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HOUSTON Medical Times

Bringing Healthcare News to the Forefront

January Issue 2015

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STUDY SHOWS ANESTHESIA-RELATED DEATHS DECLINE; IMPROVEMENT NEEDED TO REDUCE TOOTH DAMAGE AND OTHER INJURIES

JOURNAL OF HEALTHCARE RISK MANAGEMENT PUBLISHES RESEARCH ON PATIENT INJURIES

By Darrell Ranum, JD, CPHRM
Vice President, Patient Safety,
NE Region,
The Doctors Company and
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Staff Anesthesiologist,
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Assistant
Professor of Anesthesia,
Harvard Medical School

Although recent trends show a decline in anesthesia-related deaths, a study published today by the Journal of Healthcare Risk Management concludes that risks are evolving and both physicians and patients can take steps to reduce injuries.

The study, "Analysis of Patient Injury Based on Anesthesiology Closed Claims Data from a Major Malpractice Insurer," is based on 607 anesthesia-related claims reported by The Doctors Company, the nation's largest physician-owned medical malpractice insurer. Three prominent Harvard Medical School anesthesiologists, a Stanford University Hospital anesthesiologist, and a patient safety expert with The Doctors Company conducted the research.

Some of the major findings from the study include:

- Almost 80 percent of anesthesia technical performance claims resulted from complications that were explained to patients prior to the procedure. However, patients who filed claims may not have had sufficient clinical knowledge to associate those risks with their injuries.
- Delayed responses to deterioriating vital signs intraoperatively were sometimes the result of alarms being turned off or ignored.
- The number one injury from anesthesia was tooth damage (20.8 percent of the claims).
- Obesity was identified as the most significant patient characteristic in claims. Obesity affected anesthesia outcomes more frequently than other comorbidities such as cardiovascular disease or diabetes.

"The results of this study show how important it is for physicians to communicate with patients about the outcomes of their care and to link informed consent discussions with the complication that they experienced," said co-author Richard D. Urman, MD, assistant professor of anesthesia at Harvard Medical School and a staff anesthesiologist at the Brigham and Women's Hospital in Boston, Massachusetts. "Patients may still be unhappy with the outcome, but they will have a better understanding of the cause of their injury and be less likely to incorrectly ascribe the injury to substandard care."

The study also found that a patient's

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02•14•15

Houston Heart Ball

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Judy and Russ Labrasca
Amanda and Jeff Malone
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Legal Health

2014 Year-end Hospice and Home Health Update: The Regulatory Landscape for Hospice and Home Health Providers Continues to Change

By Emily E. Bajcdi and Serra J.Schlanger
EPSTEIN BECKER GREEN

The end of 2014 has been marked with several legislative and regulatory efforts that have the potential to significantly impact the hospice and home health industries.

The IMPACT Act

Enacted in early October, the Improving Medicare Post-Acute Care Transformation Act of 2014 ("the IMPACT Act") includes several key changes that affect hospice providers. Beginning in April 2015, all Medicare-certified hospices will be subject to routine survey at least every three years. Prior to the IMPACT Act, the Centers for Medicare and Medicaid Services ("CMS") required certification surveys of hospices every six years, compared with home health agencies which are required to be surveyed every three years, and nursing homes which are surveyed annually. In addition, in 2013, the Department of Health and Human Services Officer of Inspector General ("OIG") found that 17 percent of state-surveyed hospices were past due for their six-year survey, leading to concerns about inadequate oversight of hospice compliance with the Medicare conditions of participation and quality-of–care requirements. With this legislation, many hospice providers can expect more frequent surveys than in previous years (those surveyed by private accrediting organizations may already be on a three-year survey cycle).

CMS will also now be required to conduct a medical review of all hospice agencies that reach a specific threshold of patients who receive care from the hospice for more than 180 days. Medicare pays for hospice care for beneficiaries who are

terminally ill and have a prognosis of six months or less to live if the terminal illness runs its normal course. As such, patient stays longer than 180 days have come under scrutiny by CMS and government enforcement agencies. The specific threshold and procedures for medical review are yet to be determined by CMS; hospice providers and stakeholders should follow the development of these reviews and provide CMS with comments when the proposed threshold and review processes are published.

The IMPACT Act also includes provisions that affect home health providers by implementing standardized data collection and reporting of patient assessment data, quality measures, and resource use measures to CMS.

The 2015 Medicare Home Health Prospective Payment System ("Final Rule")

The most significant changes in the Final Rule relate to the physician face-to-face ("FTF") encounter documentation requirements for home health reimbursement. The Affordable Care Act requires that, prior to certifying a patient's eligibility for the Medicare home health benefit, a physician must document that the physician himself or herself (or an allowed non-physician practitioner) had a FTF encounter with the patient. CMS implemented regulations adding that the

see Legal Health page 16

UTMB study finds that most patients do not use inhalers and epinephrine auto injectors correctly

By Donna Ramirez
University of Texas Medical Branch at Galveston

For people with asthma or severe allergies, medical devices like inhalers and epinephrine autoinjectors, such as EpiPen, can be lifesaving.

However, a new study by the University of Texas Medical Branch at Galveston indicates that a majority of patients often do not use these devices correctly, resulting in less effective delivery of these medications and potentially disastrous outcomes.

"Improving how patients use these devices leads to better clinical outcomes," said Dr. Rana Bonds, lead author and assistant professor in the department of internal medicine, division of allergy and immunology. "We conducted an investigation to identify factors associated with incorrect use of inhalers and epinephrine autoinjectors at UTMB so that health care providers are aware of the problem and can plan better ways to increase proper usage."

These new data are published online and scheduled to appear in the January print edition of the Annals of Allergy, Asthma & Immunology.

The study looked at more than 145 patients using epinephrine autoinjectors or inhalers from multiple UTMB allergy/immunology clinic sites. Participants demonstrated how they used the device and were evaluated compared with established standards.

The study found that only 16 percent of patients used the epinephrine autoinjector properly. More than half missed three or more steps. The most common error was not holding the unit in place for at least 10 seconds after triggering release of the epinephrine. Other common errors included failure to place the needle end of the device on the thigh and not depressing the device forcefully enough to activate the injection.

Being able to use the device correctly was not associated with a particular clinic, a patient's education level or whether someone in a family had used a similar device.

With inhalers, only 7 percent of users demonstrated perfect technique and 63 percent missed three or more steps. The most common misstep was not exhaling as much as possible before using the inhaler. Another common error was failing to shake the inhaler before taking the second medication puff. None of the factors examined in this study, including clinic site, age and education level, impacted the rates of correct inhaler use.

"We found that incorrect use of these medical devices is still a problem," said Bonds. "Despite the redesign of the autoinjector for easier use, most patients continued to make at least one mistake with the device. Most patients made multiple mistakes and would not have benefitted from

self-administration of the potentially life-saving treatment if the need arose."

The same was true with inhalers used for asthma. Fortunately, most patients were able to complete more than half of the steps properly and the common errors displayed by inhaler users would typically result in diminished drug delivery rather than no delivery at all.

The study demonstrates the clear need to improve training for patients so they receive the full benefits of these medications. Recommendations include repeated verbal and visual education using demonstration. New ways to provide this training will help patients and potentially save lives. ▼

Healthy Heart

Houston area hospitals play vital role in study showing a coordinated STEMI response could help more patients survive heart attacks.

By The American Heart Association

According to late-breaking research presented at the American Heart Association's Scientific Sessions 2014 in Chicago, a coordinated emergency response by healthcare teams to treat heart attack patients meant faster care that was associated with improved survival.

The Regional Systems of Care Demonstration Project: Mission: Lifeline STEMI ACCELERATOR — one of the largest systems of care efforts to improve heart attack care — involved 16 metropolitan areas, including Houston, comprising about 10 percent of the U.S. population. Researchers tracked more than 24,000 heart attack patients across 484 hospitals and 1,258 emergency medical services (EMS) agencies during the implementation phase of the project July 1, 2012-March 31, 2014.

Here are some of the Study Highlights:

- Collaboration between paramedics and hospitals in treating heart attack patients resulted in shorter emergency department wait times. These were associated with better survival.
- Heart attack patients were at higher risk of death the longer they had to wait for treatment.
- The findings come from a demonstration project implemented in 16 U. S. metropolitan areas.

The AHA and regional and national leaders led the ACCELERATOR initiative, coordinated through Duke University, with the Duke Clinical Research Institute as the coordinating center. Twenty Houston area hospitals participated in this national quality of care improvement initiative for centers across the United States in the following facilities:

- Bayshore Medical Center
- CHI/Baylor St. Luke's Medical Center
- Clear Lake Regional Medical Center
- Conroe Regional Medical Center
- Cypress Fairbanks Medical Center
- Houston Northwest Medical Center
- Kingwood Medical Center
- Mainland Medical Center
- Memorial Hermann Southwest
- Memorial Hermann Hospital TMC
- Memorial Hermann Memorial City Hospital
- Memorial Hermann Northeast
- Memorial Hermann Northwest Hospital
- Memorial Hermann Southeast Hospital
- Memorial Hermann The Woodlands Hospital
- St. Luke's Patients Medical

see Healthy Heart page 16

Marketing Essentials

Survey: Many Doctors May Duck Out of ACA Participation

By Lonnie Hirsch
Co-founder,
HealthCare
Success Strategies

The fast approaching New Year is shaping up to be even more challenging for many doctors and patients as well.

In a market already strapped by a growing doctor shortage, a new report by the Medical Group Management Association (MGMA) forecasts nearly 25 percent of doctors may turn their back on Affordable Care Act (ACA) plans due to low reimbursement and high costs.

In that environment, increased competition for doctors seeking well-insured patients is a serious marketing consequence.

Rewind exactly one year. Further, what if the government were to force doctors to accept ACA-covered patients? An opinion column headline by public policy observer Merrill Matthews, PhD, [viaForbes.com] asked: When Will The Government Start Forcing Doctors To See Affordable Care Act (ACA) Patients? At the time, Dr. Matthews wrote:

"Patient access to doctors is approaching a perfect storm of decreased physician supply, more demand for medical care—especially after Affordable Care Act (ACA) kicks in—and doctors increasingly refusing to see low-paying Medicare or Medicaid patients. If the 'promise' of Affordable Care Act's access to health care is to be kept, government will eventually have to force doctors to accept Affordable Care Act-covered patients.

"[A] growing number of doctors are refusing to take new Medicaid or Medicare patients, and there is every reason to think the same will happen under Affordable Care Act."

Fast forward to 2015. About 214,524 doctors are likely to not participate in new plans under the ACA, according to the Medical Group Management Association data. That number would represent 24 percent of the 893,851 active professional physicians.

As one example, an estimated seven out of 10 California physicians reportedly have not participated in Covered California plans–a state with the highest number of ACA plan enrollees.

Patients with new ACA insurance will be challenged to find (willing) providers. And when demand exceeds supply, some patients may change their coverage, resort to paying cash, or seek care via hospital emergency departments.

Medical practices, on the other hand, are likely to find the already-intense competition for well-insured patients to grow worse. Taking on additional patients to recover lost revenue is like the flawed notion that business can "lose a dollar on every customer and expect to make it up in volume."

Notwithstanding that some doctors will opt to retire or seek other employment options, marketing savvy providers who expect to stand their ground can expect an up-tick in the intensity and the quality of marketing from competitors.

Medical practices will continue to become more skillful and sophisticated in their ability to differentiate their practice and win new (and financially desirable) cases and patients

▼

Study Hints at Antioxidant Treatment for High Blood Pressure

UH College of Pharmacy Researchers Study Role of Oxidative Stress in Hypertension

By Lisa Merkl
University of Houston

High blood pressure affects more than 70 million Americans and is a major risk factor for stroke, heart failure and other renal and cardiovascular diseases. Two University of Houston College of Pharmacy researchers are examining the role of intrinsic antioxidant pathways in mitigating hypertension.

Mustafa F. Lokhandwala, a professor of pharmacology, and Anees A. Banday, a research associate, are studying kidney hormonal receptors that are responsible for sodium excretion in the urine – a condition known as natriuresis – that maintains blood plasma sodium composition and regulates blood pressure.

Kidneys play a pivotal role in regulating blood volume, sodium balance, pH and blood pressure. Activation of kidney dopamine receptors is an important factor that works to control sodium balance and, subsequently, maintains normal blood pressure. Oxidative stress, an independent risk factor for hypertension, could disrupt kidney dopamine receptor function. As a result, dopamine is not able to promote sodium excretion because its receptor, the place where dopamine acts to control sodium reabsorption, is not functioning properly. This leads to sodium retention and hypertension.

"Any dysfunction in the renal dopamine mechanism would lead to excessive sodium reabsorption, volume expansion and ultimately hypertension," Lokhandwala said. "There are various factors that play a role in causing an increase in blood pressure, one of which is oxidative stress. When you increase levels of reactive oxygen species – or free radicals – in the body and, specifically, in the kidney, they cause damage to the functioning of hormonal systems in such a way that you are predisposed to developing hypertension and other disorders."

To protect the kidney dopamine system against oxidative damage, the researchers are investigating how activation of intrinsic cellular antioxidant pathways can protect this hormonal system in kidneys to maintain sodium balance and, thus, normal blood pressure.

Specifically, they are looking at redox-sensitive transcription factor Nrf2, a protein that regulates intrinsic cellular antioxidant pathways during oxidative or toxic insult. What makes Nrf2 unique is the fact that this protein can be activated by external antioxidants such as resveratrol and sulforaphane, which are very common in everyday consumed fruits and vegetables. Once activated, this protein stimulates a plethora of downstream antioxidant proteins at gene level. The investigators, by using kidney specific gene alterations in mice, found that Nrf2 can protect the kidney dopamine system from oxidative damage that, in turn, would allow dopamine to maintain plasma-sodium balance and lower blood pressure.

The results of their research could have significant implications not only

in the understanding and treatment of hypertension, but countless other diseases in which oxidative stress is believed to have a role.

"Oxidative stress is present in many diseases, so resveratrol and sulforaphane will be beneficial for other conditions, such as neurological disorders, cancer and diabetes," Banday said. "Fruits and vegetables are natural sources of antioxidant compounds and can be consumed over a long time without negative effects, which is always something that has to be taken into account with drugs. Most drugs right now address the symptoms, but we're trying to find the mechanism. In cardiovascular medicine, if you fix one thing, it has profound benefits on other things." ▼

Nanomedicine expert joins Rice faculty

Gang Bao combines genetic, nano and imaging techniques to fight disease

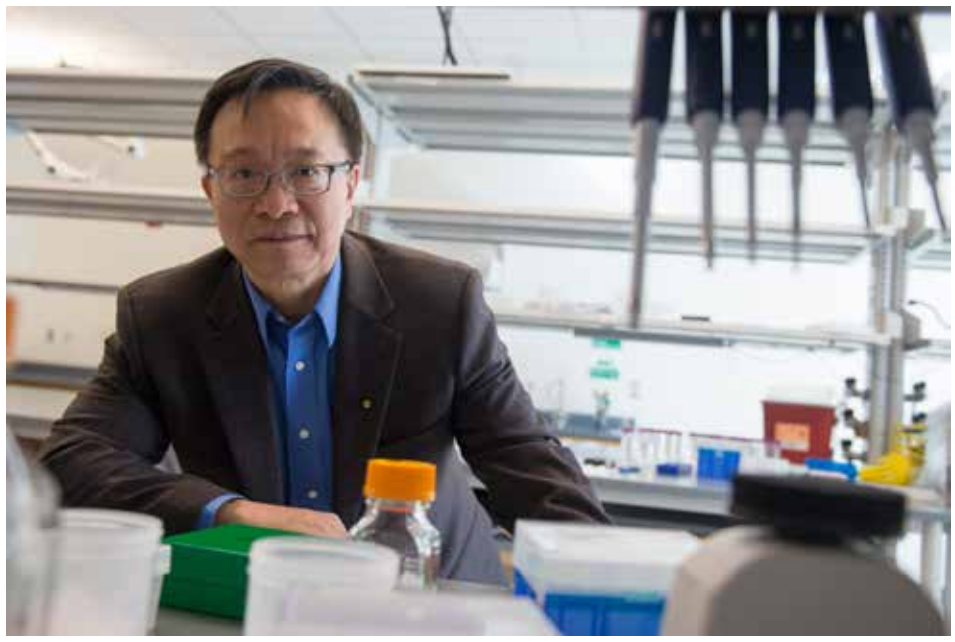
By Jeff Falk
Rice University

Gang Bao will bring a host of new expertise to Rice University's part in the fight against cancer -- and many other diseases -- when he joins the faculty March 1.

The highly regarded Robert A. Milton Chair in Biomedical Engineering at Georgia Institute of Technology and Emory University is the latest recruit to move to Houston with $6 million in funding from the Cancer Prevention and Research Institute of Texas (CPRIT).

Michael Deem, chair of the Department of Bioengineering and the John W. Cox Professor of Biochemical and Genetic Engineering.

"His work in the mid-2000s involved groundbreaking contributions to the molecular imaging field, and he has turned to nanomedicine and nanomaterials-based interventions, for example, with special contributions to the isolation of specific cell types from differentiating human pluripotent stem cells. Most recently, Dr. Bao has made major contributions to the use of the



Gang Bao will bring his expertise in precision genome engineering, nanotechnology and molecular imaging to Rice's Department of Bioengineering through a grant from the Cancer Prevention and Research Institute of Texas.

Bao and his colleagues, nine of whom will join him at Rice, cover a wide range of research linked primarily by their interest in the genetic roots of disease and the promise of nanotechnology and biomolecular approaches to treat them.

Among their ongoing projects, lab members are working on targeted genome modification using engineered nucleases, the development of magnetic nanoparticles for use as contrast agents and for ablation of tumors and the application of fluorescent molecular beacons for specific RNA detection in living cells.

"Dr. Bao has an outstanding track record of center leadership in developing and applying nanomedicine for disease diagnosis and treatment, and is a fantastic addition to the Rice effort in translational nanomedicine," said CRISPR/Cas9 system for genome editing," Deem said.

The opportunity to work at Rice's BioScience Research Collaborative, with its close connections and proximity to the Texas Medical Center, made the offer too good to resist, said Bao, who will be the Foyt Family Professor in the Department of Bioengineering and the CPRIT Senior Scholar in Cancer Research at Rice.

"One thing I really like is that this building is right in the Texas Medical Center, very close to (the University of Texas) MD Anderson (Cancer Center), Texas Children's (Hospital) and Baylor (College of Medicine)," he said. "For cancer research, this will make it much easier for me to work with colleagues at

see Nanomedicine page 18

Wellness Program at Memorial Hermann Southwest Helping People to Lose Weight and Live Healthier Lives

Patient Says Program Changed His Life

You have worked hard to lose weight and get healthy. You are following the doctor's orders: You are eating right, exercising and staying on schedule. Then, the holiday season hits and with it, the temptation to overeat. So, how do you resist the urge and stay the course toward a healthier life even during the holiday season?

With "discipline" and "professional" help, said Michael Overbey. For Overbey, he found both in the Health & Wellness Counseling Program at Memorial Hermann Southwest.

In July 2012, Overbey was diagnosed with diabetes. Like many, he ignored his doctor's admonishment to begin living a healthier lifestyle or suffer the consequences. In July 2014, the consequence of Overbey's unhealthy lifestyle hit home. He was unable to obtain his medical certificate for his pilot's license because at more than 250 pounds he exceeded the weight requirement.

Patient Michael Overbey, (right), confers with Gerry Listi, MS RCEP at the Health & Wellness Counseling Program at Memorial Hermann Southwest.

For Overbey, the thought of not being able to fly was the epiphany he needed to change his lifestyle. He entered the 12-week Health & Wellness Counseling Program at Memorial Hermann Southwest with the goal of incrementally trimming pounds from his 5-feet-7 frame towards his target weight of 169 pounds.

"My motivation was to get my health back in shape so I could get my medical certificate for my pilot's license," Overbey explained. "Being told that I was too heavy helped the point sink in for me. But I knew I had to do something because I was so heavy I would get fatigued."

Under the guidance of the counselors at the Health & Wellness Counseling Program at Memorial Hermann Southwest, Overbey shed more than 25 pounds in the first 10 weeks of the program. More importantly, his Hemoglobin A1c or HgA1c (a common blood test used to diagnose type 1 and type 2 diabetes) dropped from over 10 when he started the program to 5.9 by week 12. He also was taken off diabetes medication and he lowered his blood pressure.

The added bonus for Overbey was getting his medical clearance to get his pilot's license. He will be starting a second 12-weeks in the program soon.

Overbey said the key to his weight loss has been having the discipline to follow his diet plan, consistently documenting what he eats to watch his caloric and carbohydrates intake, recording his vitals daily and reducing his sodium intake.

Today, his protein-rich diet consists of eggs, lean meats like beef and chicken, seafood and lots of fruit and vegetables. He also made a personal choice to quit drinking alcoholic beverages. For exercise, he walks and

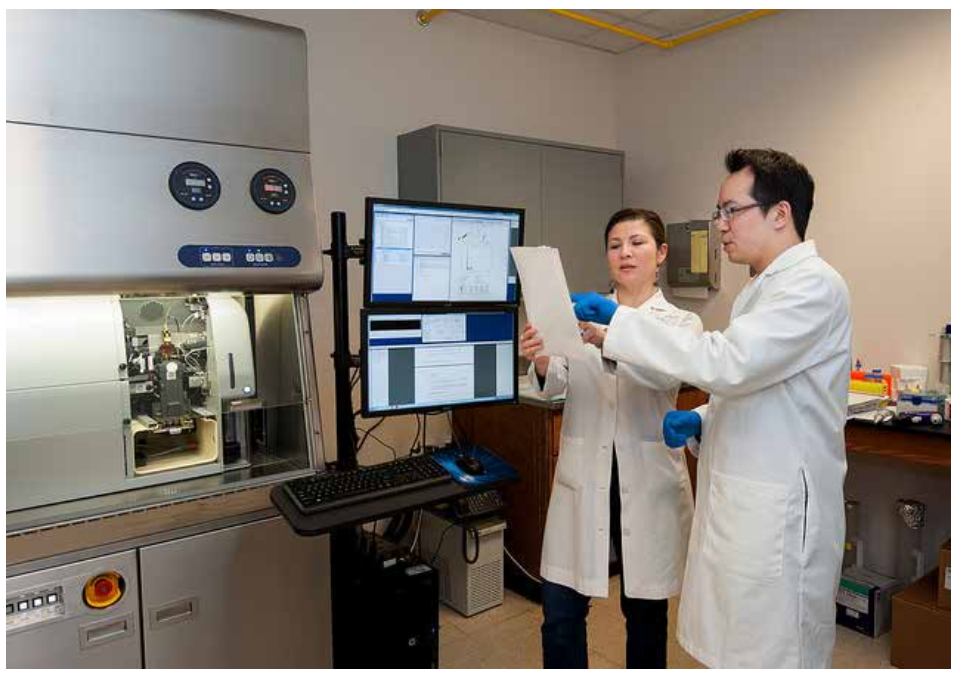
see Weight Loss page 19

Texas A&M's new environmental research center awards stimulating research at Texas A&M and across the Texas Medical Center

By Holly Lambert
Texas A&M Health Science Center

The Center for Translational Environmental Health Research (CTEHR), headquartered at the Texas A&M Health Science Center Institute for Biosciences and Technology in Houston, has awarded its first five pilot program grants, each intended to fund "high-risk, high-reward" science to better understand the effects of the environment on human health – with most recipients also receiving matching funds from their own organizations.

Named by the National Institutes of Health (NIH) in April as the newest National Center of Excellence in Environmental Health Science, the CTEHR – a cross-institutional initiative which includes collaborators from across The Texas A&M University System, Baylor College of Medicine and the University of Houston – serves as the cornerstone for integrated environmental health research, translation of research advances into practice and community outreach and engagement aimed at improving human health.



The Center for Translational Environmental Health Research (CTEHR) awarded its first five pilot program grants to researchers across The Texas A&M University System and University of Houston.

The Pilot Project Program, an integral component of the CTEHR, is designed to enhance the overall mission of the center by advancing and promoting early-stage environmental health research, the hardest to fund via traditional funding sources, but the most important for launching "high-risk, high-reward" science.

Texas A&M researchers receiving CTEHR pilot program grants include Clinton D. Allred, associate professor, Department of Nutrition and Food Science; Leslie Cizmas, assistant professor, Department of Environmental and Occupational Health, School of Public Health; Gerard L. Cote, department head, Biomedical Engineering and the Charles H. & Bettye Barclay Professor of Biomedical Engineering; and, receiving a joint grant, Robin Fuchs-Young, professor, College of Medicine and Mick Deutz, director of the Center for Translational Research in Aging and Longevity. Funding was also awarded to Maria Bondesson Bolin, research assistant professor in the Center for Nuclear Receptors and Cell Signaling at the University of Houston.

Allred, along with co-principal investigator Arul Jayaraman, professor in the Department of Chemical Engineering, will receive a $25,000 grant to support their project titled, "The role of estrogenic compounds and their metabolites in colonic inflammation" which will be matched by the College of Engineering and Department of Nutrition and Food Science for a total project budget of $50,000.

Cizmas' project, "A multi-step approach to assessing the toxicity of drinking water disinfection by-

see Texas A&M page 19

Help with Sticking to Your Resolutions is Available

By Jeff Carmack
Managing Editor,
Texas Department of Aging and Disability

This is the time of year when many of us – 40 percent, by some estimates – start to think about resolutions, and what we might do in the new year to make us healthy and happier. With every good intention we vow to eat better, lose weight, and be more active or some combination of these and other self-improvement goals.

However, few of us keep our resolutions. Research by the University of Scranton suggests that a mere 8 percent of us achieve our lofty goals.

If you've resolved to change your ways in 2015, there are some tricks you can use to help you keep your resolutions, courtesy of the Texas A&M School of Public Health.

Doris Howell, MPH, is director of the university's Evidence-Based Program on Healthy Aging.

The center conducts evidence-based health and wellness programs in communities, including fall prevention and chronic disease management. Classes are led by instructors trained by A&M.

Howell said that one useful technique for keeping resolutions is action planning.

"That means realizing your goal has to be tangible and actionable, and breaking it down into manageable steps," she said.

"People see the broader goal, but don't know tiny steps that will allow them get to that goal. Smaller steps, when accomplished, create feelings of success.

"For example, if you want to lose weight, that's not tangible – it's too vague. What you could do instead is say, 'When I snack this week, I'm going to substitute carrots for chips Monday, Wednesday and Friday.' "

This sort of realistic goal-setting helps because success breeds confidence. "Lots of people unwittingly set themselves up to fail," Howell said. "This is damaging in itself, but it also discourages you from getting back on the horse.

"When a person sees they can succeed in a small way, that makes a huge difference. It's the power of what a small change can be in the grand scheme of things."

She cites as an example a woman from one of her classes who resolved to watch less television. She started by turning off the TV for just 10 minutes a day, and then week by week increased the time she kept it off. "Once she got away from the TV, she started making new friends in class, and three of them started a walking program."

Another tip to boost your odds of sticking to your resolutions is to make sure your resolutions are important to you, not just to a spouse or someone else. "It needs to be something you want to do – something you're motivated to do, and not something someone else wants you to do," she said.

Another trick instructors teach involves flexible problem-solving. "If you encounter barriers, how can you work around them? For instance, you want to walk every day but the weather isn't cooperating. A good self-manager would decide, 'I'm going to switch from walking outdoors to walking indoors.' "

Another tactic participants are taught to use when they encounter barriers they can't overcome by themselves is bringing the problem to the class for suggestions. The experiences of others often reveals valuable alternatives.

Sometimes the solutions to New Year's resolutions require patience and perseverance. Timing matters and new habits cannot be microwaved into existence.

For more information on A&M's evidence-based programs, call Doris Howell at 979.458.8099 or visit http://sph.tamhsc.edu/pha/ebp/programs/index.html . ▼

The Framework

Solis Mammography, the nation's largest and most innovative independent mammography provider, enters the Houston Market

Solis Mammography, the nation's largest and most innovative independent provider of mammography services has opened its first of four centers in Houston, Texas at 1900 North Loop West. Solis Mammography has successfully transformed the mammography experience for thousands of woman across the U.S. by combining a peaceful and caring mammography experience with and exceptional diagnostic expertise.

"Our goal is quite simple" said James Polfreman, CEO of Solis. "We want to remove as much anxiety as possible from the entire mammography process. We believe that process starts at the point a woman considers getting her mammogram and does not end until she receives her results. To that end, we always partner with highly experienced radiologist who specialize only in breast imaging."

In Houston, Solis Mammography is partnering with Dr. Stephen Rose, President of Rose Imaging Specialist. Dr. Rose is a nationally renowned leader in breast imaging and Houston's foremost authority on 3D mammography, the newest technology in the breast imaging field. Dr. Rose recently co-authored a ground breaking study on 3D mammography published in June 25, 2014, issue of The Journal of American Medical Association (JAMA). The paper was awarded JAMA's "Scientific Paper of the Year." The new Solis center will open with the latest in 3D mammography technology.

It makes a real difference who reads a woman's mammogram. Of the approximately 27,000 radiologist in the United States, only about 1,300 are considered specialized breast radiologists. It is no coincidence that 25 of those 1,300 (2%) are members of Rose Imaging Specialists. Nowhere else in the country is there this type of collective and collaborative breast imaging talent and expertise. Studies have shown while general radiologists may read mammograms, their accuracy is much less than the radiologists who specializes in breast imaging.

Dr. Rose has served as Solis Mammography's national Medical Director since August 1, 2014. "I am very excited that Solis Mammography and Rose Imaging Specialists are able to bring this great partnership to Houston," said Dr. Rose. "With the collaborative expertise of our specialized breast radiologists and Solis's unique ability to provide a peaceful experience to its visitors, together we will be able to deliver the confidence and peace of mind the women of our community desire and deserve".▼

Rendering of Solis Mammography Houston

Live Without Pain

By Karla Goolsby
Houston Hospice

Talking To Your Doctor about Pain

Whether you are the person in pain, or a caregiver, you can help the doctor prescribe the most effective treatment plan. Write down the answers to the following questions before you talk to the doctor so you can best describe the pain:

- How long has the pain been an issue?
- Is it a new pain?
- Where is it located? Is it more than one area? If so, which location is most bothersome? Does it move?
- How severe is the pain?
- Is the pain sharp and stabbing, dull and aching, burning, or does it feel like an electric shock?
- Is there numbness, tingling, or new weakness in the pain area?
- How does the pain interfere with normal activities? What activities worsen the pain?
- How has the pain affected you emotionally?
- What has been tried to relieve the pain?
- What medicines are being taken? Are the medicines taken at set times or as needed?
- Are you/is the person allergic or sensitive to any pain medicine?

The more you understand about pain treatment, the better you'll be able to advocate for yourself or your loved one. Below is a list of suggested questions:

- What options are available for treating the pain?
- What each treatment's benefits?
- What are each treatment's risks?
- What are possible side effects?
- What are the costs of each treatment?
- How can treatment help me (or my loved one) be more comfortable and active?
- How long will it take for the treatment to work?
- What should I do if the treatment does not work?
- Will insurance pay for treatment?
- What side effects, if any, are the pain medications causing?
- Besides medication, what else can be done to manage the pain? Is there a pain specialist available to me?
- What support is there for emotional pain that has developed from being in physical pain?

How Can Palliative Care Help?

Palliative care (pronounced PAH-LEE-UH-TIVE) is provided by palliative and hospice programs. In America, these programs serve more than 1.2 million patients and their families yearly. To palliate means to make comfortable by treating a person's symptoms from an illness. Hospice and palliative care both focus on helping a person be comfortable by addressing issues causing physical or emotional pain, or suffering. Hospice focuses on relieving symptoms and supporting patients with a life expectancy of months not years, and their families. However, palliative care may be given at any time during a person's illness, from diagnosis on.

Pain at the End of Life

Pain associated with a life-limiting illness or at the end of life requires special attention and can best be treated by a palliative care or hospice provider. Palliative care and hospice providers are not only experts at physical pain control at the end of life, but are compassionate professionals who can help bring peace and comfort to the last months and weeks of life with teams of doctors, nurses, chaplains, social workers and counselors.

Just as pain at earlier times in life may be physical and emotional, this is true for pain at the end of life. Physical and emotional pain may increase as a person deals with the myriad issues the end of life can bring. To learn more about how palliative and hospice care can help, call nonprofit Houston Hospice at 713-468-2441 or visit www.houstonhospice.org. ▼

Anesthesia

Continued from page 1

complete medical history and physical evaluations provide critical information that can help avoid anesthesia complications. Conditions such as sleep apnea, seizure activity, allergies, reactions to anesthetics, comorbidities, and difficult intubations can be identified during the medical history interview. In addition, laboratory test results, including abnormal electrocardiogram and elevated potassium levels, can reveal other important considerations when developing a patient's anesthesia treatment plan.

"This research provides physicians and hospitals with important information for promoting patient safety and reducing risks," added co-author Darrell Ranum, JD, CPHRM, vice president of Patient Safety at The Doctors Company. "For example, physician experts identified inadequate preoperative assessments in 15 percent of cases filed against anesthesia professionals. Knowledge of patient history, comorbidities, chronic conditions, and current status is essential for planning appropriate anesthetic treatment and is critical for anticipating complications that may arise during surgery."

Other authors of the study are Haobo Ma, MD, instructor in anesthesia at Harvard Medical

School and a staff anesthesiologist at the Beth Israel Deaconess Medical Center in Boston, Massachusetts; Fred E. Shapiro, DO, assistant professor of anesthesia at Harvard Medical School, staff anesthesiologist at the Beth Israel Deaconess Medical Center, and member of The Doctors Company's Anesthesia Advisory Board; and Beverly Chang, MD, who

completed her anesthesiology residency at the Brigham and Women's Hospital and is a fellow in critical care medicine at Stanford University Hospital in Palo Alto, California. ▼

Legal Health

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physician must include an explanation of why the clinical findings of such encounter support that the patient is homebound and in need of either intermittent skilled nursing services or therapy services.

In the Final Rule, CMS finalized three changes to the FTF encounter documentation requirements effective for start of care episodes beginning on or after January 1, 2015. First, CMS eliminated the current physician narrative requirement for most services. Instead of requiring the physician narrative to be part of the home health agency's ("HHA's") required documentation, CMS will now require the medical records of the certifying physician to contain sufficient documentation to support the physician's certification of beneficiary eligibility for home health services. The physician's records must also include the actual visit note from the FTF encounter. Second, a physician's claims for certification or recertification visits will not be covered if the HHA's claim is denied due to insufficient documentation to support the patient's eligibility, because there is no longer a respective claim for Medicare-covered home health services. Third, CMS clarified that FTF encounters are required for certifications, rather than initial episodes. CMS also noted that certification, as opposed to recertification, is typically considered to be whenever a new assessment is completed to initiate care.

Although CMS is eliminating the physician narrative requirement, much ambiguity remains as to what constitutes "sufficient" documentation. HHAs may provide certifying physicians with information that supports the need for skilled service and homebound status in order fill in any "gaps" in the physician's documentation. However the certifying physician must review and sign any documentation that is incorporated into the physician's own record and used to support the certification/recertification of patient eligibility. Additionally, during a December 16, 2014 National Provider Call, CMS representatives stated that information from HHA's can only be incorporated into the certifying physician's record if it is "corroborated" by other entries in the physician's record and aligns with the time period in which services were rendered. The FTF documentation revisions, therefore, do not fully resolve the ongoing tension between HHAs and physicians, as HHAs must continue to monitor documentation not prepared by the HHA, and will continue to bear a disproportional financial risk if documentation is determined to be insufficient.

Furthermore, the Final Rule does not provide HHAs with any relief or clarity regarding compliance with the physician narrative requirement for home health services provided before January 1, 2015, or for claims currently under review and appeal, which still remain at risk for denial due to insufficient physician narrative documentation.

Recent Proposals Impacting HHAs

On December 11, 2014, CMS announced its plan to publish a star rating for HHAs on Home Health Compare starting in 2015, as part of CMS' plan to adopt star ratings across all Medicare.gov Compare websites. CMS plans to begin with a single star rating that summarizes HHA's performance across 10 of the 27 process, outcome, and utilization quality measures currently displayed on the Home Health Compare website. Star ratings will be provided for all Medicare-certified HHAs that have reported sufficient data. CMS held a Special Open Door Forum on December 17th for stakeholders to provide feedback on the proposed methodology. The methodology will be finalized based on the feedback received and additional technical analysis.

CMS has also proposed substantial changes to the conditions of participation ("CoPs") for HHAs that purport to more closely align the CoPs with the modern realities of home health practice, and seek to develop more continuous, coordinated, and integrated care for home health patients. Proposed changes to the CoPs include: enhanced and expanded patient rights requirements; changes to plan of care requirements and the processes for transfer and discharge of patients; new requirements for the development of Quality Assessment and Performance Improvement ("QAPI") programs; and new requirements for infection prevention and control. Comments to the proposed rule were due to CMS on January 7, 2015.

Conclusion

These legislative and regulatory efforts signal that hospice and home health providers continue to face increased government scrutiny and a changing regulatory landscape. In order to maintain compliance and a competitive advantage, hospice and home health providers, as well as other interested stakeholders, must stay on top of these regulatory changes and issues. ▼

Healthy Heart

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Center

- St. Luke's Sugar Land Hospital
- St. Luke's The Woodlands Hospital
- St. Luke's Vintage
- West Houston Medical Center

Nearly half of the more than 250,000 people who have a STEMI each year in the United States aren't treated within the recommended 90 minutes. The AHA created Mission: Lifeline Mission in 2007 to bring together hospitals, emergency medical services and communities to overcome delays in treatment. Mission: Lifeline STEMI

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Healthy Heart

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now includes 827 community-based systems, covering 82.5 percent of the U.S. population.

Health-care leadership teams across the regions established standard treatment protocols, a universal data collection system and ongoing measurement and feedback to rapidly diagnose and treat heart attack patients.

In the first 12 months of the project:

- Patients arriving by EMS treated within 90 minutes of first medical contact increased from 54 percent to 59 percent ($p = 0.0046$).
- Some regions improved more than 15 percent.

"The key to success was the collaboration between paramedics, hospital teams and interventional cardiologists working to provide care quickly," said Christopher Granger, M.D., senior author of the study and director of the cardiac intensive care unit at Duke University Medical Center in Durham, North Carolina. "With in-the-field diagnosis and activation of hospital catheterization laboratories prior to hospital arrival, time spent waiting in the emergency department for the catheterization team to be available was minimized."

Shorter emergency department (ED) times (adjusted for several covariates) were associated with improved survival. This means:

- The death rate was 3.6 percent for patients in the ED 30 minutes or less.
- The death rate increased to 7.0 percent for patients waiting in the ED 30-45 minutes.
- Those waiting in the ED longer than 45 minutes had a 10.8 percent death rate.

"These findings validate the concept that the collaborative systems of care model we launched with our Mission: Lifeline initiative seven years ago can speed heart attack treatment and save lives," said Alice Jacobs, M.D., AHA past president, original chair of the AHA Mission: Lifeline Advisory Working Group and professor of medicine and Vice Chair for Clinical Affairs, Department of Medicine at Boston University Medical Center. "Lessons from the demonstration project can be used to guide our future efforts to further improve heart attack care in the U.S. and beyond."

The project focused on ST segment elevation myocardial infarction (STEMI), the type of heart attack that occurs when a vessel supplying blood to the heart is suddenly and completely blocked. Quickly opening the blocked artery can restore normal blood flow and minimize heart damage.▼

Nanomedicine

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MD Anderson, a few blocks away, or at Baylor.

"Another attraction, really, is that the undergraduate programs at Rice are super strong. I always want to attract undergraduates to my lab to do research," he said.

Along with his lab, Bao brings his Nanomedicine Center for Nucleoprotein Machines to Rice. The National Institutes of Health-funded center is developing gene correction techniques to address an estimated 6,000 single-gene disorders. Their first target is sickle cell disease, caused by a single mutation in the beta-globin gene. The mutation causes the body to make sticky, crescent-shaped red blood cells that contain abnormal hemoglobin and can block blood flow in limbs and organs.

Bao calls the tool he and his team created to treat such mutations "nanoscissors," engineered nucleases that cut DNA strands at a specific site. "We have been working on sickle cell disease since 2008," he said. "We are testing an idea to take hematopoietic stem cells from a patient's bone marrow and deliver our nanoscissors into those cells. These nanoscissors generate a cut near the mutation and deliver a correction template that repairs the DNA cut and fixes the mutation. The gene-corrected stem cells will produce normal red blood cells in the patient to replace sickle cells."

The need is critical because there is no widely available cure for the disease, he said. "In theory, 15 percent of patients could be cured with a bone marrow transplant from a matching donor. In reality, only 5 percent or fewer patients have the opportunity to be cured by this therapy."

Bao hopes to have the technology ready for human trials in 2018, and if successful, use it to treat other single-gene disorders, including HIV. "There, we'd use nanoscissors to damage the viral genome that integrated into host cells. And there's potential for this to be used to treat other infectious diseases and cancer," he said.

Bao and his colleagues are heavily invested in nanotechnology. The lab has developed polymer-coated superparamagnetic iron oxide nanoparticles that can be modified to target tumors and serve as a contrast agent for magnetic resonance imaging in cancer diagnosis. The same nanoparticles can be used to deliver anticancer drug molecules and, under an applied alternating magnetic field, could generate local heat to kill cancer cells. "The synergistic effect of an anticancer drug and hyperthermia could make cancer therapy more effective," he said.

To reduce side effects, Bao and his team plan to increase the accumulation of drug-carrying magnetic nanoparticles in the tumor by attracting them to tumors, even deep within tissue, by applying a magnetic field. "If the tumor is close to the surface, you can actually mount magnets to the skin as a way to apply the field," Bao said. "But in deep tissue, that may not work. You might have to put the patient in a large machine to apply the field and generate high nanoparticle accumulation in tumors." The technology for such deep-tissue targeting "may take another 10 years," he said.

He said iron oxide nanoparticles might also be embedded in stem cells that could then be directed around the body with magnetic fields.▼

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Weight Loss

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carries a pedometer to record how far he goes.

Overbey said nothing will change for him during the holiday season. But recommends not offending your host by turning down food, just eat less of it.

Gerry Listi, MS RCEP at the Health & Wellness Counseling Program at Memorial Hermann Southwest, echoes Overbey in offering these tips for holiday eating and drinking:

- Keep track of how much you eat by making one plate. Avoid picking food throughout the party or having several servings.
- Plan ahead. Reduce total calories by eating light throughout days you know you will attend functions with tempting high calorie foods.
- Don't forget that many holiday beverages contain calories too. Set a limit of how many caloric beverages you have and try to reduce calories somewhere else in your meal plan.
- Choose only foods you really want and manage your portions. Don't waste calories on foods you don't really enjoy or can have anytime. ▼

Texas A&M

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products following chlorination, chloramination or a novel fen·ate disinfection process," will receive $25,000 from CTEHR to support this research and Virender Sharma, interim department head of the Texas A&M School of Public Health Department of Environmental and Occupational Health, has committed $25,789 in matching funds.

Cote's project, "Blood-based point-of-care system to measure radiation exposure using citrulline as a biomarker," has a total budget of $50,000. CTEHR will provide $25,000 to support this research and Dr. Costas Georghiades has committed $25,000 in matching funds from the Texas A&M Engineering Experiment Station/College of Engineering.

Fuchs-Young and Deutz applied jointly for their project, "A quantifiable biological endpoint to assess the impact of an educational intervention on control of childhood asthma in the Rio Grande Valley." CTEHR will provide $25,000 to support this research and the College of Medicine and Department of Molecular and Cellular Medicine has committed matching funds to support the total project budget of $50,000.

Bondesson Bolin will receive $25,000 to support her project titled "Modes of action of vascular disrupting compounds" and the Center for Nuclear Receptors and Cell Signaling has committed matching funds, to total $50,000.

As pilot project award recipients and center members, all grant recipients will also have access to the center's facility cores and qualify for subsidies to further leverage their research

"Through a unique team science approach, members of the CTEHR are unlocking the mysteries of environmental health through new discoveries aimed at improving human health," said Cheryl Lyn Walker, Ph.D., director of the Texas A&M Health Science Center Institute of Biosciences and Technology and director of the CTEHR. "The center aims to accelerate innovative scientific discoveries and move them from bench-to-bedside, across translational boundaries, and from the laboratory to the clinic and ultimately to communities to improve human environmental health."

One of only 21 centers of excellence in the country, the CTEHR is poised to lead the state and nation in better understanding the effects of the environment on human health. The center's members are focused on translating research advances in environmental causes of disease to improve detection, prevention and management of diseases induced or worsened by environmental exposures. ▼