the FDA regulations. First is banning the sale of e-cigarettes to anyone under the age of 18, with retailers needing to verify the age of purchasers by photo identification. The youth-access restrictions also include requiring health warnings on e-cigarette labels, and ban sales of e-cigarette products in vending machines that are accessible to minors as well as the distribution of free samples. The youth protections did not, however, ban the use of flavorings in the e-cigarettes. All of these regulations take effect in 90 days.

The second major aspect of the regulations requires manufacturers to disclose a detailed accounting of their ingredients and submit their products to the government for approval—including manufacturing processes and scientific data. These rules will not be fully enforced for currently marketed e-cigarette products for up to three years. There is a two-year window to submit an application to the FDA for approval of the product, with an additional year while the FDA reviews the application.

In our roles as co-chairs of the Lee’s Summit Health Education Advisory Board, Ed Kraemer, MD, and I have reviewed more than 30 scientific studies, review articles, position statements and editorials from the current medical literature and have made presentations to the Lee’s Summit City Council and the Missouri Association of School Nurses regarding the public health concerns of e-cigarettes, especially the health concerns for youth.

**SO WHAT IS THE CONCERN ABOUT E-CIGARETTES?**

Electronic cigarettes (e-cigs) or Electronic Nicotine Delivery Systems (ENDS) are devices powered by a small battery attached to an atomizer/vaporizer with a heating element. This creates a vapor that is inhaled through a cartridge that includes a solvent mixture of water, propylene glycol, nicotine and additive flavoring. This action is called “vaping.” Other chemicals in the solvent mix include aldehydes, tobacco-specific nitrosamines, tobacco alkaloids, polycyclic aromatic hydrocarbons, acrolein and volatile organic compounds—many of these chemicals are known cancer-causing agents.

The CDC Office on Smoking and Health notes that e-cigarette aerosol is not a harmless water vapor. In addition to the above chemicals, the aerosol can also contain heavy metals and ultrafine particulates that can be inhaled deep into the lungs. Some e-cigarette manufacturers claim that the use of these ingredients is safe because they meet the FDA definition of “generally recognized as safe” (GRAS). GRAS status, however, applies to the ingestion of these ingredients in food—not inhalation. The health effects of inhaling these substances are unknown, but considered by the CDC to be potentially harmful to health.

One chemical of particular concern, according to a study by the Harvard School of Public Health, is diacetyl. This flavoring chemical is found in 75% of flavored e-cigs. Diacetyl has been linked to severe cases of bronchiolitis obliterans, also known as “Popcorn Lung,” which was first noted in workers who inhaled artificial butter flavor in a microwave popcorn processing facility in Missouri.

**WHAT ARE THE POTENTIAL HEALTH RISKS OF SECONDHAND VAPOR EXPOSURE?**

The hazards of passive cigarette smoke exposure are well documented, with much of that risk from sidestream smoke exposure to combustible products of tobacco. By contrast, the secondhand emissions from e-cigarettes consist entirely of what is exhaled by the user.

Since these products have been available in the U.S. for only about 10 years, the scientific data is limited...
regarding the short- and long-term health effects of exposure to the exhaled vapor. Again, scientific studies do prove that this e-cigarette aerosol is not a harmless water vapor (as has been claimed by some in the e-cigarette industry) and can be a source of indoor air pollution.

Study designs vary and the measured components are not the same in all studies. Reported components in the vapor include: formaldehyde, acetaldehyde, acrolein, isoprene, acetic acid, propylene glycol, glycerine, propanol, propanediol/triol, 2-butanedione, 16 different carcinogenic polycyclic aromatic hydrocarbons and fine/ultrafine microparticles (such as aluminum, tin, silver, iron, nickel, silicate and chromium). In studies that compared the vapor to secondhand tobacco smoke, the amounts of these chemicals are 5-40 times less than from standard cigarettes. In one study, the ambient level of ultrafine particles was 18% of the level compared to tobacco smoke.

Nicotine was found in the e-cig vapor in all studies reviewed; one study measured the ambient level of nicotine to be 10% of the level compared to tobacco smoke. Another study found the measured serum cotinine (nicotine) levels in person exposed to e-cig vapor and tobacco smoke to be similar at 0.5 ng/ml compared to 0.8 ng/ml. Residual nicotine on indoor surfaces can also lead to third-hand exposure through skin, inhalation and ingestion long after the aerosol has cleared the room.

Although the levels of these carcinogenic compounds in the e-cig vapor is less than the levels from exposure to secondhand tobacco smoke, the long-term health effects and cancer risk of exposure to low levels of carcinogens are not known. It is known that the short-term inhalation of fine/ultrafine particles can trigger respiratory symptoms and constrict arteries (which theoretically could lead to heart attacks). Nicotine/cotinine is passively absorbed into the bloodstream of persons exposed to the e-cig vapor.

The “Precautionary Principle for Public Health” may be invoked when a phenomenon, a product or a process with potentially dangerous effects has not been subjected to full scientific and objective evaluation so that the harm cannot be determined with sufficient certainty. The use of e-cigarettes in indoor public places meets this definition for a preventive public health policy. The acceptable “precaution” in such a case is to restrict the use of the product while awaiting definitive (continued on next page)
E-CIGARETTES (continued)

evaluation of the public health risks involved in its use.

Multiple public health organizations raise the concern that allowing e-cig use in public places will re-create the social norm for using tobacco products—potentially damaging decades of work on comprehensive smoke-free air laws that have helped lead to significant declines in smoking rates by both adults and youth. This is of particular concern related to the use of e-cigarettes by middle and high school youth.

SO WHAT IS THE CONCERN ABOUT ADOLESCENT USE OF E-CIGARETTES?

Developing adolescent brains are highly susceptible to the addictive effects of nicotine and are potentially harmed by nicotine exposure.

The April 14, 2016, issue of the CDC’s Morbidity and Mortality Weekly Report shared results of the National Youth Tobacco Survey (NYTS). One in four high school students now use what officials define as a tobacco product, and e-cigarettes have eclipsed traditional cigarettes as the most widely used tobacco product among teens.

In 2015, 4.7 million middle and high school students said they used a tobacco product, and e-cigarettes have eclipsed traditional cigarettes as the most widely used tobacco product among teens. In 2015, 4.7 million middle and high school students said they used a tobacco product at least once in the previous 30 days, and more than 2.3 million used two or more tobacco products.

Three million middle and high school students used e-cigarettes in 2015, up from 2.5 million in 2014. From 2011 to 2015, e-cigarette use rose from 1.5% to 16% among high school students and from 0.6% to 5.3% among middle school students, according to the study.

While there was a significant drop in cigarette smoking between 2011 and 2015, there was no change between 2014 and 2015, the report found. Last year just over 9% of high school students and slightly over 2% of middle school students smoked cigarettes, making them the second-most widely used tobacco product among youths.

“We know about 90% of all adult smokers first try cigarettes as teens. Fully implementing proven tobacco control strategies could prevent another generation of Americans from suffering from tobacco-related diseases and premature deaths,” according to Corrine Graffunder, director of CDC’s Office on Smoking and Health. Conversely, if current smoking rates continue, it is estimated that 5.6 million Americans less than 18 years old alive today will die prematurely from smoking related diseases.

The overriding public health concern is whether this use of e-cigarettes and possible resultant nicotine addiction will lead to use of combustible (tobacco) products, such as cigarettes and cigars. A 2015 study reported in the Journal of the American Medical Association looked at that specific question. In that study of high school students who had not previously smoked combustible cigarettes, surveys one year later showed that 25% of those students who used e-cigs also used combustible tobacco products, while only 9% of students who never used e-cigs reported using combustible tobacco products. This study clearly raises concerns about increased use of combustible tobacco products in e-cig using high school students. But further research is needed to understand whether this association is causal.

SO WHY ARE MORE YOUNG PEOPLE USING E-CIGARETTES?

The increase in e-cigarette use by middle and high school students directly correlates with the increase in advertising dollars spent in the U.S.—rising from $6.4 million in 2011 to $115 million in 2014. The overall U.S. sales of e-cigarettes have also increased with the increased advertising dollars—with sales from all sources (Internet, convenience stores, mall kiosks and “vape shops”) increasing from $20 million in 2008 to $1.7 billion in 2013. The National Youth Tobacco Survey found that 18.3 million (69%) of middle and high school students have been exposed to e-cigarette advertising from at least one source. These include 14.4 million (55%) at retail stores, 10.5 million (40%) through the Internet, 9.6 million (37%) through TV/movies, and 8 million (30%) through magazines/newspapers.

The advertising techniques are very reminiscent of the tobacco advertising techniques used in the recent past—
they clearly target young people. Many of these ads use models that portray a macho or glamorous image for the e-cig user, make vaping look like a fun peer-group activity, use cartoon figures, or comment on the “good taste” of the product. Clearly, the flavors of the solvents—bubble gum, cotton candy, cinnamon, various fruits, French vanilla, toffee, mocha, chocolate and caramel—are also a form of marketing to young people.

ARE THERE OTHER CONCERNS ABOUT VAPING?

In regards to regulating vaping in public places, the American College of Environmental Medicine notes that “the inability to distinguish between conventional and e-cigarettes makes it difficult to monitor and enforce compliance if e-cigarettes are not treated the same way as conventional cigarettes in smoke-free areas.” An additional problem is that any additive, including hash oil, cannabinoids (from marijuana), liquid cocaine, or methamphetamine can be mixed into or replace the E-liquid. This further raises concerns about enforcement against the use of these illegal substances, as well as concerns about secondhand exposure to exhaled vapor and residues. In fact, vaping is the preferred method for medical marijuana treatment.

COULD E-CIGARETTES BE BENEFICIAL?

Some public health experts consider e-cigarettes to be a “harm reduction strategy” for individual patients—minimizing the potential health consequences by vaping as compared to combustible tobacco use. They point out that e-cigs do not contain tar, and that the various carcinogenic chemicals in e-cigs are measured from 9 to 450 times less than in conventional cigarettes—therefore, they are safer than traditional cigarette smoking.

Studies looking at use of e-cigarettes for smoking cessation have mixed results. Some studies have shown them to be similar in effectiveness to nicotine patches and nicotine gum when compared to placebo—but without FDA approval or regulation of amounts of nicotine per cartridge. In Great Britain, the Royal College of Physicians concluded that e-cigarettes were likely to be beneficial to public health and urges smokers to switch to e-cigs. The United States Preventive Services Task Force (USPSTF) has given e-cigarette use a Level I (Indeterminate) rating: “Current evidence (continued on next page)
E-CIGARETTES (continued)
is insufficient to recommend ENDS (electronic nicotine delivery systems) for tobacco cessation in adults.”

One survey of e-cigarette users found that 77% of adult users said they used for smoking cessation, and 84% said they used because they perceived e-cigs to have lower toxicity compared to cigarettes. Of concern, however, is that the majority of adolescents in the survey indicated they used e-cigs for recreational purposes, not for smoking cessation.

SO WHAT CAN PHYSICIANS DO?

E-cigarettes appear to be less toxic than traditional cigarettes, but their long-term safety is unknown. In this regard, they may be beneficial as a harm-reduction strategy for current smokers. While some studies suggest e-cigs may be a useful smoking cessation tool, they should not yet be recommended as a first-line treatment since they are not FDA approved and the USPSTF recommendation is indeterminate. More studies are needed to determine long-term toxicity of e-cigs, as well as to confirm their effectiveness for smoking cessation.

E-cigarettes are certainly more harmful than not vaping/smoking at all. Physicians should question all patients about e-cig use—and should counsel non-users against using e-cigs as a recreational option due to the nicotine addictive potential. This is especially important in adolescents and young adults.

Physicians should advocate on behalf of public health in support of the FDA regulations to restrict youth access to e-cigarettes. Many of the Tobacco-21 laws being proposed throughout the Kansas City metro area are including e-cigs in the increase of age for purchase of tobacco products even further up to age 21. Due to the unknown potential harmful effects of secondhand vapor exposure and the “Precautionary Principle of Public Health,” physicians should also advocate for prohibiting the use of electronic cigarettes in all indoor locations that currently prohibit the use of tobacco products.

Stephen Salanski, MD, Kansas City Medical Society 2016 president, is director of the Research Family Medicine Residency Program at Research Medical Center. He also is co-chair of the Lee’s Summit Health Education Advisory Board which has advocated for smoke-free indoor air spaces. He also co-chairs the Kansas City Area Ethics Consortium of the Center for Practical Bioethics, and the Kansas City Quality Improvement Consortium.

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14 AREA CITIES HAVE TOBACCO 21 ORDINANCES

According to the Kansas City Business Journal, the following area cities have passed Tobacco 21 ordinances limiting sales of tobacco products to persons age 21 and over:

- Bonner Springs
- Gladstone
- Independence
- Kansas City
- Lansing
- Leavenworth
- Leawood
- Lenexa
- Olathe
- Overland Park
- Prairie Village
- Unified Government of Wyandotte County/Kansas City, Kan.
- Westwood Hills

The New York Times


ABSTRACT: Naloxone is a rapid-acting and effective opioid reversal agent that has a good safety profile. It is now available in both an auto-injector form and a nasal spray for rapid administration in the event of opioid overdose. Our nation is currently experiencing an increasing incidence of deaths from opioid overdose. The Centers for Disease Control and others have recommended widespread availability of the drug in the hope that this will reduce the frequency of opioid overdose. This paper will review bystander and field use of naloxone for opioid overdose.

Naloxone is a primary means of treating opioid overdose.1 Drug overdose as a cause of death has increased over 200% since 2000, with 61% of drug overdose deaths in 2014 related to opioids. This epidemic of opioid death has impacted all communities and socioeconomic groups in the United States. Opioid overdoses are increasingly due to the use of fentanyl, a semisynthetic compound now being manufactured outside of legitimate pharmaceutical labs.2, 3 Deaths due to heroin use are also climbing. Prescription opioids are widely available. As stated by the Centers for Disease Control: In 2012, health care providers wrote 259 million prescriptions for opioid pain medication, enough for every adult in the United States to have a bottle of pills.4 In 2014, 28,647 of the 47,055 drug-related overdose deaths involved opioids. Can increasing the availability of naloxone decrease deaths from overdose while other efforts are made to improve safety of prescribed medication and reduce access to illicit opioids?

NALOXONE

Jack Fishman, looking for a means to negate constipation in patients taking opioids, invented naloxone in 1961. Although Fishman held the original patent, he allowed the patent to lapse long before the use of the drug accelerated in response to opioid overdoses. Despite the subsequent successes of naloxone, Fishman, who died in 2013, was largely unaware of its widespread use. He never profited from his invention. Indeed, his own stepson was lost to a heroin overdose in 2003.5

Naloxone was first approved by the Food and Drug Administration (FDA) in 1971. The use of naloxone was successful in hospital settings. It became an important drug for first responders in opioid overdose. The initial use of naloxone has been parenteral. Due in part to the increasing illicit use of fentanyl, more potent than other opioids, increasing and repeated doses of naloxone are sometimes necessary in current treatment.6 Naloxone continues to be a mainstay of treatment for opioid overdose.

Taking note of the successful use of naloxone in emergency departments and by first responders, community advocates began programs to distribute naloxone to persons at risk for overdose.7 Studies of community distribution programs have noted success in preventing opioid overdose deaths, although published studies are dependent on self-reporting and have other design flaws.8 Initially, naloxone distribution programs provided injectable forms of the drug. Over time, naloxone began to be provided in inhaled forms. This was at first through some creative uses of non-FDA approved administration devices.9 Recently, FDA-licensed forms of inhaled naloxone have been approved for sale in the United States. (continued on next page)
NALOXONE (continued)

CURRENT ISSUES IN USE OF NALOXONE DURING OPIOID OVERDOSE

The required dose of naloxone that is needed for an individual patient is empiric and can be a challenging decision.1 6 Many patients who have overdosed are not certain about the substance taken or the amount. As fentanyl is being rapidly introduced into the community of users, this more potent substance often requires higher and repeated doses of naloxone to achieve the desired effect.2 10

First responders providing naloxone to a suspected opioid overdose patient must confront several issues. The newly reversed patient often experiences acute symptoms of withdrawal, an uncomfortable but usually not life-threatening condition.1 Acute opioid withdrawal symptoms include agitation, pilo-erection, lacrimation, rhinorrhea, diarrhea and yawning. Many patients so revived fear involvement with police and legal authorities, and thus refuse transport to an emergency department for further observation and evaluation. EMS providers in San Antonio and other communities have adopted protocols that provide full reversal of opioid overdose and then a “treat and street” policy for patients refusing transport. This policy has proven safe and effective.11 Increasingly, law enforcement officers are also administering naloxone as first responders.12

The willingness of bystanders to assist a person with opioid overdose is compromised when the bystanders are similarly engaged in the use of illicit drugs. Two strategies seem to emerge for those also engaged in illicit drug use: take the person to a different place; or, “cleanse” the scene of the overdose from any incriminating evidence prior to calling emergency responders. Both strategies lose valuable time and may contribute to the death of the overdose victim. Many states have enacted statutes that hold harmless those who call for help, although the opioid abusing community remains skittish about calling.13

The effectiveness of reversing opioid poisoning using naloxone when given

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Training is desirable for bystander administration of naloxone to an opioid overdose victim, but bystanders without training can successfully administer nasal inhaled naloxone.

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IV or IM is without question. Fewer studies have been undertaken with nasal or inhaled naloxone. Delivering naloxone nasally appears to be effective as long as the overdose patient continues to have spontaneous respirations (Weber). As opposed to injectable naloxone, nebulized naloxone may be a particularly attractive administration route for bystander use in the home setting where accidental ingestion might occur or in the home of a known opioid abuser. Training is desirable for bystander administration of naloxone to an opioid overdose victim, but bystanders without training can successfully administer nasal-inhaled naloxone.14 Steps have been taken to simplify any needed assembly so that bystander use of inhaled naloxone becomes simpler.15 A new nasal delivery device has been introduced by Adapt Pharma. This is the first such naloxone nasal delivery device to be FDA approved.16 It simplifies assembly steps from the older MAD100 Nasal Atomizer Device, which was not FDA-approved. The formulation in the newly approved device appears to deliver naloxone by nasal absorption, making it perhaps more effective in persons with shallow respiratory efforts. A variety of community activists have sponsored training for bystanders and set up online training sites for recognition of opioid overdose and administration of naloxone. Examples are the Massachusetts Department of Public Health, Get Naloxone Now (http://getnaloxonenow.org/) and Project Lazarus (http://www.projectlazarus.org/). The increasing use of fentanyl may challenge these efforts as higher and repeated doses of naloxone are often required with fentanyl-related opioid overdose.

Physicians are encouraged to prescribe naloxone to their patients for whom they are prescribing opioids and in whom there is history of overdose, substance use disorder, higher opioid dosages (≥50 MME/day), or concurrent benzodiazepine use. (Italics quote CDC Guidelines, MME Morphine milli-equivalents)4 This risk-based prescribing of naloxone presumes that bystanders in the patient’s home or community will administer naloxone in the event of opioid overdose. A systematic review of naloxone take-home programs indicates that these
programs are effective in reducing deaths from opioid overdose. Unfortunately, there are legal issues with this approach locally. The Missouri Legislature this year passed HB 1568 to help remedy this, and it was recently signed by the governor. HB 1568: Allows physicians to prescribe naloxone to any individual to administer, in good faith, to another individual suffering from an opiate-induced drug overdose. No such bystander, prescriber or dispensing protections yet exist in Kansas.

Many states now permit the procurement of naloxone directly from a pharmacist, usually under standing orders or a practice agreement with a collaborating physician. In such states, a person concerned about being present in a potential overdose situation may purchase naloxone from the pharmacist. Two national chains, CVS and Walgreens, have aggressively provided naloxone. Walgreens, for example, recently announced such a program in 35 states, although neither Kansas or Missouri was included. As community activists and others develop naloxone distribution programs, some have raised concerns that such rescues will allow opioid abuse to seem less dangerous and possibly contribute to further use. Recently Maine legislators resoundingly overrode Gov. Paul LePage’s veto of Good Samaritan protection for community naloxone programs, after the governor cited such concerns. While the evidence is not robust, those who have experienced a naloxone rescue in the community appear to be quite likely to seek help following the rescue.

SUMMARY

Rising deaths from opioid overdose have reached epidemic proportions, now outstripping automobile accident deaths for those aged 25-64. This epidemic calls for a multi-pronged approach, including effective treatment of opioid overdose. Opioid overdose is best treated with reversal agents prior to respiratory or cardiac arrest. The need for immediate treatment calls for actions to be taken in the field by bystanders and first responders. Improved access to naloxone saves lives.

Michael L. O’Dell, MD, MSHA, FAAFP, is professor and chair of the Department of Community and Family Medicine at the University of Missouri-Kansas City School of Medicine, and is associate chief medical officer for the Truman Medical Centers Lakewood campus. He served as 2015 president of the Kansas City Medical Society. He can be reached at Michael.O’Dell@tmcmd.org. Author’s note: Dr. O’Dell has served in a consulting role with Adapt Pharma.

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Getting Ready for MACRA
NEW MEDICARE PAYMENT SYSTEM EXPANDS VALUE-BASED COMPONENTS
By Jim Braibish, Kansas City Medicine

Major changes are coming to Medicare payment under the Medicare Access and CHIP Reauthorization Act (MACRA). While payments under the new system won’t start until 2019, those payments will be based on quality measures effective Jan. 1, 2017—meaning the first impact of MACRA is less than six months away.

“MACRA is a transformative law that builds a new, fast-speed highway to take the health care system away from the fee-for-service system and toward new risk-bearing, coordinated care models,” according to a blog posting by Anne Phelps, principal and U.S. Health Care Regulatory leader for Deloitte & Touche LLP.

MACRA replaces the flawed Sustainable Growth Rate formula with two main pathways for physician payment:
• **Merit-based Incentive Payment System** (MIPS). Most physicians will begin being paid via this modified fee-for-service model. Physician payments are adjusted up or down according to measures of quality, resource use, information technology and clinical improvement activities. MIPS consolidates and realigns the electronic health records Meaningful Use program, the Physician Quality Reporting System and the value-based modifier, in what medical advocates call an improvement over these physician-criticized programs.
• **Advanced Alternative Payment Model** (APM). Physicians participating in payment models specifically approved by the Centers for Medicare & Medicaid Services (CMS) can receive an annual 5% bonus payment through 2024. According to the Deloitte blog posting, only six programs nationally will qualify initially as advanced APMs; CMS states it expects to pay APM incentives to as many 90,000 clinicians in 2019. Participation in APMs (e.g., patient-centered medical homes) that fall outside of the advanced models approved by CMS will still help physicians in their performance measurements under MIPS.

The American Medical Association, the Leawood-based American Association of Family Physicians and other medical associations advocated for medicine during the April 2015 passage of MACRA. They continue to work for changes important to physicians in the proposed MACRA regulations announced this April. Final regulations will be completed this fall.

“There is no question that the system offers significant improvements over previous Medicare law,” said the AMA in its MACRA Action Kit. “MIPS consolidates and better aligns the separate quality and performance measurement programs that affected physician payments previously—the Meaningful Use program, the Physician Quality Reporting System and the value-based modifier. … It also adds a new clinical practice improvement activities component with more than 90 activities from which physicians can choose to receive credit for providing high-value services.”

MACRA is highly unlikely to be affected by the outcome of the 2016 election, since it passed Congress with overwhelming bipartisan majorities — 392 to 37 in the House and 92 to 8 in the Senate.

**MIPS PROGRAM STRUCTURE**

Physicians can receive bonuses or penalties of up to 4% (increasing to +/- 9% by 2022) depending on their scores on the following four components of the MIPS program. Components are scored individually and then combined to create a composite score. Each physician’s score will result in a positive, negative or neutral payment adjustment.

• **Quality performance**—50% of score in the first year (replaces PQRS and some components of the VBM)
• **Advancing Care Information** — 25% of score in the first year (replaces MU)
• **Clinical practice improvement activities**—15% of score in the first year
• **Resource use**—10% of score in the first year (replaces the cost component of the VBM)

Following are highlights of MIPS performance reporting, excerpted from the AMA MACRA Action Kit:

**QUALITY**

• Physicians report on six measures rather than nine and no longer have to pick at least three measures from the national quality strategy domains.
• Allows physicians to select individual measures or specialty specific measure sets, and report through ei-
ther claims, electronic health record, clinical registry, qualified clinical data registry or group practice reporting Web-interface.

For more information on performance measurement, watch for an article in the fall issue of Kansas City Medicine by KCMS member Richard Hellman, MD, FACP, FACE, a national expert in quality measurement and vice-chair of the AMA Physicians Consortium for Performance Improvement.

ADVANCING CARE INFORMATION
- Moves away from a pass-fail program design by combining a base score and performance score into an overall Advancing Care Information (ACI) score.
- No longer requires physicians to report on computerized provider order entry and clinical decision support.
- Removes clinical quality measures to streamline overall quality reporting.

CLINICAL IMPROVEMENT ACTIVITIES
- Physicians can select from a list of more than 90 activities from which to receive credit. Examples include hiring a diabetes educator or participating in a qualified clinical data registry.
- Rather than requiring a full year of reporting, CPIA activities would be performed for at least 90 days during the performance period.
- A patient-centered medical home would receive full CPIA credit if it is a nationally recognized accredited PCMH, a Medicaid medical home model, or has a patient-centered specialty recognition from the National Committee for Quality Assurance.

RESOURCE USE
- Adds 41 episode-based measures to account for differences among specialties.
- Refinements to attribution methodology will be provided.

IMPACT ON SMALL PRACTICES
Announcement of the proposed MACRA rules unleashed complaints about an unfair burden on small practices. In its own data on page 676 in the proposed rules, CMS states that 87% of solo practices and 70% of practices with 2-9 clinicians would, using 2014 performance data, receive a negative payment adjustment. On the other hand, only 18% of practices with 100 or more eligible clinicians would receive a negative payment adjustment. “For smaller practices this is going to hurt their wallet,” wrote the website Physicians Practice.

CMS responded by noting that the proposed rules have many flexibilities and supports built in for smaller practices. Examples:
- Clinicians or groups who have less than or equal to $10,000 in Medicare charges and less than or equal to 100 Medicare patients are excluded from the MIPS payment adjustment.
- If there are not sufficient measures and activities applicable and available in a MIPS performance category, then the category would not be included in the MIPS score.
- Under MIPS, clinicians will have the option to be assessed as a group across all four MIPS performance categories. The law provides that solo and small practices may join “virtual groups” and combine their MIPS reporting.

These and other accommodations for small practices are described in the booklet “Flexibilities and Support for Small Practices” available at www.cms.gov.

STEPS TO PREPARE
Here are a few suggestions the AMA MACRA Action Kit offers to help physicians prepare.

GENERAL CONSIDERATIONS
✓ Determine whether you have $10,000 or less in Medicare charges and 100 or fewer Medicare patients annually. If so, you are exempt from MIPS participation.
✓ If you are not already participating in a patient clinical data registry, contact your specialty society about participating in theirs—data registries can streamline reporting and assist with MIPS performance scoring.
✓ Determine whether your practice meets the requirements for small, rural or non-patient-facing physician accommodations.

(continued on next page)
MACRA IMPLEMENTATION TIMELINE

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Source: Health Affairs Health Policy Brief, “Medicare’s New Physician Payment System,” April 2016

**MACRA (continued)**

**MIPS: QUALITY MEASUREMENT AND REPORTING**

✓ Identify your most costly patient population conditions and diagnoses.
✓ Identify targeted care delivery plans for these conditions.

**MIPS: CLINICAL PRACTICE IMPROVEMENT ACTIVITIES**

✓ Review the proposed rule’s list of clinical practice improvement activities (CPIAs) to evaluate what activities your practice is already doing and what adjustments it should make to complete additional activities in 2017.

**MIPS: ADVANCING CARE INFORMATION**

✓ Determine whether there is an additional public health registry to which you can report to receive an additional point towards your total Advancing Care Information score.

FOR MORE INFORMATION

• Centers for Medicare and Medicaid Services (www.cms.gov)
• American Medical Association (www.ama-assn.org)
• American Association of Family Physicians (www.aafp.org) (AAFP membership required for most MACRA content)

Links to a variety of MACRA materials are posted on www.kcmedicine.org.
Stowers Researcher Elected to the National Academy of Sciences

Robert Krumlauf, PhD, scientific director and investigator at the Stowers Institute for Medical Research, has been elected a member of the National Academy of Sciences (NAS), recognizing his distinguished and continuing achievements in original scientific research. Membership in the NAS is considered one of the highest honors given to a scientist in the United States. Krumlauf will be inducted into the NAS in April 2017 during its 154th annual meeting in Washington, D.C.

Krumlauf joins R. Scott Hawley, PhD, as the second Stowers investigator elected to NAS. A world-renowned developmental biologist, Krumlauf was among the first to insert genes into the mouse genome to create “transgenic” mice that mimic human development. His seminal work involves a set of genes called homeobox genes, which control the layout of a developing embryo. Krumlauf found that mammalian homeobox genes cluster next to one another on the chromosome and that the order of genes on the chromosome matches the order of their expression in the embryo. Today, he also studies the molecular and cellular pathways that govern the patterning of the nervous system, the establishment of the basic body plan, and craniofacial development of vertebrate embryos, particularly how these processes are altered or affected in human diseases.


Lisa A. Weber, MD, of Kansas Nephrology Physicians, has been named associate medical director for the kidney transplant program at Saint Luke’s Hospital. In her new role Dr. Weber will contribute to the growth and development of Saint Luke’s Hospital’s Kidney Transplant Program, while continuing to provide comprehensive kidney care to the community through integrative service, education and advocacy at Kansas Nephrology Physicians.

A graduate of the University of Kansas School of Medicine at Wichita, she is a member of the American College of Physicians and the American Society of Transplantation. Dr. Weber serves as clinical assistant professor at University of Kansas School of Medicine in Wichita. She also serves as clinical instructor for Kirksville College of Osteopathic Medicine and Kansas City University of Medicine and Biosciences. She completed post-graduate training in internal medicine at the University of Tennessee College of Medicine, and completed a transplant fellowship and earned nephrology certification at the University of Alabama Medical Center at Birmingham.

Study Suggests Improved Treatment for Abscesses

Mark Steele, MD, University of Missouri-Kansas City School of Medicine professor of emergency medicine and chief medical officer and chief operating officer at Truman Medical Centers, is a co-author of a report released in the March 3 New England Journal of Medicine on treatment of skin abscesses, many of which are caused by Methicillin-resistant Staphylococcus aureus (MRSA).

Surgical drainage of the abscess has long been regarded as the primary treatment. But the study, conducted at a network of emergency departments at hospitals throughout the United States, reveals that patients with abscesses caused by MRSA who receive the antibiotic trimethoprim-sulfamethoxazole, in addition to the drainage procedure, have higher cure rates with fewer recurring infections and subsequent surgical drainage procedures.

Besides TMC, other hospitals participating in the study included Olive View-UCLA Medical Center in Los Angeles, Johns Hopkins University Medical Center in Baltimore, Maricopa Medical Center in Phoenix and Temple University Medical Center in Philadelphia. The UCLA hospital served as the central site for the study.
Physicians’ and dentists’ personal interests and opinions can sometimes expose their practices to unwanted attention, particularly with the rate at which information travels today.

For example, the recent negative publicity surrounding a Minnesota dentist whose hunting pastime made worldwide news, resulted in backlash that disrupted his practice. The overwhelming negative attention led to shutting down his professional social media accounts, practice website and the doors to his practice during this frenzy. The flood of negative comments online, directed at him personally, now sit side by side with reviews of his professional ability on third-party rating and review websites.

This may be an extreme scenario, but it does illustrate the power of how online reviews and commentary can affect a physician and his or her practice. Because of this, proactive steps should be taken by health care providers to safeguard their practices from negative online publicity or comments that may occur. Recommended considerations include:

- **Set up your own practice website** where you can manage the content and control your message you want to share with the community. Work with your group administrator or medical director as necessary.
- **Maintain separate professional and personal profiles.**
- **Develop a social media plan** for your practice. Periodically search your name on the Internet. Consider having a designated, trained individual who responds quickly and tactfully to reviews and comments when warranted. Comply with privacy laws.
- **Periodically check rating websites** for yourself or your practice to identify any specific issue or trends that you can proactively address.
- **Provide an office satisfaction survey.** If appropriate, use positive information you have gathered in your marketing and social media campaign. Negative information should be evaluated objectively and addressed appropriately.

Physicians and dentists can quickly become public figures, so it is important to consider using privacy controls and setting boundaries between personal and professional online profiles. Physicians and dentists who choose to respond in writing to reviews should consider moving the discussion to a private forum with a response like, “I’m sorry you had that experience. I’d like to discuss it with you. Please contact my office.” Avoid using patient identifiers or revealing any protected health information, of course.

It is important to have measures in place for how to respond to negative comments online. Here are a few steps you can take:

- **Do not respond immediately or impulsively.** Take time to consider the comment, reflect on why the individual felt compelled to post and decide if it is even worthy of response. Not all negative comments are worthy of your time to respond. Engaging someone may start a chain reaction of negative commentary and potentially may aggravate the situation.
- **If you feel the information is untrue, inappropriate or simply meant to be provocative, try contacting the website administrator.** Since rating sites have content guidelines, the administrator may remove information that violates the site’s terms.
- **Honestly look at yourself and the way you practice in light of the reviews (good or bad).** Maybe the reviews will have useful information, maybe they won’t. You won’t know unless you read them and consider them with an open mind.

As social websites continue to increase in popularity, physicians and dentists need to understand the potential backlash if their responses are not well received by the general public or the individual in question. It is wise to have a strategy in place to help prevent a scenario that could lead to irreparable harm to your reputation. NORCAL Mutual has a team of risk management specialists available to assist policyholders with the assessment of their practice and to help identify any potential pitfalls that may arise.

Dustin Shaver is vice president of risk management at NORCAL Mutual Insurance Co., overseeing patient safety and ACCME accredited Continuing Medical Education (CME) programs. He can be reached at 844-466-7225. NORCAL Mutual is represented by Keane Insurance Group, a Kansas City Medical Society partner.
Physician Comments: Managing Online Reputation

JOSHUA M.V. MAMMEN, MD, PHD, FACS
On average monthly, I perform a web search of my name and review the links that I find on the first search page. I have not encountered a circumstance of having to mitigate a negative review (frankly, I have very few total reviews thus far), but I would respond to it quite cautiously. First, I would have to honestly answer the question as to whether there was validity to the patient’s perspective. Obviously, we all have aspects of our practice that we can improve, so I would view it as an opportunity to identify a problem. I would not, however, allow myself to get into a direct response to the complaint via the Internet, but would engage the patient’s concerns privately.

THE UNIVERSITY OF KANSAS MEDICAL CENTER | @JOSHUAMAMMEN

DAVID A. VORAN, MD
Your personal as well as your professional online persona need to be coherent, consistent and support you as a person. A significant number of my patients have chosen me as their physician based on my personal rather than bland, politically correct, commercial, professional postings. They are seeking individuals who are physicians in thought, word and deed instead of individuals who put on the physician’s white coat a few hours of the day. ...

A practice website should reflect all of the good things you can provide to patients but it needs to be honest, not contrived, not overly commercial, and not too similar to other practices. The website also can enable two-way communication and allow patients to actually post their experiences. The practice-based social media presence should be consistent with the social media presence of not only the physicians but the nurses, managers and virtually everyone who works in your offices. You can, of course, monitor your ratings and aggressively but gently tackle the negative information … but this is best done by personally working with those who posted those ratings, not publicly online. Office satisfaction surveys are okay but don’t come close to the simple question at the end of a visit, “Well, how did we do today?” or a phone call after the visit to show you actually care.

The most important part of an online presence is presence. It cannot be static but must be forever current, responsive and relevant. It’s not something that is posted and then infrequently updated. Whether there are only a handful of viewers or thousands, the content must be updated daily and prove it lives.

UNIVERSITY OF MISSOURI-KANSAS CITY, HEARTLAND REGIONAL MEDICAL CENTER | @DVORAN

JOHN F. DOANE, MD, FACS
Discover Vision uses several tools to monitor and track the online reputation of our doctors and locations. Creating business accounts and claiming free listings ensures that we’re notified directly from various websites, and we also utilize alerts and social tracking tools. Discover Vision proactively engages its patients with an electronic survey when they leave the office. This allows our team to receive feedback directly from patients and respond to positive or negative feedback quickly. In our experience, responding to negative reviews can be a learning opportunity and prompt attention to concerns often helps to turn the patient experience around.

DISCOVER VISION CENTERS
War is an actual, intentional and widespread armed conflict between political communities.  
~ Stanford Encyclopedia of Philosophy

Care of the injured soldier is as old as war. And war is as old as history. Perhaps older. People were fighting and hurting one another back into the Old Stone Age, long before organized societies and armies. And others were caring for the injured. So one can make the argument that military medicine should go back a very long way. Yet, what we now call military medicine is really a product of the 19th and 20th centuries. It was in fact during the Napoleonic wars at the beginning of the 19th century that the organized practice of military medicine began, and it didn't reach its modern form until the beginning of the 20th century.

EARLY CIVILIZATIONS

What is this human activity that we call war? When did they invent it? How does it differ from simple fighting? As noted above, the definition of war includes nations, states, or their equivalent. In other words, civilization. No, not the computer game. The real thing. Primary civilizations appeared in four areas, widely separated in time and place. In chronologic order, from around 4000 BCE to around 1500 BCE, these were the Middle East, in Mesopotamia and Egypt; the Indus River valley, in present-day Pakistan and India; the Yangtze River valley in China; and the Americas, specifically meso-America and the Andes. All were agriculturally based, and featured organized governments and armies supported by hereditary ruling and military castes. Without exception, all were warlike. Initially, it was thought that the meso-American civilization of the Maya were peaceful. The latest archeologic evidence is clear that they were not.

But when we say that armies of the ancient world were organized, that does not mean that they were organized as we would do so today. The treatment of casualties is very obviously an inherent part of military organization. But wound care and medicine itself varied widely from one culture to another. In ancient Egypt, for example, medicine was both sophisticated and highly specialized. The Smith Papyrus (1600 BCE) describes wound treatment, fracture splinting and cauterization to control bleeding. Egyptian clinical practitioners were deployed to garrison posts. This can be seen as the beginning of a formal military medical service. Babylonian-Assyrian medicine (1000-600 BCE) had physician-priests for magic and ritual, but also had the asu, pragmatic practitioners who became the first full-time military physicians. On the other hand, the Persians, whose empire stretched from the Middle East to India around 500 BCE, had no military medical service and very rudimentary wound treatment.

ROMANS ADVANCE BATTLEFIELD MEDICINE

In the ancient world, Roman military medicine most closely approached what we have today. The Greeks had a long tradition of practical medicine, although handicapped with the “humoral” theory of disease. The Romans were still more practical. The Roman army had organized field sanitation, well-designed camps and separate companies of what we would now call field engineers. They had a much better grasp of sanitation and supply than anyone else before, or for a long while after. Their camps were laid out in a way as to protect their water supply and to locate latrines downstream. Their permanent

The Romans practiced front-line treatment, and they appeared to have a casualty collection system within each legion. They evacuated wounded legionnaires back down their well-organized support and logistics chains.
camps included separate hospitals. They had medical corpsmen, whom they called immunes. They practiced front-line treatment, beginning with soldiers treating one another, and they appeared to have a casualty collection system within each legion. They evacuated wounded legionnaires back down their well-organized support and logistics chains. They had more sophisticated wound treatment than anyone up to that time. Roman medicine reached a high point which was not to be equaled until the 18th century.

It would be reasonable to argue that the Romans actually had something which we would call military medicine. Because of their improved sanitation, their armies suffered somewhat less from the epidemics that swept military camps, but only by comparison with their opponents. Two-thirds of their casualties were still due to disease. Their world view included no such thing as bacteria or protozoa, and such things as immunizations were two millennia in their future. And, perhaps most important, their practices did not outlive their empire.

After the Romans came a period of regression, which has always been a bit difficult to characterize. It is probably best known for our purposes as the Early Middle Ages. The term “Dark Ages,” implying a regression into barbarism, has become politically incorrect. Besides, it isn’t really accurate. The people of the post-classical world often regarded themselves as quite civilized. In fact, they often regarded themselves to be Romans. The Eastern Roman Empire (Byzantine) so styled themselves until 1450, and the ruler of Russia was called “Caesar” (Czar) up into the 20th century. But, I digress.

MEDIEVAL WARLORDS: DECENTRALIZATION

The early medieval armies were built around warlords and their bands of retainers. National armies, except for the Byzantine Empire, largely disappeared. Forces were made up from nobles and followers, tied to one another by a chain of reciprocal obligations and duties. We now call this the feudal system. Whatever its name, it basically broke down armies into units the size of companies or smaller, with little central organization. All of the sophistication of the Romans regarding sanitation and camp organization was completely lost. Medical care was by whoever the lord happened to have in his retinue. The wounded were cared for by servants, camp followers and other warriors. The lord might have a physician, but no more than one or two. In short, if a soldier was wounded, he was pretty much on his own. Most battles were between small armies, because anything over a few thousand men, could not be supplied, so the numbers of wounded were relatively small.

By the Late Middle Ages, organization had improved markedly. Armies of 10,000 to 15,000 men were routinely fielded. At the famous battle of Crécy in 1346, about 10,000 English beat 20,000 French, using the longbow, a weapon that dominated battle for the next 200 years. Over those years, gunpowder weapons evolved, and armies began once again to specialize. Cavalry and infantry were always present, but (continued on next page)
MILITARY MEDICINE (continued)

alongside the archers there also appeared pikemen, engineers, artillerists and finally musketeers. Medical organization did not advance at the same pace. Bandsmen, who typically weren’t much good at fighting, were designated to evacuate the injured. And again, camp followers, personal servants and other members of the lord’s retinue were pressed into service. Local doctors and surgeons were conscripted into caring for the wounded. Indeed, this persisted for a surprisingly long time and was seen in our Civil War, as well as most other 19th century wars.

RISE OF GUNPOWDER WEAPONS

The Early Modern Period was from about 1450 to 1700. (“Renaissance” has fallen into disuse, something like “Dark Ages.” Feel free to substitute if you wish.) This era was marked by the widespread use of gunpowder weapons and the rise of national armies. Paid soldiers, often with standardized weapons and uniforms, replaced the old feudal levy. The thing about the new weapons was that, they used things up, like powder and shot. Someone had to make replacements, and then those had to be transported forward to the fighting line. Cannon and even early personal firearms had to be made in a rear area and then transported forward to inflict losses and damage. Armies became too big to live off the land. Horses required fodder. So a system of what we now call logistics began to emerge. Of course, this would have been no mystery to the Romans. But around 1500, it was a major innovation. But for a number of reasons, a system of medical support failed to evolve in the armies of the day.

To be sure, medicine wasn’t very effective. And it was during this time that medicine re-discovered Greco-Roman medicine. Unfortunately, they latched on to the humoral theory of disease, and began to combine that with astrology. To compound a medicine, one needed to diagnose which humors were involved, then determine the house of the zodiac under which the patient was born, and then prepare the appropriate medication. If this seems odd, reflect that we have faithfully collected our patients’ birthdates down to the present day. At least today, we use it for identification purposes, so the effort isn’t entirely wasted.

These men (mostly) were the ones to accompany armies, and they were the ones who actually carried out wound treatment and care. The most famous barber-surgeon of this period was Ambrose Paré (1510-1590). From a family of barber-surgeons, he started as a battlefield surgeon, and eventually was in the royal service of five successive kings of France. He re-discovered the old Roman remedy of treating wounds with a compound which included turpentine, a harsh but effective wound antiseptic. He re-discovered (from Galen) the use of ligatures to tie off bleeding vessels, rather than using hot iron cautery or boiling oil, two of the “remedies” of the day. He even invented an early hemostat. He published, in 1545, The Method of Curing Wounds Caused by Arquebus and Firearms, a book cited by others for centuries.

But eventually, medical science moved beyond the limits of the old theories. Great advances were made during the 18th century. Jean Louis Petit introduced the tourniquet in 1718. Forceps were used to remove bullets. Pierre-Joseph Desault described the debridement of wounds. There were three textbooks of military medicine, John Pringle (1752), Richard Brockelsby (1756) and John Hunter (1794). Hunter’s views on the treatment of wounds dominated the next century, and many of his principles survive today. Perhaps most significantly, John Pringle, (circa 1740) described and identified the epidemic disease of typhus, one of the scourges of the battlefield.

TRIAGE BEGINS DURING NAPOLEONIC WARS

Much of this came together in the epic wars at the start of the 19th

Dominique Jean Larrey staffed ambulance units with corpsmen and litter-bearers, used initial care just behind the battle, and formalized the use of field hospitals a few miles back from the battle. He is considered the first modern battlefield surgeon.
century, the Napoleonic Wars. Armies of 100,000 or more ranged throughout Europe, almost forcing the recognition of a need to care for the wounded, and to provide some organization to the medical system. This was done best in the French army. Dominique Jean Larrey, surgeon-in-chief of French armies from 1797 to 1815, contributed in many ways to modern military medicine (Fig. 1). He established the criteria for “triage,” in case you were wondering why we use a French term for that. He invented the “ambulance volante,” or flying ambulance, which imitated Napoleon’s “flying artillery.” These were horse-drawn carriages, which could move quickly around the battlefield to provide evacuation (Fig. 2). He staffed ambulance units with corpsmen and litter-bearers, used initial care just behind the battle, and formalized the use of field hospitals a few miles back from the battle. He is considered the first modern battlefield surgeon.

In 1812, the French Emperor decided to invade Russia. Leaving Berlin with 600,000 men, he returned with 50,000. Of 800 physicians with the army, 300 made it back. Minard’s famous graphic is a milestone in its own way, and shows the grim reality of the failed campaign (Fig. 3). What happened? Starvation, cold, exposure, typhus, diarrhea and pneumonia.

Poor logistics, corruption in the Army administration, poor attention to medical issues and the Russian weather all contributed. Larrey ended the campaign as a hero for his efforts on behalf of the wounded and ill. But even he was unable to prevent the disaster. He could control the treatment of the wounded, and he did so. But he had no say in how the army was organized, nor how sanitation was carried out, nor over anything we would now term public health. Napoleon’s invasion of Russia was perhaps the best documented military misadventure up to the 20th century.

Coming in Part II: In the fall issue of Kansas City Medicine, we will move to the New World. American military medicine was no better, and perhaps a bit worse, than that of Europe. We had far greater distances, fewer doctors and fewer resources. As the 19th century passed, we learned bitter lessons in the Civil War and the Spanish-American War, and we made great progress in the early 20th century. Stay tuned.

Charles W. Van Way, III, MD, is editor of Kansas City Medicine and is emeritus professor of surgery at the University of Missouri-Kansas City. A longtime speaker on military history, he holds his undergraduate degree in history and did post-graduate studies at the Army War College. He began lecturing on war and medicine while helping to present the course, “Medicine War and the Arts,” at UMKC School of Medicine. He can be reached at cvanway@kc.rr.com.

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WEDNESDAY SEPTEMBER 14
NATIONAL WORLD WAR I MUSEUM AND MEMORIAL

5:30 P.M.  7:00 P.M.
reception and tours  program and awards

JOIN WITH THE KANSAS CITY MEDICAL SOCIETY
AT THE SPECTACULAR NEWLY RENOVATED NATIONAL WORLD WAR I MUSEUM AND MEMORIAL FOR OUR 135TH ANNUAL MEETING

HONOR THE PAST
Michael E. Monaco, MD, KCMS member and military medicine history expert, will discuss World War I battlefield medicine while you tour the museum.

CELEBRATE THE PRESENT
KCMS President Stephen Salanski, MD, will update us on the Medical Society’s progress.
KCMS 2016 awards will be presented including Achievement Awards, Friend of Medicine Award and Member Awards.

BE INSPIRED BY THE FUTURE
Featured speaker Victor J. Strecher, PhD, MPH, of the University of Michigan will discuss his work on how having a life purpose improves patient health.

R.S.V.P. AT WWW.KCMEDICINE.ORG BY WEDNESDAY, AUGUST 24

KANSAS CITY MEDICAL SOCIETY