Physicians Promoting Healthy Lifestyles

New Food Label Guides: Do They Help?
Tobacco 21: Raising the Legal Age
What Makes a Good Tobacco Tax?
Missouri’s Tobacco Tax Proposals
Physician-Supervised Fitness Studio

Features

Should Physicians Ever Retire?
KCMS 2016 President Stephen Salanski, MD
Lower Extremity Ischemia
CT Scans and Lung Cancer Screening
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ON THE COVER:
Eleanor Lisbon, MD, MPH, CPI, KCMS member, consults with a client at Exhale, LLC, a fitness studio she owns in Mission, Kan. Exhale clients receive a physician consultation as part of designing their fitness programs.
“TOP DOC CHEFS” SQUARE OFF

Teams of physicians challenged their culinary skills in the Wyandotte-Johnson County Medical Society’s “Top Doc Chef” fundraising event on March 2 at the Culinary Center of Kansas City in Overland Park. Proceeds support Wy-Jo Care, which provides donated care to uninsured and underinsured individuals. Pictured, best overall dish winners Jill Jones, MD, of The University of Kansas Medical Center; Elizabeth Spenceri, MD, of Dermatology & Skin Cancer Center; and David Duethman, MD, of Saint Luke’s Hospital. See more photos on Facebook at metromedkc.

APPOINTED TO HCFGKC BOARD

Michael O’Dell, MD, KCMS 2015 president, has been appointed to the board of directors of the Health Care Foundation of Greater Kansas City. Dr. O’Dell is chair of the Department of Community and Family Medicine at the University of Missouri-Kansas City, and serves as associate chief medical officer at Truman Medical Center’s Lakewood campus. The Healthcare Foundation of Greater Kansas City provides leadership, advocacy and resources to eliminate barriers and promote quality health for uninsured and underserved in the metropolitan area.

CO-AUTHORS STUDY ON MRSA TREATMENT

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 March in the New England Journal of Medicine finding that patients with abscesses caused by MRSA who receive the antibiotic trimethoprim-sulfamethoxazole in addition to drainage, have higher cure rates with fewer recurring infections and subsequent surgical drainage procedures. Dr. Steele is a KCMS corresponding member.

NAMED TO NATIONAL KIDNEY FOUNDATION BOARD OF DIRECTORS

Bradley A. Warady, MD, of Children’s Mercy Hospital, has been named to the National Kidney Foundation board of directors. A KCMS member, Dr. Warady is the senior associate chair for the Department of Pediatrics and director of Division of Nephrology.
There has been interest, of late, on just what to do with old docs. A resolution at the AMA annual meeting in 2015 suggested that standards should be relaxed, to make it possible to retain more older physicians.¹ This was defeated. That's probably for the best. Lowering standards past some age, say 60, would send a very bad message. On the other side of the question, there continue to be advocates for stricter treatment of older physicians. The reasoning is that since physicians may lose some faculties with age, all physicians should be tested for loss of mental faculties. Perhaps there should be a mandatory retirement age. It works for pilots, doesn't it? Checklists can be helpful in both practicing medicine and flying airplanes, right? But the similarities pretty much start and end with checklists.

Nonetheless, the argument for mandatory retirement has a certain amount of appeal. There are institutions, both academic and non-academic, that require retirement at a certain age, usually 65. But … do they, really? Such requirements are often highly selective. If the administration of a university decides you’re making sufficient money, or bringing prestige, or generating grant income, you may find yourself at the grindstone well after you begin drawing Medicare. Whatever their stated principles, most institutions are coldly pragmatic. The whole idea of mandatory retirement is simply a way of easing some older physicians out while retaining others who still have value to the institution. Why retire the aged goose who is still laying golden eggs? Assessment of competence is flexible, after all.

A few statistics might be in order. There are, at last count, about 900,000 licensed active physicians in the US.² The physician supply is growing at about 2-3% per year. So, how many practicing physicians are elderly? (Who you calling elderly, sonny boy?)

A 2015 report by the AMA Council on Education concluded that physicians should meet the same standards of competence, whatever their age.⁴ Seems fair enough. Does this resolve the issue? Well … not really. Consider surgeons. Dr. Mike DeBakey operated into his 90s. Most of us are not so skilled. Or so valuable to our institutions. All of us lose some of our stamina as we age, even though we may still be skilled. Staying up all night to operate, for example, becomes more difficult to endure. So … should a 70-year-old continue to take trauma call? A 65-year-old? Granted, it depends on the individual. But how do we know? How does the surgeon himself or herself know? We all keep track of outcomes, now, especially in trauma. But it may take several years for enough poor outcomes to accumulate to mandate a decision.

PERSONAL DECISION

Such things as peer review, maintenance of certification, keeping up on CME activities, and attending conferences are probably helpful. But we all know older physicians. Some of us are older physicians. Do we follow them around, looking for mistakes? I can testify that as you get older, you do ask yourself if you should be continuing in practice. Speaking personally, I stopped operating a year...
or two ago, but I still see patients on a part-time basis. This was with the advice of my colleagues. But it was basically a personal decision, made on my best judgement. Judgement, of course, is the very thing that might be failing. I like to think my judgement is pretty good. Or I wouldn’t still be writing editorials. But then, so does everyone, even politicians. Especially politicians. Some, obviously, are wrong.

The truth is that we depend largely on the judgement and the conscience of the individual physician in these matters. Most of us, and I say this on the basis of long observation, do a pretty good job at making the call about when to slow down and when to stop entirely. Inevitably, a few of us do not. Figuring out who those few are, and easing them into retirement, will remain difficult.

Maintaining uniform standards for all ages, as the AMA advocates, is certainly a good thing to do, and is necessary. But is it sufficient? In that 2014 survey, 54% of practicing physicians were over 50. They will be entering their 60s and 70s over the next 10 years. With a growing physician shortage, it will be very tempting to keep these old warhorses in harness. And really, we need them. Every time a physician retires, we lose 30, 40 or 50 years of experience.

Finally, there is a legitimate fear that too many older physicians will respond to the current trends in health care by simply quitting. In the last issue of Kansas City Medicine, we published an editorial on physician burnout. The number of doctors who have talked, written, or e-mailed me about this issue is sobering. To reprise the conclusion of that piece, we must strive to make working conditions better for physicians. Otherwise, a lot of us are going to retire, or at best go into non-practice jobs. But health-care reform will require increasing numbers of practicing physicians. The manpower loss could be crippling. In short, we need older docs. And we need to keep them happy. Or the rest of us will be even more stressed in 10 years than we are now.

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. He can be reached at cvanway@kc.rr.com.

REFERENCES

EXCLUSIVE OFFER FOR KCMS MEMBERS

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

*A Program available to physicians in good standing with KCMS. Discounts subject to underwriting approval.
LEADERSHIP // Helping physicians build leadership skills for today’s health-care system

With more physicians being part of hospital systems, and the growth of team-based care and collaboration, leadership skills are essential to ensure the physician voice is represented as our system evolves. KCMS is building a leadership development program that will roll out in 2016. Leadership attributes of four physician leaders were profiled in the spring 2015 Kansas City Medicine.

INNOVATION // Equipping physicians with education on best practices and emerging trends in health care

The Sept. 22, 2015 “Getting 2 Value” daylong conference brought together national and local experts to discuss the coming transformation to value-based care. Topics covered included the patient-centered medical home, the value-based components coming to Medicare as a result of the spring 2015 MACRA legislation, and more. More than 80 Medical Society members and other interested stakeholders attended. In addition, the future of physician compensation was explored at a gathering of stakeholders in April 2015. KCMS joined with the Medical Group Management Association of Greater Kansas City for a daylong educational conference.

ADVOCACY // Providing the physician voice on issues impacting the practice of medicine and the health of the community

KCMS has supported the Tobacco 21 initiative which has resulted in ordinances raising to 21 the legal age to buy tobacco products in Kansas City, Mo., and five other cities in the metropolitan area. KCMS joined with the state medical associations in Missouri and Kansas advocating for physician-supported legislation. This included regulations on minors’ use of tanning beds, and a measure enabling Missouri parents to request notice of whether an immunization exemption has been filed for another child in their school, day care or preschool.

The KCMS board sent a letter to the Missouri Board of Healing Arts providing recommendations on the supervision and training of Assistant Physicians, a new
ADVOCACY
practitioner category. The Assistant Physician was created under a 2014 Missouri law permitting limited practice by medical graduates who have not completed residency training.

COMMUNICATIONS
KCMS started 2015 with a new name, Kansas City Medical Society and a new logo. The rebranding expresses the overall renewal in the Medical Society.

The Medical Society rolled out a new look to its website, www.kcmedicine.org. The website features information about the Society, a list of coming events, employment opportunities, a searchable directory of KCMS member physicians, and more. And, be sure to check the Medical Society Facebook page regularly for current activities, plus links to important health-care news. The address is metromedkc. In addition, the Medical Society keeps members informed with weekly email news updates.

MEMBER SERVICES

COLLABORATIONS
The Medical Society has increased its partnerships with other related associations in the region. KCMS is providing administrative and joint programs with the Wyandotte-Johnson County Medical Society. A joint conference was held in spring 2015 with the Medical Group Management Association. KCMS also is working in partnership with the Greater Kansas City Medical Society, the minority physicians’ organization.

MEMBER JOURNAL
The member journal, Kansas City Medicine, was re-launched in 2015. Each issue is packed with a mix of clinical information articles, features on trends in medicine, plus news on Medical Society activities. Topics covered in 2015 included cardiac care, family practice, physician leadership, medical education, work-life balance, and more.

MEMBERSHIP GROWTH
Through greater partnerships with hospitals and other providers, the Medical Society has achieved a five-fold increase in membership in just two years. This connects the Society with a much broader range of physicians and health-care organizations across the community.

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Leadership

Working for the health of the community

Through-out his career, Stephen Salanski, MD, has been involved in community health issues, ranging from medical ethics and quality improvement, to public health and health-care access. As Kansas City Medical Society president for 2016, he seeks to continue the Society’s forward progress and extend its impact for physicians and the community.

Dr. Salanski is director of the Research Family Medicine Residency Program at Research Medical Center, where he oversees training of 36 residents from all over the United States and internationally. He also maintains a part-time clinical practice. “Teaching medicine to young physicians truly is my passion,” he said.

ADDRESSING COMMUNITY HEALTH ISSUES

A member of the KCMS Board of Directors since 2010, Dr. Salanski also is active in a number of key community initiatives:

- As co-chair of the Kansas City Area Ethics Committee Consortium of the Center for Practical Bioethics, he has helped bring together ethics committee members from area hospitals to develop guidelines for ethics policies. The group has prepared recommended policy guidelines on medical futurity, end-of-life care and pandemic. “These documents help guide hospitals in ethics consultations,” he said.

- He co-chairs the Kansas City Quality Improvement Consortium, which has written chronic illness guidelines for use by the Kansas City medical community on diabetes, asthma, congestive heart failure, depression and more. “There was a lot of stakeholder engagement—physicians, health plan medical directors, medical schools, employer groups, consumers and the state quality improvement organization. By getting the health plans to agree on the guidelines, these could become the standard of care across all insurers,” Dr. Salanski noted.

- In one of his accomplishments of which he is most proud, Dr. Salanski in 2006 co-chaired a committee promoting a ballot proposition for a clean indoor air ordinance in Lee’s Summit. Passing by a 71% majority, the ordinance made Lee’s Summit one of the first communities in the Kansas City area with smoke-free indoor air spaces. “This started me in the community health advocacy realm,” he said.

- Dr. Salanski currently is co-chair of the Lee’s Summit Health Education Advisory Board, which addresses community health issues and educates the public.

At Research Medical Center, Dr. Salanski chairs the Bylaws Committee and serves on the Medical Executive Committee, the Code Blue Committee.
and the Medical Ethics Committee. He was president of the medical staff for two years at the former Baptist Lutheran Medical Center. He currently is a member of the board of directors of the Baptist-Trinity Lutheran Legacy Foundation. The foundation oversees the Kansas City Medicine Cabinet program which provides emergency medical funding assistance to underserved individuals in the greater Kansas City area.

In 2015, "Last year’s ‘Getting 2 Value’ conference explored the change from volume-based to value-based reimbursement. This year we will have educational programs on adapting our practices to meet changing payment structures. We will continue to develop the leadership initiative started in 2015 in the areas of executive leadership, patient advocacy and community leadership."

Another of his priorities is improving patient health in the community.

"I want to work on advancing the patient advocacy portion of our mission statement, particularly in helping to provide health-care services for the large number of Kansas City citizens who still ‘fall between the cracks’ in our health-care system.”

**MEDICAL SOCIETY GOALS FOR 2016**

Dr. Salanski first became acquainted with KCMS through his work with the KC Quality Improvement Consortium. He would attend KCMS board meetings to report on the consortium. During the meetings, he was drawn to the work he heard being done by Project Access in Kansas and the formation of Metrocare in Missouri.

"As I saw this unfold, I could see this board benefits people in the community who lack access to health care. At the local and state levels, this organization had goals which I had also been working on for the health of the community," Dr. Salanski said.

Looking ahead to 2016, Dr. Salanski has two primary goals for the Medical Society. The first is building on physician education programs held in the past. "Last year’s ‘Getting 2 Value’ conference explored the change from volume-based to value-based reimbursement. This year we will have educational programs on adapting our practices to meet changing payment structures. We will continue to develop the leadership initiative started in 2015 in the areas of executive leadership, patient advocacy and community leadership."

Another of his priorities is improving patient health in the community.

"The Board has endorsed the Tobacco 21 initiative now being adopted around the Kansas City area. We also are looking at ways to re-engage with Project Access programs. We will continue to represent physicians at MSMA and the AMA."

An important element in accomplishing these goals, he noted, is collaboration with other organizations. He hopes to advance joint efforts with the Wy-Jo Medical Society, for which KCMS provides administrative services, and the Greater Kansas City Medical Society. He added, "I want to work on advancing the patient advocacy portion of our mission statement, particularly in helping to provide health-care services for the large number of Kansas City citizens who still ‘fall between the cracks’ in our health-care system.”

To attract younger physicians, he noted, "We have to design programming more in line with their needs. These include short-term projects that don’t require a regular commitment to attend meetings. We also need to find ways to use technologies to reach younger physicians."

**LOCAL BACKGROUND**

A native of St. Joseph, Dr. Salanski has remained in the Kansas City area (continued on next page)
STEPHEN SALANSKI, MD (continued)

throughout his career. He obtained his undergraduate degree from the University of Kansas, then graduated from the University of Missouri-Columbia School of Medicine. He served his residency at the former Baptist Medical Center in Kansas City.

After residency, he practiced as a family physician for twelve and one-half years in Lee’s Summit. He then returned to Baptist Medical Center in 1999 as a faculty member of the residency program. He was appointed director in March 2006 when the program moved to Research Medical Center.

The Salanski family retains strong roots in Lee’s Summit. Dr. Salanski and his wife, Phyllis, a cardiac rehab nurse, have been married for 35 years. They have two grown children, Doug and Kristin, along with three grandchildren who have just arrived in the past 18 months. Doug has a degree in criminal justice and works in the Lee’s Summit School District; his wife is a school counselor. Kristin teaches elementary music in the Lee’s Summit School District; her husband is a medical student at the Kansas City University of Medicine and Biosciences. The entire family is active in Lee’s Summit Christian Church. They sing in the chancel choir, and Kristin directs the children’s choir. Dr. Salanski also is moderator of the church board of directors and serves as elder.

KU ties are strong in the family. Dr. Salanski and daughter Kristin represent the third and fourth generation of KU alumni, following in the footsteps of his parents, grandparents and other relatives. “All of our family are huge Jayhawk fans, especially during basketball season,” he said.

For the Medical Society, Dr. Salanski brings diverse interests and a desire to serve. “I look forward to laying the groundwork for greater health throughout Kansas City in 2016.”

KCMS 2016 President Stephen Salanski, MD.
We in the U.S. have a problem with obesity. Moreover, we’re not only fat, we’re poorly nourished. Many people combine too many calories with too few vitamins and other essential nutrients. So, what’s the solution? Since 1990, the answer has been food labels. We’ve all seen them, and read them. But … do they work? Are they effective?

The obesity epidemic has only worsened since 1990. Americans consume a relatively nutrient-poor diet. Although most adults meet and even exceed the daily caloric energy requirements, they fail to meet recommended nutrient intakes. Nutritious foods like lean meats, nonfat milk, and fresh fruits and vegetables play a small role in the typical American diet. Nearly half of all adults boast a diet high in sodium, calories, saturated fats, refined grains and added sugars. These dietary patterns ultimately contribute to one or more preventable chronic diseases (e.g., cardiovascular disease, hypertension, type 2 diabetes, cancers). The majority of Americans ignore guidelines by the U.S. Department of Agriculture (USDA) and the U.S. Department of Health and Human Services (HHS) to limit “total intake of discretionary calories, including both added sugars and solid fats, to 5%-15%.” Moreover, climbing obesity rates exacerbate comorbid disease states. The Centers for Disease Control (CDC) estimate that approximately 33% of children and 66% of adults are overweight or obese.

The Nutrition Labeling and Education Act of 1990 gave the U.S. Food and Drug Administration (FDA) authority to oversee food labeling. Since 1993, the FDA has required food and beverage manufacturers to label their products with Nutrition Facts. These labels display dietary info in a table format. Consumers can consult the table for details on an item’s calories. Nutrition Facts also breaks down the percentage dietary value (%DV) of total fat, cholesterol, sodium, total carbohydrates and protein within an item. Still, the FDA did not require manufacturers to disclose added sugar content. General concerns prompted the FDA to reconsider its Nutrition Facts label. Newly proposed rules call for inclusion of serving size and sugar content on package labels. Regardless, the proposed regulations lack solid evidence for improving consumer health and do not truly change anything about food labeling.

ALTERNATIVE LABELING SYSTEMS

Currently the only standardized food label remains Nutrition Facts on the backs of packages. However, front-of-package labels are simpler to use, and are probably more effective. We need a universal system for front-of-package labeling. Several alternative labeling systems exist in the U.S. marketplace, including:

- Facts Up Front. Launched in 2011, this currently is carried by over 10,000 products. A voluntary front-of-package labeling system, it is the product of a joint effort by the Grocery Manufacturers of America and the Food Marketing Institute. It features a blue or green monochrome coloring scheme of four “basic icons” and their % DV for calories, saturated fat, sodium and sugars. Manufacturers can highlight two additional “optional icons,” or “nutrients to encourage” to advertise on the front-of-package label. This program allows for continuing the dishonest tradition of fortifying items that have intrinsically lower nutrition (continued on next page)
content to create more positive Facts Up Front figures.

- Great for You. Launched in 2012, this is the brainchild of Walmart. This front-of-package label, similar to the Smart Choices program, serves as a green-colored stamp of approval for foods that meet certain criteria (e.g., protein, fruit, vegetable, nut, dairy product, total fat < 35% of calories, added sugars < 25% of total calories). Walmart awards this label to food items ranging from popcorn to seafood to dried fruit. The requirements for meeting the Great for You program skip around, allowing consumers to choose what is good for them, as consumers remain oblivious to exactly which criteria the food item meets. Moreover, the label’s “healthy” green-colored graphic fails to include information recommended by the FDA regarding trans fats, sodium and added sugars.

Multiple front-of-package labeling systems complicate the process of making healthy food choices. Research data compiled by the British Market Research Bureau (BMRB) reveals consumer frustration at the coexistence of multiple front-of-package labeling systems. Studies show that consumers are most likely to rely on front-of-package labels for product comparison, dietary management of chronic medical conditions, and losing weight. Product comparison is an issue because different labeling systems highlight different things. Label misinterpretation is another problem. Labels containing nutrition-related claims are especially misleading in the context of foods like cereals and frozen meals—items notoriously high in nutrients to limit (e.g., sodium, sugar). A recent study at Yale University found that many parents misinterpret the front-of-package labels on low-nutrition cereal boxes. When asked to interpret the labels, parents concluded “that cereals with claims (e.g., ‘supports your child’s immunity,’ ‘whole grain,’ ‘organic’) were more nutritious overall.” Positive beliefs arising from front-of-package labels directly translates to greater likelihood of buying the product. Misleading labels can manipulate consumers into choosing foods that appear healthy, but in reality, lack substantial nutritive value.

Introducing a standardized front-of-package label will lower the chances of consumer misunderstanding.

**HOW INFORMATIVE IS THE CURRENT SYSTEM?**

The current labeling system is not as effective as it could be. The FDA mandates a back-of-package Nutrition Facts label. This label helps inform consumers to a certain degree. According to survey data, more than half of consumers read the Nutrition Facts before purchasing a product for the first time. Most of these consumers check the food’s calorie and fat content prior to purchase. Yet, the other half of consumers have trouble interpreting food labels. People with low education levels may have trouble understanding the labels. The Nutrition Facts table’s format puts rows of % DV for items to limit (e.g., sodium, fats, sugars) between % DV of nutrients to encourage (e.g., dietary fiber, protein). This design makes it hard to decipher information when healthy and unhealthy nutrients are all grouped together.

While the Nutrition Facts’ table format is standardized, its serving sizes are not. One common misinterpretation is that between two similar packages, the one with a smaller serving size—with proportionally lower % DV of sodium and fats—is healthier. In one study, only 12% of participants (n=687) could correctly determine a Coke bottle’s total calorie content when given the calorie amounts per serving. The FDA’s current efforts to revamp the “Nutrition Facts” label is inadequate because some populations either 1) do not bother reading it, or 2) do not understand it. The Nutrition Facts label sheds some light on a food’s healthiness, but leaves a lot of consumers out in the cold.
IMPROVING FOOD LABELING

Using an additional, standardized front-of-package label can improve the effectiveness of the present system. Existing labeling systems fail to break down nutrition information in a way that is easy for consumers to understand. Research suggests that food labeling—when combined with nutrition education, parent engagement and behavior services—can help improve weight issues and promote healthy diets. Multiple studies suggest that front-of-package labels permit real-time evaluation of similar food and beverage products at grocery stores. Additional surveys find that people with low education levels and with high BMI prefer nutrient-specific front-of-package labels that utilize traffic-light color coding, rather than front-of-package systems that highlight numeric information (e.g., % DV).

Further, text that matches traffic-light colors raises consumer understanding of a product’s nutritional content. In a report prepared by the BMRB for the U.K. Food Standards Agency, the combination of traffic-light front-of-package label with text or % guideline dietary amount (%GDA) allowed for greatest understanding of nutrition content.

Other countries already have standardized front-of-package labeling. Notably, the U.K. successfully implemented a traffic-light front-of-package labeling system. It assigns foods a color—red, amber, or green—based on whether they have high, medium, low saturated fat, sugar and salt content, respectively. Australia and New Zealand have followed suit in exploring the traffic-light model. A study of submissions to the Review of Food Labelling Law and Policy conducted in Australia and New Zealand revealed that out of all parties submitting comments, the majority (n=62) supported the traffic-light system and a minority (n=29) opposed it. Using the same traffic-light system, Harvard University’s Thorndike, et al. conducted a long-term study taking place in a large hospital cafeteria with an average of 6,511 transactions daily. Results revealed that by adapting traffic-light labeling, sales of red-labeled foods decreased from 24% to 20% (p<0.001) and red-labeled beverages decreased from 26% to 17% (p<0.001), while sales of green-labeled foods increased from 41% to 46% (p<0.001) and green-labeled beverages increased from 52% to 60% (p<0.001). Over two years, the cafeteria’s consumer population adapted their eating behaviors. Using the traffic-light front-of-package labels allowed for sustainable, healthier consumer food choices in the long-term. These various models support using a single front-of-package labeling system in America.

In 2015, the Missouri State Medical Association (MSMA) passed a resolution encouraging use of standardized front-of-package labels as a tool for ensuring sustainable healthy eating behaviors. Although there is a large body of evidence favoring a single front-of-package label, particularly the traffic-light system, the FDA has not published any regulations. Ongoing research efforts and successful usage in countries like the U.K.—and pending implementation in Australia and New Zealand—overall suggest that traffic-light labeling really works in promoting long-term healthier food choices. Redirecting efforts to standardizing front-of-package labels, rather than remaking the Nutrition Facts labels, shows promise for putting a stop to America’s ever-expanding waistlines. Standardization of front-of-package labeling warrants serious FDA consideration.

Ingrid Hsiung is a fifth-year student in the BA-MD program at the University of Missouri-Kansas City School of Medicine. She is secretary of the Missouri State Medical Association Medical Student Section, and is American Medical Association secretary for the UMKC chapter. She also works as a tutor and consultant at the UMKC Writing Studio. She can be reached at ihhcal@mail.umkc.edu.

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“Tobacco use is the single most preventable cause of disease, disability and death in the United States, yet more deaths are caused each year by tobacco use than by all deaths from human immunodeficiency virus (HIV), illegal drug use, alcohol use, motor vehicle injuries, suicides and murders combined.” 1,2,3 The Centers for Disease Control (CDC) estimates that 480,000 deaths per year are caused by tobacco products.1 This makes tobacco prevention a critical issue. Tobacco 21 has presented such an opportunity.

Tobacco 21 policies prohibit sales of all forms of nicotine to anyone younger than 21—the period of their lives when most smokers become addicted. As physicians, we see the health consequences of tobacco use every day in the patients we serve. We also see the addictive nature of nicotine, with smokers averaging several cessation attempts before quitting for good. Stopping this addictive habit before it starts promises to greatly enhance the health of the Kansas City region.

TOBACCO 21 DELAYS SMOKING INITIATION

High school students report that many have had their first cigarette by age 12—some swipe them from their parents, some get friends to buy them illegally but most get cigarettes from older friends. In our area, 80% of high schoolers will turn 18 in their senior year and are legally able to purchase and share with younger friends. Smokers frequently transition from experimentation to addiction between ages of 18 and 21. Ninety-five percent of committed smokers have started before age 21.³

Neurodevelopmental research shows that adolescent brains are still maturing in the areas of pleasure seeking, impulse control, risk assessment and decision making. The U.S. Surgeon General report states that the younger the age of initiation, the greater the risk of nicotine addiction, heavy daily smoking and difficulty quitting.4

The Institute of Medicine Report, Public Health Implications of Raising the Minimum Age of Legal Access to Tobacco Products, through mathematical modeling, estimates a reduction in youth smoking of up to 25% with implementation of Tobacco 21 policies. Much of this effect is due to the reduction of social sourcing to younger teens.⁵

TOBACCO 21 POLICIES HAVE BROAD PUBLIC SUPPORT

The CDC conducted a public survey in 2013 that showed broad support of Tobacco 21 policies. Three fourths of adults favor Tobacco 21 policies including more than 70% of smokers.⁶ Raising the drinking age to 21 has reduced the number of alcohol-related fatalities and continues to have incredible public support.⁷

IT MAKES GOOD BUSINESS SENSE

Tobacco Control reports that a smoker costs a private employer in the United States an extra $5,816 per year compared with a nonsmoker. These costs include direct medical, smoke breaks and increased days lost to illness.⁸ The website WalletHub estimates the total cost of a single smoking Missourian at $1.2 million in his or her lifetime.⁹

Tobacco 21 will not harm business in the short run—only 2% of national
cigarette sales are made to 18-20 year olds. Over the long term, declines in smoking will occur gradually, giving retailers time to adjust to the changing market conditions.10

LOCAL POLICIES ARE EFFECTIVE
Leaders in Needham, Mass., wanted to affect the rate of youth smoking in their community. They increased the legal age for purchase of tobacco products in 2005. They saw a dramatic fall in the rate of youth smoking despite the fact that there were surrounding neighborhoods where purchase was still legal at age 18 (decline of 46% in Needham and 19% in surrounding communities). The effect lasted—13 years after institution of the effort, the Massachusetts Department of Health found the following:

• The smoking rate for adults in Needham is 8.0%. This rate is 56% lower than the overall rate for Massachusetts (8.0% in Needham compared to 18.1% statewide).
• The rate of smoking during pregnancy in Needham is 90% lower than for Massachusetts overall (0.8% in Needham vs. 7.9% statewide).
• Mortality from lung cancer is 24% lower among males and 33% lower for females in Needham compared to Massachusetts.11

Currently 120 communities and the state of Hawaii have raised the age of purchase to 21.

WHY INCLUDE VAPING PRODUCTS?
Use of vaping products among teens has been increasing faster than the rate of cigarettes. Electronic cigarette use among American middle and high school students jumped to 13.4% in 2014 from 4.5% in 2013, according to the CDC.12 The long-term health effects have not been fully quantified, but the addictive nature of alternative nicotine delivery systems is clear. Public health officials are concerned because of data showing that students who initially were using only electronic nicotine delivery devices were more likely to transition to tobacco products by the six-month point.13 With more than 700 flavors, including tutti-frutti, sweet tart and gummy bear, these products are clearly targeted at young people.

EFFORTS IN KANSAS CITY
Amazing partners have come to the table to make Tobacco 21 happen in the greater Kansas City community, including chambers of commerce, insurers, school districts, health systems, providers and businesses. With this broad base of support, municipalities have found it easy to make this choice on behalf of their residents. Tobacco 21 ordinances have now been enacted in the Missouri cities of Kansas City, Independence and Gladstone, and in the Kansas communities of Kansas City, Olathe and Iola, covering more than 800,000 people. There are another five communities in the planning stages.

I applaud the leadership of the Kansas City Medical Society and the Kansas City community in addressing youth smoking before it begins.

Bridget McCandless, MD, MBA, FACP, is president and CEO of the Health Care Foundation of Greater Kansas City, and a past president of the Kansas City Medical Society.

(continued on page 18)
The tobacco tax is a powerful public health tool.

Tobacco taxes are like antibiotics—dose matters. A drop here and there does nothing. With tobacco taxes, the dose needs to be strong enough to affect the choices of purchasers. This makes phased-in taxes ineffective.

The bare minimum to change behavior is an increase of 10% of the cost of a pack. Every 10 percent increase in cigarette prices reduced youth smoking by about 7% and total cigarette consumption by about 4%.1 Rate increases like these have the greatest effect on pregnant women, young smokers and low-income smokers because they are the most price sensitive. For reference, Missouri has the cheapest cigarettes in the nation at an average price of $5.25 per pack, so a 10% increase would be 52 cents.2

Tobacco taxes are one of the most effective means to effect a change in smoking. Missouri has the dubious distinction of having the lowest tax in the nation at 17 cents per pack. Kansas just recently raised their cigarette tax to $1.29 per pack (31st highest in the nation).3 We also have some of the highest rates of tobacco use at 25% in Missouri and 22% in Kansas. By comparison, the tobacco use rate in Utah is 12%, and in California, 14%.4

The other issue to consider in tobacco economics is the cheaper price of off-brand cigarettes. The Master Settlement Agreement of 1998 required that fees paid by cigarette manufacturers be returned to states for the costs of covering smoking-related illnesses. This fee is paid only by the brand manufacturers, like Altria/Philip Morris that makes Marlboro. This leaves a loophole that means off-brand cigarettes are much cheaper (for reference, in Missouri, Fortuna Soft cigarettes are $1.62 per pack).5 Unfortunately, since Missouri never closed this loophole, the state will forgo up to $50 million of general revenue yearly. Fixing this loophole was included in the language for some previous attempts to increase the tobacco tax.

Tobacco taxes ... should not be seen primarily as a revenue generator. They should be evaluated according to their ability to reduce smoking and decrease health-care costs for the state.

Tobacco polices are most effective when they are part of a comprehensive tobacco plan. Unfortunately neither Kansas nor Missouri has invested in tobacco prevention. The most effective plans in other states have included high tobacco taxes, smoke-free laws, effective enforcement of youth access statutes, mass media campaigns and accessible cessation services.

We can do better.

Bridget McCandless, MD, MBA, FACP, is president and CEO of the Health Care Foundation of Greater Kansas City, and a past president of the Kansas City Medical Society.

References
Two proposals are being circulated for placing tobacco tax increases before Missouri voters on the November 2016 ballot. Each proposal will need to collect upwards of 100,000 signatures before the May 8 filing deadline. Neither initiative is effective in impacting price-sensitive choices of young smokers. Both use tax funding for unrelated and popular work. Tax-supported entities have become perversely reliant on such taxes to fund such non-tobacco related activities. Importantly, these also carry the potential to blunt attempts to decrease smoking.

PROPOSAL #1—Sponsored by the Missouri Petroleum Marketers & Convenience Store Association. These stores are large sellers of off-brand cigarettes.

- It will raise the price of cigarettes by 6 cents per year for four years, resulting in a total $0.40 per-pack tax.
- It has a “poison pill” provision such that any future attempt to raise the cigarette tax will cause this tax to cease—effectively giving a discount to any future efforts.
- This proposal does not correct the Master Settlement Agreement loophole leaving the state with a loss of tobacco funds of up to $50 million per year.
- The tax dollars are dedicated to transportation funding and are expected to raise about $80 million per year.

The transportation needs of the state are estimated to be $600 million to $1 billion annually.

- Transportation advocates are concerned the inadequate amount of funding will cloud issues for a more comprehensive solution.

PROPOSAL #2—Raise Your Hands for Kids. This organization serves as the fundraising and advocacy arm of the Shawnee, Kansas-based Alliance for Childhood Education, a coalition of business leaders committed to improving the education systems in Missouri and Kansas. RYHK has wide support among Missouri child advocacy groups. In its December 2015 campaign finance report, RYHK reported receiving a $1 million donation from RJ Reynolds, manufacturer of Camel cigarettes.

- This constitutional amendment will raise the price of cigarettes by 15 cents per pack for four years, resulting in a total $0.77 per-pack tax by 2020.
- This constitutional amendment will raise the price of cigarettes by 15 cents per pack for four years, resulting in a total $0.77 per-pack tax by 2020.
- The tax dollars will be dedicated to early childhood services, which can include preschool or other health services as identified by each of the 115 counties in the state. Up to 10% will support smoking cessation and prevention programs and another 10% will support hospital-based early childhood health programs.
- This proposal also has an excise tax on off-brand cigarettes of 67 cents per pack.
- There has not been a legal determination on whether this will close the Master Settlement Agreement loophole, or whether the state can continue to receive the revenue that would be paid by large tobacco manufacturers.

ANALYSIS OF THE PROPOSALS

These proposed changes will have a minimum effect on smoking behavior. The absolute minimum “dose” of tobacco tax needed to affect youth smoking is 10% of the purchase price, or 52 cents per pack, all at one time. In order to make a real impact on the behavior of our price-sensitive teens and young adults, a more realistic goal is 75 cents. Phased-in taxes are much less effective because consumers adjust their budgets to accommodate them. In the unlikely event that no other state in the U.S. raises tobacco taxes in the next four years, a 52-cent increase would improve Missouri’s standing from 51st in the nation to 38th, between Mississippi and Alabama. Getting to the middle of the pack for state taxes, 26th in the nation, would mean an increase of $1.37 per pack.

It is difficult to raise the cigarette tax in Missouri. Despite three at-
Tobacco tax (continued)

tempts, the rate has not been adjusted in 23 years. If either of these bad proposals pass, a meaningful increase in the future will be even that much harder. Proposal #1 would, if passed, add future burdens by challenging transportation funding. Proposal #2 would add future burdens by challenging early childhood health funding. Both initiatives appear to be cynical attempts to encumber needed and popular programs with a tobacco Trojan horse.

Because of the unique ability of tobacco taxes to effect health change, they need to be used wisely. The hopelessly flawed current proposals are a perfect example of situation in which passing something is worse than passing nothing. Putting it another way, ‘tis better to do nothing than to do something stupid.

Michael O’Dell, MD, MSHA, is chair of the Department of Community and Family Medicine at the University of Missouri-Kansas City School of Medicine, and associate chief medical officer for the Truman Medical Centers Lakewood campus. He served as 2015 president of the Kansas City Medical Society.

For more information

Initiative petition language for each proposal: https://www.sos.mo.gov/elections/petitions


Tobacco Tax (continued)

References


Food labeling (cont’d from pg. 13)


I have been a practicing physician in Kansas City since the early 1990s. My professional career as a family physician has come full circle now that I have launched my own small business: Exhale, LLC.

Exhale, LLC, is a physician-led wellness team housed in a boutique fitness studio located in Mission, Kan. We serve health-conscious adults who want to belong to a community that promotes wellness. In the past five years, boutique fitness studios have become a global phenomenon that is disrupting the mainstream health-club industry. Boutiques now comprise 21% of the $22.4 billion U.S. health-club market. Consumers are looking for different categories of fitness classes and are seeking out options that fit their needs. The era of personalization has enabled studios to identify specific consumer niches and serve them in new business formats. Consumers are seeking community-based fitness concepts that provide an outstanding fitness experience in a convenient and effective way.1 Who better to enter this arena than a physician? How did I get to this point?

When taking my first board examination as a third-year medical student in the 1980s, I encountered a question that I have never forgotten: “Which population has the highest rate of obesity?” The answer was African-American females, a fact that was hard for me to swallow at the time. In high school, I played basketball, field hockey and was an avid cyclist. In college, I became a lifeguard and rode my bike everywhere because I did not have a car. So, I did not see myself as a “statistic,” but many years later, I know that many Americans are obese or at risk for obesity as a result of multiple factors.

A main goal in private practice was to educate my patients on healthy lifestyles while treating their diseases. After I left private practice for the University of Kansas Medical Center, my job and my interests in health promotion allowed me to travel all over the state. Obtaining my Master of Public Health degree provided me with a larger scope, and I realized that focusing on prevention could save lives and money. Finally, working for a global Contract Research Organization (CRO) allowed me to see that there are maladies that can be prevented and treated, but that most treatment is not “one size fits all.”

REASONS BEHIND EXHALE, LLC

Around the world, there is growing interest in changing the way we take care of ourselves. This interest is not just our bodies, but also our minds, spirits, societies and the planet. There is a growing impetus for a shift, from mere reactivity (fixing problems), to a proactive and holistic approach to health.2 In this age of personalized medicine, wellness can be tailored to the individual too. The gym, health and fitness club industry is in its growth cycle, because consumers continue to be interested in exercise in order to boost personal fitness and health. Key drivers of the growing wellness industry are: increasingly older and unhealthy people, failing medical systems, globalization, and people’s desire to be connected to healthy communities.

Over the next five years, wellness industry revenue is anticipated to grow at an annualized rate of 2.8% to reach $30.5 billion in the years leading up to 2019. In the U.S., most health insurance providers are attempting to lower individuals’ risk for type 2 diabetes, heart disease, dementia, cancer and high blood pressure to cut health-care
costs. In Kansas City, there are many physicians who promote wellness. However, there may only be a handful who work closely with a PharmD and personal trainers. My preparation for this role has been molded by my own interest as well as skills acquired through corporate executive work, executive seminars at the Bloch School of Business and the Kauffman FastTrac program.

PHYSICIAN CONSULTATION

At Exhale, the physician consultation includes a full medical history with a focus on chronic disease, musculoskeletal disease, the client’s level of fitness and wellness goals. The medical history is kept confidential between physician, client and trainers to ensure that injury can be avoided. The experienced personal trainers value function and foundation and ensure that everyone is moving in a safe and sustainable way. Additionally, a full nutrition consultation is completed by a doctor of Pharmacy, who has a passion for healthy eating. Her expertise regarding medications, drug-drug interactions and healthy eating allows her to provide recommendations that our clients do not get during their regular doctor visits.

Exhale offers a variety of classes:
Intense, muscle-building cardiovascular workouts, as well as low-impact Tai Chi and Pilates. Also, the incorporation of dance classes to increase flexibility, while strengthening the cardiovascular system provides something new, different and fun for our clients. Finally, weekly text messages and Facebook posts keep our clients engaged and motivated to meet their fitness goals. At Exhale, we encourage each client to “breathe out your best you.”

Eleanor Lisbon, MD, MPH, CPI is a KCMS member and the owner/founder of Exhale, LLC. She also is a senior medical director with Quintiles. She is president of the Greater Kansas City Medical Society, the minority physicians’ organization. She can be reached at eleanor.lisbon@quintiles.com.

REFERENCES

Kansas City Internal Medicine Joins Signature Medical Group

Kansas City Internal Medicine (KCIM), one of the largest independent medical practices in the Kansas City area, has joined Signature Medical Group effective Jan. 1. Signature is a multi-specialty physician-owned organization comprising more than 150 physicians at 30 practices in Kansas City, St. Louis and Bolivar, Mo.

The 23 KCIM physicians will be shareholders in Signature Medical Group as well as hold two seats on its board of directors. KCIM’s ownership and leadership remains the same—independent and physician owned—but KCIM will benefit from the purchasing power and increased efficiencies of a group with more than 1,000 employees.

KCIM CEO Jean Hansen said, “As health care continues to evolve from fee-for-service to quality outcomes, this collaboration allows us to be a thought leader involved in driving change.”

Signature CEO Jan Vest added, “The addition of KCIM to Signature Medical Group is another example of our efforts to preserve and advance the independent practice of medicine for the betterment of the patients and communities we serve.”

KCIM offices are located at 12140 Nall Ave. and 5401 College Boulevard in Overland Park, Kan.; 1010 Carondelet in Kansas City, Mo., and at 506 NW Murray Road in Lee’s Summit. Serving greater Kansas City for more than 30 years, KCIM physicians perform over 140,000 patient visits each year.

Kansas City Medical Society members practicing with KCIM include Andrea Arvan, MD; Eric Baker, MD; Jennifer Bequette, MD; Mark Box, MD; Jennifer Brown, MD; Stephanie Crabtree, MD; Marie Delcambre, MD; Jonathan Finks, MD; Andrew Green, MD; Amir Hemaya, MD; Marianne Hudgins, MD; Kristin Humphreys, MD; Jonathan Jacobs, MD; Bernard Judy, MD; Paul Katzenstein, MD; Sajeev Menon, MD; Janis Steinbrecher, DO; Ted Whitaker, DO; Diane Voss, MD; and David Wilt, MD.

As Mosaic Life Care increases its presence in the greater Kansas City area, the St. Joseph-based health system also is expressing its commitment to physicians by becoming a partner of the Kansas City Medical Society.

“We believe the Medical Society is a wise investment to express our participation in the Kansas City medical community,” said Linda Bahrke, RN, BSN, MAOM, administrator of population health and the Mosaic Life Care Accountable Care Organization, which was certified in 2012.

Angela Broderick Bedell, KCMS executive director, added, “KCMS is very pleased that Mosaic Life Care is joining with us to support our growing physician community in the greater Kansas City area. A first-class organization, they have been recognized with many awards including the 2009 Malcolm Baldrige Quality Award. Their wellness model reflects care for the whole patient, rather than just treatment of disease.”

Mosaic Life Care has more than 60 locations primarily in St. Joseph and Northland Kansas City, but also extending to 23 counties in northwest Missouri, northeastern Kansas and southeastern Nebraska. Formerly Heartland Health, it has hospitals in St. Joseph and Albany, Mo. Mosaic Life Care is a member of the Mayo Clinic Care Network, giving physicians access to Mayo Clinic expertise through eConsults.

In 2012, Mosaic Life Care entered the Northland Kansas City market and now has eight locations encompassing family medicine, orthopedics, cardiology, pain management and urgent care, along with physical and occupational therapy and imaging. Mosaic Life Care hopes to expand ACO participation in greater Kansas City.

The name Mosaic Life Care emphasizes the provider’s interest in promoting wellness beyond basic health care. Mosaic Life Care facilities offer such classes as yoga and tai chi, and a program component “myRelationships” promotes healthy relationships and their part in total health. “Our innovative life care model combines traditional health care and a focus on key life elements that affect overall wellness,” Bahrke said.

As part of the commitment to whole-patient care, all of Mosaic Life Care’s primary care practices are Level 3 certified as Patient-Centered Medical Homes. This also complements Mosaic Life Care’s ACO and positions it well for Medicare’s new value-based reimbursement programs.

Kansas City Medicine spoke with Bahrke to find out more.

What is Mosaic Life Care’s overall key to success?
Bahrke: Put simply: 1) physician leadership, 2) actionable information, and 3) a proven care management team of dedicated people. We are a physician-led, professionally managed organization. Our vision is to make Mosaic Life Care and our service area the best and safest place in America to receive health care and live a healthy and productive life. At the center of this effort are our physician partners. Our goals are closely aligned with our vision. We focus on quality, patient engagement and care management. We have created and honed processes and tools, such as an electronic medical record (EMR), to achieve these goals. Key data is always in our providers’ and caregivers’ hands when it is most needed. At our foundation, though, we are an organization dedicated to continual quality improvement.

How is Mosaic Life Care addressing population health?
Bahrke: Our population health approach is patient centric with an infrastructure built to support the care continuum. Our care managers and social workers routinely work in tandem with physicians to prevent gaps in care, breaking down barriers for the people we serve to ensure they are following their plan of care. Outside our doors, Mosaic Life Care is in the community donating time, effort and funding to address the root causes of poor health (and the habits that support it). The Pound Plunge, a community weight-loss effort, and the Fourth Grade Challenge, two of Mosaic Life Care’s signature health-improvement programs, have existed for more than a decade.

How are providers managing care for patients and addressing ongoing gaps in care?
Bahrke: Our EMR is built to provide real-time data to the care team. This means that when they have a patient...
interaction, they are able to deliver just-in-time education to address any care gaps and ensure excellent outcomes. We also use this information proactively as a part of patient outreach to ensure they are engaged in their care.

How is quality measured at Mosaic Life Care?
Bahrke: At Mosaic Life Care, quality is measured in three main ways: 1) customer engagement and satisfaction, 2) traditional, evidenced-based medicine measures (both process and outcome), and 3) efficiency measures to ensure we also offer an outstanding value. We align this approach with the mandated alternative payment model measures to ensure we provide the best and safest care possible.

What are your goals for the ACO?
Bahrke: Our aspiration is to assist quality-minded patient-centered physicians to organize to change and improve health care. A group of Kansas City physicians asked Mosaic Life Care to provide our ACO knowledge to assist them in developing a physician-led network in Kansas City. Our Medicare Shared Savings Program is anticipated to allow physicians to improve quality and share in savings. These physicians will also likely be able to take advantage of higher reimbursements prescribed in Medicare’s new Alternative Payment Model track.

ACOs are required to be “physician led.” What does that mean at Mosaic Life Care?
Bahrke: First, Mosaic Life Care is very serious and intentional about physician leadership. It is not just a slogan. It starts at the top of our organization. Mark Laney, MD, Mosaic Life Care’s CEO, is a former fellowship-trained pediatric neurologist and president of a large physician network. Dr. Laney has instilled a culture of excellence in terms of being process driven and patient centric. We very literally consider ourselves servants to the people who come to us seeking care and guidance, which makes our work sacred.

What is unique about Mosaic LifeCare’s culture for physicians?
Bahrke: For some time now, our physicians have been an integral part of the way our organization is run. Every officer and administrator has a physician dyad, a clinical counterpart who serves to ensure the physician perspective is considered when making business decisions. Many of our physicians serve on Mosaic Life Care boards, leading the changes that will ultimately impact patient care. It’s one of the many ways we ensure our physicians have the information, equipment and technology they need, when they need it, so they are able to practice medicine in the most effective, efficient manner possible.

What are the most physician-friendly qualities of the ACO?
Bahrke: The goal of the ACO is to put the physician in direct control of all aspects of patients’ health care with like-minded physicians. The ACO will be designed to allow physicians to enhance the delivery of care, contract directly with employers and insurers, have access to large multi-state contracts through a multi-state provider network, and maximize compensation via value-based purchasing options without a front-end physician investment.

Website: www.mymosaiclifecare.org
INTRODUCTION
The treatment of lower peripheral artery disease (PAD) has evolved significantly over the last 30 years. Until the 1980s, interventions for PAD were all surgical in nature. Balloon catheter development has allowed for the treatment of atherosclerosis with endovascular techniques. What could once only be treated with a large operation and prolonged hospitalization can now often be treated with percutaneous intervention on an outpatient basis.

The risk factors for the development of PAD include increasing age, smoking, diabetes mellitus, hypertension, dyslipidemia and chronic renal insufficiency. It is estimated that in the United States and Europe, there are more than 27 million people with PAD. This number has risen by as much as 23.5% in the past 10 years. The incidence of PAD increases with age and thus, as the “baby boomer” generation continues to age, the number of patients presenting with PAD will continue to increase over the coming years.

The inevitable outcome of untreated severe PAD is amputation. The five-year survival rate of patients with a below the knee amputation is around 50 percent. In fact patients who undergo below knee amputation have a lower five-year survival rate than patients with colon cancer, breast cancer, prostate cancer and melanoma. Only pancreatic cancer patients have a higher mortality rate. Thus, the treatment of PAD and its risk factors not only preserves quality of life but can also be life-saving.

SYMPTOMS
Patients with PAD may present with intermittent claudication (IC), critical limb ischemia (CLI), or acute limb ischemia (ALI).

The risk factors for the development of PAD include increasing age, smoking, diabetes mellitus, hypertension, dyslipidemia and chronic renal insufficiency.

Arterial claudication is described as pain in one’s leg with ambulation of a set distance and is relieved by rest. This is typically located in the calf muscle and caused by mild to moderate arterial insufficiency. Claudication comes from the Latin word claudicare, which means “to limp.” It was first described by the French veterinary surgeon Jean-François Bouley Jeune in 1831. He performed an autopsy on a horse that was noted to limp while hauling its daily workload. The autopsy revealed bilateral femoral artery occlusion. Unlike the horse examined by Dr. Jeune, most patients do not limp, they stop walking to relieve the discomfort of claudication. These patients usually do not need to sit down to relieve the pain, as cessation of ambulation and standing immobile for a brief period of time will provide relief. While claudication can be disabling and prevent patients from being active or even working, it very rarely leads to limb loss.

On the other hand, critical limb ischemia is marked by rest pain with or without tissue loss. Tissue loss may include a non-healing lower-extremity ulcer or frank gangrene. Rest pain is a burning pain in the dorsum of the foot or toes when the leg is elevated (as when in bed, resting). It is caused by severe arterial insufficiency in the affected extremity. When the foot is in the dependent position, gravity helps pull blood into the foot, providing enough oxygen to the toes. When the leg is elevated, there is not enough blood flow to the toes and they hurt. The toes and dorsum of the foot are the first to hurt, because this is the part of the leg that is furthest from the heart and thus suffers the greatest decrease in blood flow from more proximal arterial blockage. Rest pain is a sign of severe arterial insufficiency and impending tissue loss. These patients require revascularization in the near future or they will develop ulcerations and eventually end up with an amputation. They will also have other signs of severe arterial insufficiency such as claudication, dependent rubor

Current Therapy for Lower Extremity Ischemia
TREATMENTS RANGE FROM ENDOVASCULAR THERAPY TO SURGERY
By Robert R. Carter, MD, FACS, RPVI (left), and Mark L. Friedell, MD (right)
(redness of feet in dependent position and pale coloration with elevation) and hair loss. Patients with rest pain will often dangle their foot off their bed or sleep in a recliner with their legs dependent to relieve the pain and be able to sleep at night.

Acute limb ischemia (ALI) is identified by the sudden onset of severe symptoms. This often leads patients to seek immediate medical attention for unrelenting leg pain. Patients can often articulate the exact time of onset. ALI may be caused by acute thrombosis of chronic disease or embolic phenomena from a more proximal source such as an aneurysm or atrial fibrillation. No matter the etiology, ALI is a surgical emergency, and failure to restore blood flow in the first few hours will result in nerve injury, muscle necrosis and ultimately loss of limb.

**DIAGNOSTIC STUDIES**

Diagnostic tests used to diagnose and evaluate the severity of arterial insufficiency, be it acute or chronic, include ultrasound (US), non-invasive arterial studies such as the ankle brachial index (ABI) and pulse volume recordings (PVRs), computed tomography angiography (CTA) and angiography. Each of these has its own advantages and limitations.

US is non-invasive and inexpensive and an excellent screening tool for diagnosis of significant stenosis and occlusion. It is particularly useful in the acute setting for the diagnosis of an acute thromboembolism as it can confirm the paucity of flow in the artery of concern. It is somewhat limited, however, in its ability to evaluate deeper more proximal structures such as the iliac arteries in the pelvis. Further, it is very technologist dependent, and the severity of the disease may be severely over or underestimated depending on the experience of the technologist and technique used.

Non-invasive arterial studies utilize the ratio of the blood pressure in the legs as compared to the arms to assess degree of arterial insufficiency. These studies have no role in ALI but are very helpful in CLI. The ankle brachial index is determined by dividing the blood pressure at the ankle by the brachial artery blood pressure. It should be 1.0 or higher if there is no disease. As the ABI decreases, the severity of the arterial insufficiency increases. For example, with an ABI of 0.4 rest pain is common and tissue loss becomes a concern. PVRs evaluate the flow at multiple levels throughout the bilateral lower extremities and help to delineate the level of disease. If there is a drop of 20% from one level to the next, this suggests significant stenosis at that level. For example, if the high thigh index is 1.0 and the low thigh index is 0.8, then there is significant disease in the superficial femoral artery. Further, waveform analysis can help localize disease level and severity as the waveforms become blunted below the level of hemodynamically significant stenosis. This is especially useful in diabetics who may have falsely elevated ABIs or even non-compressible arteries. Toe pressures are also useful in diabetics to determine healing potential as these (continued on next page)
LOWER EXTREMITY ISCHEMIA (continued)

vessels are typically not calcified even with severe more proximal disease.

CTA allows for evaluation of both the level and severity of lower extremity arterial insufficiency. It is useful for surgical planning and may help identify potential distal targets for bypass. It requires an intravenous contrast bolus and thus may be contraindicated in patients with renal insufficiency. It is further limited by the fact that it is diagnostic only and intervention at the time of the study is not possible.

Angiography is both diagnostic and potentially therapeutic as the surgeon performing the angiogram may be able to perform angioplasty with or without stenting at the time of the angiogram. Similar to CTA, angiography will show both the level and severity of disease within the extremity examined. The drawback to angiography is the fact that it is an invasive procedure that requires accessing an artery (typically the common femoral artery), which may potentially result in complications. Further, sometimes intervention is not possible nor needed, and the patient ends up undergoing an invasive procedure without gaining any benefit. Angiography uses contrast similar to a CTA, although the typical dose is a fraction of that needed for a CTA. We currently offer CO₂ angiography for patients who have renal insufficiency or a contrast allergy. CO₂ angiography allows us to gather the same information as conventional angiography and even intervene on these patients without the risks of using iodinated contrast agents.

TREATMENT

The medical management of risk factors associated with PAD such as diabetes, hypertension and dyslipidemia is the first step in the treatment of PAD. Management of these risk factors will limit the progression of arterial disease as well as help maintain the patency of bypasses and stents placed. Further, patients with PAD have an increased risk of mortality compared to the average population, this is primarily due to cerebrovascular and coronary artery disease. The management of these risks factors will also reduce these patients' risk of heart attack and stroke.

The intervention with the most impact on risk reduction is smoking cessation, and this should be the first therapeutic goal. Antiplatelet therapy with medications such as aspirin and clopidogrel, are also an important part of the treatment strategy in these patients, to reduce the risks of heart attack and stroke as well as potentially...
help maintain patency of bypass grafts and stents. It is well recognized that lipid modification with statins in coronary disease patients also leads to a reduction in cardiovascular events; further, it slows the progression of PAD. Supervised walking regimens have been shown to significantly improve walking distances in these patients. In fact, several studies have shown walking regimens to be as effective as endovascular treatment of aortoiliac occlusive disease. One medication, cilostazol, has been shown to improve walking distance in this patient population but must be avoided in patients with congestive heart failure. Intervention should only be contemplated after conservative management fails to improve quality of life.

The management of CLI with open or endovascular interventions should include continued maximal medical therapy. The decision as to which interventional therapy is most appropriate for a given patient should take into account all of the following: surgical risks, life expectancy, severity of disease and symptoms, anatomical pattern of disease, and the availability of vein for bypass. Many vascular surgeons apply an “endovascular-first” approach to treatment of PAD. With careful application, this approach does not preclude future bypass surgery even if the initial endovascular therapy fails months or years later.

In 2000 and again in 2007, a multispecialty group including both medical and surgical vascular specialists generated the Trans-Atlantic Inter-Society Consensus (TASC and TASC II) documents on the management of PAD. These are the basis for recommended treatment paradigms today. TASC and TASC II created a classification of arterial lesions into two areas, the aortoiliac and femoropopliteal arteries, and divided the severity of the disease in each of these levels into four categories A-D. The recommended treatment of the least complex (A) lesions is endovascular therapy, and the most complex (D) lesions is with bypass surgery. For TASC B and C lesions, there is insufficient evidence to recommend one modality over the other, but B lesions are thought to be best treated with endovascular techniques and C lesions with open surgery (Figures 2-3). As technology has improved, particularly with the routine use of stents, virtually all TASC A, B, and many C femoral artery lesions are being treated initially with endovascular techniques. Bypass is reserved for relatively healthy patients with TASC C and D lesions or those patients in which previous endovascular therapy has failed.

The ultimate decision of mode of therapy should also take into account the patient’s comorbidities and risk factors as well as the clinician’s comfort with different treatment modalities. Further, as technology continues to improve, more and more complex lesions are becoming amendable to minimally invasive techniques. It is important, however, to make sure that as we become more aggressive with endovascular techniques, care is taken to avoid injury to potential future distal bypass targets, as many patients (continued on next page)

Figure 4. A) Angiogram of occluded anterior tibial artery at the ankle in an elderly patient with a nonhealing foot ulcer. B) Crosser athrectomy device used to cross the lesion and then Angioplasty performed with a 2 mm balloon. C) Post intervention angiogram showing now patent anterior tibial artery. This patient went on to heal her ulcer.
LOWER EXTREMITY ISCHEMIA (continued)
require repeat intervention for restenosis or occlusion. The bypass versus angioplasty in severe ischaemia of the leg (BASIL) trial randomized angioplasty vs. bypass of the femoral artery and suggested that angioplasty was more appropriate for patients with a short life expectancy, as it was less expensive than bypass, but that bypass grafting should be performed in patients expected to live longer than two years because it was a more durable procedure and cost equivalent beyond two years, as there were fewer re-interventions than with endovascular therapy.

The treatment of tibial disease has other issues. Tibial vessels should only be treated in the setting of CLI when tissue loss is present and amputation impending. First, tibial disease does not cause claudication symptoms. Second, these vessels are extremely small, and poor outcomes with potential limb loss are more likely with intervention at this level. When revascularization of tibial vessels is required, vein bypass is the gold standard and the most durable therapy. More recently, endovascular interventions have become a part of the limb-salvage paradigm for tibial disease, particularly for elderly debilitated patients who might not tolerate an open operation.

Hybrid operating rooms have now become standard in many hospitals. These rooms integrate an interventional radiology suite into an operating theater, combining the best that these two locations have to offer.

With the continued improvement of technology, endovascular interventions are now far more commonly performed than open surgery. It is important that the decision as to which therapy to utilize in the treatment of patients with PAD remains based on the factors outlined above—lesion location, severity, patient risk factors and comorbidities, rather than comfort level of the provider. Often we see patients with a failed percutaneous intervention who may have benefited more from an open intervention. We also see patients who have been told there are no other options for revascularization but have not been evaluated for open bypass. With proficiency in both percutaneous interventions and open procedures, vascular surgeons are uniquely positioned to provide the best care possible for these patients, improving quality of life and decreasing amputation rates and mortality.

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Vascular Surgery Groups Combine to Form Midwest Aortic & Vascular Institute


“We are excited about the many benefits that will come as a result of this merger,” said Karl R. Stark, MD, FACS, who formed Kansas City Vascular in 1984. “Having a larger practice will allow us to maximize practice operations efficiencies, improve the physician’s quality of life by reducing their call coverage commitments, strengthen the financial viability of our independent practice, enhance patient care through increased clinical collaboration, and improve our ability to grow and expand services.”

MAVI has seven vascular surgeons, all of whom are Kansas City Medical Society members. Besides Dr. Stark, they include Mike L. Waldschmidt, MD, FACS, who founded Vascular Surgery Associates in 1984; Michael K. Deiparine, MD, FACS; Scott W. Kujath, MD, FACS; Robert R. Carter, MD, FACS; Austin J. Wagner, DO; and Jonathan E. Wilson, DO.

MAVI will have four office locations in Independence, Lee’s Summit, Liberty and North Kansas City, Mo. In addition to the seven vascular surgeons, MAVI will employ four nurse practitioners, four ultrasound technicians and 31 additional staff members. Jimmy Foster, MD, will join MAVI on July 1, 2016, following the completion of his vascular surgery fellowship in Iowa City, Iowa.

A MAVI physician serves as medical director for the following hyperbaric medicine and wound care centers: Centerpoint Medical Center’s Advanced Wound Care Center, North Kansas City Hospital’s Wound Healing Center, St. Mary’s Medical Center’s Center for Wound Care and Hyperbaric Medicine. MAVI also is represented on 12 hospital medical staffs.

The practice website is www.mavi.life.

KCU Raises Nearly $40 Million Toward Joplin Campus

The Kansas City University of Medicine and Biosciences (KCU) is closing in on $40 million in donations toward the planned development of a second college of osteopathic medicine in Joplin, Mo. The campus is scheduled to enroll its first class of 150 students in the fall of 2017.

The Joplin Regional Medical School Alliance, a not-for-profit foundation formed through an alliance of medical and community leaders, has raised $29.6 million toward its $30 million pledge to KCU for the project. An in-kind donation of land and former hospital building from Mercy Hospital Joplin is valued at $9.5 million. The KCU campus will be located on the site of Mercy’s former hospital, which was constructed in 2012 to serve as a temporary facility following the destruction of St. John’s Hospital during the devastating Joplin tornado in 2011.

KCU-Joplin will be the first new medical school in Missouri in nearly 50 years. Its realization is being made possible through collaboration among KCU, Mercy Hospital Joplin, Freeman Health System, the City of Joplin and philanthropic leadership from the surrounding community. Freeman Health System has pledged a multi-million dollar gift, as well as a commitment to provide medical student training for KCU.

Paula M. Gregory, DO, has been appointed dean of KCU-Joplin effective June 1, 2016. She currently serves as assistant dean of clinical education for Georgia Campus-Philadelphia College of Osteopathic Medicine in Stone Mountain, Ga.
We have made many advances in understanding the molecular basis of many types of cancer. We can treat tumors with drugs to disrupt molecular pathways leading to cancer; still, a cancer diagnosis remains a devastating diagnosis. Over 75% of patients with lung cancer present with regional or distant metastases. Even with localized disease, overall survival is only 50% at five years. There are few five-year survivors with distant disease. Lung cancer remains the leading cause of cancer-related death in the United States.

Early detection of lung cancer, when it is most treatable, has been a goal for more than 30 years. Screening with chest X-ray, sputum cytology and computed tomography (CT) has produced more diagnoses of patients with lung cancer and more patients undergoing resection; however, until very recently, no screening method had resulted in improved patient survival. It may be that these previous trials have detected more indolent and less aggressive forms of lung cancer, leading to over diagnosis or lead-time bias.

Based upon no demonstrable change in mortality, leading up to 2011, no professional society or health service endorsed any form of lung cancer screening. Prevention has emphasized cessation of smoking, and this continues to be the most important intervention.

The publication of the results of the National Lung Cancer Screening Trial (NLST) in 2011 caused a seismic shift in our thinking about lung cancer screening. For the first time in 30 years, a single study demonstrated a 20% reduction in lung cancer-related mortality, with the application of low-dose CT scan. In the next few sections, we will review some of the salient issues regarding the application of lung cancer screening CT scan, and highlight the controversies surrounding a seemingly favorable study.

**TRIAL DEMONSTRATES 20% REDUCTION IN LUNG CANCER-RELATED MORTALITY**

The NLST enrolled 53,454 patients between 2002 and 2004, with follow-up ending in 2009. Investigators randomized eligible patients to chest X-ray or CT scan, done yearly for three years. Patients were between the ages of 55 and 74 and had smoked at least 30 pack-years. In the CT arm, 1,060 patients were diagnosed with lung cancer, versus 941 in the chest X-ray group. After five years, 247 patients in the CT group and 309 patients in the chest X-ray group experienced a lung cancer-related death. This difference of 62 patients was the basis of the 20% reduction in cancer-related death.

Shortly after the publication of this paper, a number of societies and groups including the NCCN (National Comprehensive Cancer Network), the U.S. Preventive Services Task Force (USPSTF), the American Lung Association, the Society of Thoracic Surgeons and the American College of Chest Physicians all endorsed the concept of lung cancer screening. The various societies offered slight variations to eligibility for screening, based upon the inclusion criteria of the NLST. All of the recommendations provided disclaimers as to the setting of screening—“only in settings that can deliver the comprehensive care provided to NLST participants.” Furthermore, most recommendations also advocated for not screening individuals with severe comorbidities that would preclude potentially curative treatment and/or limit life expectancy.

Unfortunately, these recommendations for discontinuing screening are prone to interpretations and local expertise. What is treatable by an experienced thoracic surgeon employing minimally invasive techniques, may not be achievable with an open thoracotomy, to achieve the same level of morbidity or mortality risk.
thermore, studies have demonstrated a clear difference in short-term and long-term outcome whether general surgeons, cardiothoracic surgeons or specialized general thoracic surgeons surgically manage patients. Unfortunately, apart from urban centers, most patients will not have access to specialized general thoracic surgeons.\\n
**WHY WAS CMS ADVISED NOT TO PAY FOR LUNG CANCER SCREENING?**

In February 2015, after a public comment period and lengthy discussion, CMS issued a decision memo recommending screening utilizing strict criteria. CMS did so, going against the advice of the Medicare Evidence and Coverage Advisory Committee (MEDCAC), which advises the CMS on coverage guidelines under Medicare.

The transcripts of the MEDCAC discussion of lung cancer screening demonstrate a cautious and thoughtful discussion of lung cancer screening data. The MEDCAC committee voted a low confidence in the ability of lung cancer screening with low-dose CT to have enough benefit to outweigh the risks. They also voted low confidence that the harms of low-dose CT scan to the Medicare population could be minimized. For the interested reader, the entire transcript of the discussion is available for review.

**TO SUMMARIZE**

- **Sensitivity and specificity:** The best screening tool for a disease should not only be sensitive (detect all cases of a disease), but also be specific (low incidence of false positive findings). The NLST demonstrated the exact opposite. In patients undergoing CT scans, a quarter of patients had a positive finding. Of these, 96.4% were false positives. While chest X-ray discovered 6.9% of patients having positive findings, 94.5% were false positives. Patients with a positive finding should be prepared for additional testing including PET imaging, or more invasive diagnostic strategies, including surgery.

- **Morbidity associated with positive findings:** Additional testing and procedures are not without risk. The NLST reported 16 deaths within 60 days of an invasive procedure. Of these deaths, only 10 of 16 had lung cancer. Bach and colleagues estimated that one can expect 33 major complications per 10,000 screened by LDCT. The access to qualified expert pulmonary, interventional radiology and thoracic surgical care is not uniform. The NLST was performed primarily in academic environments, with specialized care. The applicability of the stringent standards of a research study to the entire medical community of the U.S. was questioned.

- **Indolent tumors:** There was concern for a potential bias in the NSLT study. Most of the patients found in the study had invasive tumors, mostly adenocarcinoma, and bronchioalveolar carcinoma (BAC) – now renamed lung adenocarcinoma in situ. Moreover, the NSLT committee reported in a separate publication that 18% of tumors detected were in fact indolent and represented over-diagnosis. Given the concerns for morbidity and mortality associated with any interventions, the diagnosis of more indolent tumors may result in adverse outcomes.

- **Radiation exposure:** MEDCAC expressed concern that not only will patients experience a high rate of false positive findings, a single CT scan is not enough, and requires a lifelong commitment to screening. The application of screening technology also requires commitment to modern low-dose radiation techniques. Experts expressed concerns for not being able to meet this requirement uniformly. Unnecessary radiation from more conventional CT imaging strategies is also a risk to the patient.

Given the complexities of CT screening, and the small absolute benefit to screening, the advisory committee contradicted every other professional society in opposing lung cancer screening. The committee felt that the lung cancer screening could not be offered in a uniform and accurate manner across the U.S. to the Medicare population.

**CMS APPROVES LUNG CANCER SCREENING – WITH MANY CONDITIONS**

On Feb. 5, 2015, CMS issued a decision memo recommending lung cancer screening with CT scans, but with significant documentation and quality measures required. In the public comment period, CMS acknowledged MEDCAC’s concerns. In order for an institution to offer lung cancer screening, a rigorous set of requirements mimicking the conditions of the NSLT must be met.

It is this author’s opinion, despite the CMS decision, that widespread application of CT screening for lung cancer may not result, due to issues of access to care. MEDCAC concluded that CT screening for lung cancer could not be done in a uniform manner for Medicare recipients in the U.S., and therefore declined to support a recommendation for coverage. The CMS requirements for screening set stringent standards, which may not be achievable outside specialized

(continued on next page)
LUNG CANCER SCREENING (continued)
centers. The reality for the patient and
the health-care provider may not have changed with the CMS decision in favor of lung cancer screening. Even if the patient has been counseled and wishes to undergo screening, the mandates set forth by CMS limit the sites offering lung cancer screening.

The requirements for lung cancer screening are markedly different from other CMS decisions regarding cancer screening. No other screening recommendation requires this degree of documentation or quality control or documentation of follow-up and outcomes. At the time of the writing of this editorial, additional requirements regarding documentation, and initiation of the screening process are being finalized.

In order for a patient to be eligible for lung cancer screening, CMS mandates the following:

- Eligible patients are:
  - Age 55-77 years
  - Asymptomatic (no signs or symptoms of lung disease)
  - Tobacco smoking history of at least 30 pack-years (one pack-year = smoking one pack per day for one year; 1 pack = 20 cigarettes)
  - Current smoker or one who has quit smoking within the last 15 years

- Documentation should be provided of a clinic visit providing counseling to include actual pack-year smoking history, to include benefits, harms, follow-up diagnostic testing, over-diagnosis, false positive rate, and total radiation exposure. Counseling should also include discussion of importance of adherence to annual LDCT lung cancer screening, impact of comorbidities and ability or willingness to undergo diagnosis and treatment.

- The radiologist must have been involved in the supervision and interpretation of at least 300 chest CT acquisitions in the past three years, with documented ongoing CME training.

- The facility must use and document a low-dose technique with an effective radiation dose less than 1.5mSv.

- The facility must maintain a registry of all patients undergoing screening, and include data such as demographic information, CT scanner technical parameters, specific characteristics of each nodule identified, and the diagnostic follow-up done for any abnormal findings including repeat diagnostic chest CT, bronchoscopy, resection or other procedures.

- The registry should also include tumor registry information on any cancer diagnosed, and outcome data regarding not only lung cancer mortality, but all-cause mortality and death within 60 days after most invasive diagnostic procedure.

The CMS mandates highlight the complexity of lung cancer screening. Given the high rate of false positive findings and a lifetime of scanning, a lung cancer screening program will require a great deal of physician input, but also nursing support to follow these patients long-term. Essentially, every patient undergoing lung cancer screening should have a sustained medical relationship with a team of highly trained specialists.
screening will require the work of a “lung nodule tumor board.” Prior experience suggests that long-term follow-up of patients, even those with documented pulmonary nodules, is a challenging proposition, even in an academic center with a dedicated nodule clinic.11 Lung cancer screening programs will need to assess the resources available, and the requirements of these mandates to be eligible for CMS reimbursement.

In summary, the nature and requirements for a lung cancer screening program continue to be defined. CMS has set a very high standard for any facility proposing to conduct a lung cancer screening program. The most important step remains an honest conversation with the patient in a primary care setting to determine the willingness of the patient to accept potentially many years of follow-up scans, with a high probability of false positive findings, and to understand the risks of interventions for any finding—both benign or malignant. The cessation of smoking is essential, and is the best prevention tool for the avoidance of lung cancer.

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REFERENCES

STOWERS INSTITUTE NEWS

Potential Biochemical Mechanism Underlying Long-Term Memories Identified

Scientists at the Stowers Institute for Medical Research have identified a possible biochemical mechanism by which the specialized brain cells known as neurons create and maintain a long-term memory from a fleeting experience. The research, conducted by Stowers associate investigator Kausik Si, PhD, and his team, was published in the December 2015 issue of the journal Cell. The study describes a possible biochemical mechanism by which the specialized brain cells known as neurons create and maintain memories that endure and do not fade away. Using a fruit fly model system, they found that the synaptic connections where memories are stored are kept strong by the transformation of the Orb2 protein from one physical state to another. The transformation changes Orb2’s function so that it solidifies and strengthens the memory connections in the brain.

Researchers generate whole-genome map of fruit fly genetic recombination

A new study from the Stowers Institute for Medical Research maps where recombination occurs across the whole genome of the fruit fly Drosophila melanogaster after a single round of meiosis. Their results indicate that separate mechanisms position the two main kinds of recombination events, crossovers and non-crossovers. The findings, which are reported online in journal Genetics, give important insights into the understanding of chromosomes and the mechanisms of inheritance. The researchers explain that without such genetic recombination, cells could end up with the wrong number of chromosomes, a major cause of miscarriages and birth defects in humans.
MARK YOUR CALENDAR

A PRACTICAL APPROACH FOR IMPLEMENTING POPULATION HEALTH MANAGEMENT

FEATURING SCOTT CONARD, MD
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TUESDAY, MAY 10, 2016
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This presentation by Dr. Conard will outline various considerations for implementing population health management and explore tactics and interventions that can improve population health management. He will also review case studies of various population health management programs and interventions.

Scott E. Conard, MD, has been a practicing family physician for over 25 years in Irving, Tex. Dr. Conard has direct experience with providing care for those in adult congregate living and skilled nursing facilities. He has led and transformed over 184 clinics resulting in 248 awards for quality and excellence. Dr. Conard has served as chief medical officer at Compass Professional Health Services and was an associate professor at the University of Texas Health Science Center in Dallas for 21 years. Dr. Conard served as chief medical and strategy officer of Medical Edge, a 510-provider, 1.3-million-patient health care system. His population health management approach resulted in over 150 Medical Edge providers obtaining Bridges to Excellence and National Committee for Quality Assurance recognitions in diabetes, cardiac, asthma and patient-centered medical home performance.

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