Guideline discussions, 20 LBCTs highlight Sessions’ return to Dallas

Roughly 20 years ago, a newly minted MD from the University of Massachusetts Medical School roamed the halls of Scientific Sessions for the first time. He absorbed lectures about his specialty, interventional cardiology. He befriended peers and leaders from his field and beyond. He enjoyed it all so much that he returned as a poster presenter – spending weeks preparing, getting multiple critiques by senior colleagues as well as the practical advice to carry extra glue sticks just in case his printouts started peeling from the boards.

As his career progressed – from junior investigator to senior investigator, then to a leader in academic medicine – Robert Harrington, MD, FAHA, FACC, not only kept coming to Sessions, he became one of the planners. And this year, his first as Chair of the Committee on Scientific Sessions Program, he’s proud to say that he and his colleagues have put together an event that will enhance Sessions’ reputation as the premier gathering of cardiovascular thought in the United States.

More than 18,000 attendees from more than 105 countries will roam the halls of the Dallas Convention Center from Saturday through Wednesday. Another 1.5 million professional attendees are expected to be involved virtually, absorbing groundbreaking insights, lectures from prestigious speakers and thought-provoking discussions about basic, translational, clinical and population science.

“That’s what I think makes Sessions a unique meeting, that breadth of science being presented,” said Harrington, Chair of the Department of Medicine at the Stanford University School of Medicine. “Science is moving more and more toward being a team-based activity and understanding how to connect clinical observation and apply it is facilitated by getting all these different types of scientists together.”

The amount of science is staggering:
• 758 sessions – 443 original research, 315 invited
• Of those original research sessions, 306 are posters, 128 are oral, five are Late-Breaking Clinical Trials and four are Clinical Science Special Reports
• 20 Late-Breaking Clinical Trials will be presented, along with 19 Special Reports
• “The quality and volume of the science offered at Scientific Sessions this year is remarkable – even by the extraordinarily high standards of this meeting,” said AHA President Mariell Jessup, MD, FAHA, and CSSP Chair}

Get With The Guidelines targets AFib patients

Kiran Musunuru has a long list of accomplishments for someone who’s only 37 – an MD, PhD and MPH. But the title he holds most dear: FAHA.

Musunuru, who splits his time between cardiology, working as a research scientist and teaching genetics and biochemistry to undergraduates at Harvard University, earned his FAHA during last year’s Scientific Sessions. It was an accomplishment he had sought since joining the American Heart Association as a Premium Professional Member in 2006.

“FAHA really takes something extra,” Musunuru said. “It really signifies the highest level of commitment to the ultimate mission of the American Heart Association.”

 Origins of FAHA
The American Heart Association was founded in 1924 by six cardiologists. It’s not clear, however, exactly when fellowship programs began. For many years, fellows were elected by individual scientific Councils. Honorees were designated either Fellows or Associate Fellows of a particular Council. In 2000, the AHA’s Science Advisory Coordinating Committee authorized the Council on Clinical Cardiology to conduct a pilot program designating elected
TODAY AT SESSIONS

Don’t miss today’s highlighted presentations and events. For a complete schedule, see the Final Program or view it online at scientifichessations.org.

9–11:45 a.m. Early Career: Opening General Session Ballrooms C1 & C2

9:15–9:45 a.m. 2013 Awards for Lifetime Achievement in Cardiac Resuscitation Science and Awards in Cardiopulmonary Science Trinity Ballroom, Omni Dallas Hotel

2:15–3:30 p.m. Samuel A. Levine Young Clinical Investigator Award Finalists Room C140

3:30–4 p.m. ReSS Best of the Best Oral Abstract Presentations Trinity Ballroom, Omni Dallas Hotel

3:45–5 p.m. Laennec Young Clinician Award Finalists Room C140

5–6:30 p.m. Early Career Reception Hall F Lobby

5:15–6:45 p.m. ReSS Poster Session and Reception Dallas Ballroom D-H, Omni Dallas Hotel

7–9 p.m. AHA Cardiovascular Evening Symposium: Diabetes and Cardiovascular Disease: Current Controversies Dallas Ballroom BC, Omni Dallas Hotel


8:45–10:15 a.m. Peripheral Vascular Disease – Fellows in Training Workshop Room D170

9–10 a.m. How to Develop a Successful Research Career Room D226

10–10:45 a.m. How to Thrive as an Early Career Academic Cardiovascular Specialist Room D163

11 a.m.–12 p.m. Mission Possible: Keys to Early Career Academic Success – Part 1 Room C143

12–1 p.m. Part two of the morning session will feature a distinguished lineup of some of cardiovascular science’s top researchers, who will discuss new research paradigms and opportunities for both clinical and basic science investigators. The afternoon Early Career program is organized around council activity, with sessions designed to provide insights into what’s hot in particular fields. Afternoon sessions will also introduce attendees to important topics such as keys to academic success and advice for getting started as an Early Career investigator. While today’s primary focus is the Early Career attendee, the presentations hit upon topics relevant to a much broader audience. Topics such as mentorship, grant writing and journal submissions are just a few examples. I encourage attendees at all stages of their careers to attend these worthwhile sessions. In addition to today’s great EC programming, we have made a concerted effort to promote networking among attendees throughout the day. This evening’s Laennec Clinician awards, which highlight the exciting work of Early Career attendees, is another great networking opportunity. The day’s programming concludes with the first of three evening symposia scheduled over the course of the meeting. These symposia are excellent opportunities to continue each day’s learning activities in the more informal setting of a dinner program. The programming for each is selected and planned by CSSP and consistent with the high standards of the meeting.

Tonight’s offering, “Diabetes and Cardiovascular Disease: Current Controversies,” will be held from 7–9 p.m. at the Omni Dallas Hotel. The symposium will cover topics including the most appropriate hypoglycemic agent(s) for a variety of patient types; the causes and effects of noncompliance with glycemic control agents; the current evidence guiding treatment selection for patients with diabetes and multivessel CAD; and the most appropriate approach – medical therapy, PCI or surgery – to manage stable coronary artery disease in patients with diabetes.

Again, welcome to the 2013 American Heart Association Scientific Sessions, the premier cardiovascular research and instructional meeting in the world. We’re happy to have you here and look forward to an educational, enlightening and enjoyable week.

EIGHTH YEAR IN A ROW, THE AHA HAS ON-DEMAND CLINICAL SESSIONS! More than 300 sessions were recorded, including nearly 250 hours of new educational content. View sessions anytime, anywhere. Learn more at learn.heart.org/clinicalsessions.

Don’t miss today’s highlighted presentations and events. For a complete schedule, see the Final Program or view it online at scientifichessations.org.

5:45–7:30 p.m. Mission Possible: Keys to Early Career Academic Success – Part 2 Room C146

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Don’t miss today’s highlighted presentations and events. For a complete schedule, see the Final Program or view it online at scientifichessations.org.
African-Americans can learn how to prevent and manage hypertension with Check. Change. Control. a community program launched by the American Heart Association this year. The evidence-based program uses volunteer health mentors to motivate participants to self-monitor their blood pressure and to upload and track their readings in Heart360®, the AHA’s free Web-based tool.

About 43 percent of African-American men and 47 percent of African-American women have high blood pressure, according to the AHA’s High Blood Pressure Statistical Fact Sheet 2013 Update. By comparison, about one-third of white men and women have hypertension.

The AHA initially provided grants of $20,000 to the top 18 markets to implement the pilot. The program has since expanded to 90 markets and 60 markets, including Los Angeles, Houston and Philadelphia. The goal is to enroll 30,000 African-Americans by the end of 2014. About 13,000 African-Americans can learn how to prevent and manage hypertension. With the mentors, there’s accountability,” Lane said. “There’s that person there to make sure you check it, change it and control it. That’s how you really become hardened for those lifestyle changes.”

Each program engages participants with strategies unique to the community. Programs include faith-based, corporate, healthcare and community models. Zumba classes have been a particularly successful strategy in Richmond, Lane said. A few dozen participants gather twice a week for a 45-minute class. They get their blood pressure checked before each class.

Program participants without access to a blood pressure monitor were given one. “We made sure they knew how to use it, how to read it and what to do with it afterward,” said Lane, who also participates in the program. Every Friday at 2 p.m., an alarm on her phone reminds her to take her blood pressure.

“There are people walking around who have no idea they have high blood pressure,” Lane said. “And they don’t know it means they are at higher risk for stroke and heart disease. Once they know their numbers and understand their numbers, they can do something about it.”

Healthcare professionals interested in becoming a volunteer health mentor should contact local AHA offices. Local AHA staff can also provide information about enrollment events, where they can be connected with a mentor. For more information, visit heart360.org.

Check. Change. Control. helping African-Americans control hypertension

CAREER PROGRESSION: JORDAN MILLER, PhD

At Scientific Sessions past, Jordan Miller, PhD, noticed that poster exhibitors often had严格按照在讲座中提供的要求写成的文本，再来一份。
November trip to Chicago served as the culmination of an elective cardiology sub-internship I would later recognize as a turning point in my medical training. It was my first time attending the American Heart Association Scientific Sessions, and in 2006, I anticipated discussions of drug-eluting stent safety, and results from the Open Artery Trial (OAT) assessing late angioplasty for occluded infarct-related arteries. Actually, the highlight for me took place just prior to the opening plenary session, as I watched Professor Eugene Braunwald address a crowd.

Now a cardiology fellow at Brigham and Women’s Hospital, I have since had the privilege of interacting with Dr. Braunwald at our own Fellows’ Reports. I have heard him retell the story of the advent of transbrachial and later transseptal cardiac catheterization; of defining the natural history of severe calcific aortic stenosis prior to the adoption of widespread surgical intervention; of the dramatic discovery of “functional aortic stenosis” (now known as hypertrophic obstructive cardiomyopathy) in a young patient in the operating theater; of the realization that carotid sinus stimulation not only alleviated angina, but normalized ST segment elevation in a patient in the throes of MI, leading to a revolutionary idea in thrombolysis.

The narratives are extraordinary. Speaking in a low rumble, he is crystal clear, careful to identify events by the proper chronology, and to give credit to co-investigators he mentions by full names. He refers to his colleagues and their collective scientific legacies as his intellectual offspring. He emphasizes the importance of focusing on big questions and the act of choosing a mentor as the single most consequential career decision one can make. He peppers his stories with personal anecdotes of unlikely collaborations started at the taxi stand, or over dinner at the local housing complex of the former National Heart Institute. And then he goes on to summarize “10 tips for a successful career in translational research.”

Effortlessly, he continues to command a crowd, bringing together generations that include visiting students and longtime disciples. We listen in silence, amazed and delighted by the old stories. In them, cardiology as we know it comes to life. In our minds, we contrast the world he depicts with the more familiar hospital wards and research laboratories of today. He recounts how, at my age, he became Chief of Cardiology, and not long thereafter, Chair of Medicine. He talks of the nonexistence of investigational review boards or of informed consent. At its simplest, there was an observation. And from that careful observation, there were possibilities.

Bearing witness to these stories is invaluable. For me, these experiences provide context for what we set out to do every day in academic cardiology. There is little more powerful than hearing Dr. Braunwald tell of a difficult time, then watch him light up as he describes how a perceived mistake blossomed into discovery. It provides a humanizing and inspiring complement to reading about his latest successful randomized clinical trial.

As many of us wrestle with the future of academic research in an era of constraints, his words provide perspective. Trainees of my generation grew up with the ideality of the academic physician-scientist as the “triple threat” master clinician, scientist and educator. Listening to Dr. Braunwald, I am reminded that this construct is actually relatively new, matured over the last half-century with the advent of hypothesis-driven research. This opened up an already rich world of clinical observations to even richer possibilities afforded by the ready path from bench to bedside, and back.

These days, it can be difficult to maneuver the wards or labs of academic institutions without daily reminders of the growing demands and all-consuming complexities inherent in modern clinical care, scientific research, and postgraduate training. In an increasingly scrutinized clinical environment that values volume, and in the future, outcomes; an increasingly competitive research environment that rewards big science while remaining vulnerable to political volatility; and an increasingly strained training environment that defaults to longer, specialized tracks while simultaneously limiting hours and hands-on experience, many are questioning the viability of the path to “triple threat.”

But as Dr. Braunwald notes, much as the concept of the academic physician-scientist evolved before, it is evolving.
A

merican Heart Association journals celebrated another notable year, marked by top rankings in their fields, new digital offerings, and improved features and benefits.

“Our main objective remains constant: providing the most important evidence-based information and expert perspective in cardiology today,” said Circulation Editor-in-Chief Joseph Loscalzo, MD, PhD, FAHA.

Circulation continued its top ranking in the Peripheral Vascular Disease and the Cardiac & Cardiovascular Systems subject categories (2012 Journal Citation Reports®, Thomson Reuters, 2013). It ranks No. 1 for Impact Factor, 5-Year Impact Factor, Article Influence® Score, and Eigenfactor® Score. Arteriosclerosis, Thrombosis, and Vascular Biology (ATVB), Circulation Research, Hypertension, and Stroke each claimed the No. 1 spot in its respective immediate field of study.

The Circulation-branded journals — Circulation: Arteriosclerosis and Electrophysiology, Circulation: Cardiovascular Genetics, Circulation: Cardiovascular Imaging, Circulation: Cardiovascular Interventions, Circulation: Cardiovascular Quality and Outcomes, and Circulation: Heart Failure — remained among the leading cardiology journals. Most are ranked as the top journal in their subspecialty area, and all are among the top 15 in the Cardiac & Cardiovascular Systems subject category. For more details on rankings for AHA journals, visit www.ahajournals.org/site/misc/ipadapps.xhtml.

AHA journals’ apps are available as free downloads at the iTunes App Store, including free sample issues for each journal.

![PAID ADVERTISEMENT](_paid_advertisement)

The initial free trial periods have expired for the Wolters Kluwer Health apps, with full content now limited to member and non-member subscribers. To claim access to the iPad editions of the journals to which you subscribe, visit www.ahajournals.org/site/misc/ipadapps.xhtml for instructions. JAHA — Journal of the American Heart Association is always accessible for free.

The AHA Scientific Statements and Guidelines for 2012, collectively published in January as a free iPad supplement, also include the AHA/ASA “Heart Disease and Stroke Statistics—2013 Update.” The supplement is free through any of the 11 AHA journal apps produced by Wolters Kluwer Health. If you don’t have an iPad, you can access all AHA Statements and Guidelines at my.americanheart.org/statements.

At www.ahajournals.org, AHA/ASA members have online access to full content, depending on membership level. Anyone can access tables of contents and article abstracts, sign up for electronic table of contents alerts and RSS feeds, and read Editor’s Picks.

The six Circulation-branded journals successfully transitioned to digital-only publications in January, allowing them to publish an average of 30 percent more content than when launched in 2008. Authors also benefit from no color charges within articles.

The AHA journals further support their global author community with services aimed at improving the publication experience. Benefits include unparalleled global reach and exposure in academic, research and healthcare institutions; potential inclusion in the AHA’s Science News media release program that generates nearly 10 billion media impressions annually; and robust multi-channel marketing generating more than 24 million global market impressions each year.

Visit the AHA HeartQuarters (booth 339) or Wolters Kluwer Health-Lippincott Williams & Wilkins (booth 1613) in the Science & Technology Hall to check out the AHA journals’ apps and other new features; pick up a complimentary sample copy of any of the AHA’s five print journals; and information for authors, members and subscribers.

![EARLY CAREER DAY](early_career_day)

Early Career Day continued from previous page again. The profound, perhaps inevitable changes underway are providing new opportunities for creative thinking, including better utilization of available resources by forging new collaborations to approach existing challenges. As he hints, the thrombocardiothologist of the 20th century is becoming the diabetocardiologist of the 21st, and so on. Opportunity is here, and those that persevere in novel ways, guided by an inner compass grounded in promoting health and healing patients, will make important contributions.

And therein lies the value of activities like Early Career Day. It is through these kinds of programs that I have had the opportunity to interact informally with the greats of our profession, to hear from thought leaders in unconventional forums as they share a bit about their experiences as they happened, with sometimes surprising results. These reflections are critical for fostering context and confidence, a sense of possibility, particularly beyond the confines of any one local institution. It is easy to underestimate the impact this can have on trainees.

Back at McCormick Place later that Saturday, I watched with pride as the second-year fellow with whom I had worked as a medical student presented the case of a patient with an unusual manifestation of amyloid heart disease for the Laennec Clinical Cardiology award; that fellow would later become my attending and research collaborator. It was the first time I felt I was part of a cardiology community. And it was inspirational.
JAHA now indexed by Thomson Reuters (formerly ISI)

JAHA – Journal of the American Heart Association is now indexed in Thomson Reuters (formerly ISI) Science Citation Index Expanded and will receive an Impact Factor in 2014. This is recognition of the stature of the journal and will make publication in JAHA more valuable to authors by further enhancing visibility and discoverability of all the articles published.

Coverage of JAHA will include all published content beginning with Volume 1, 2012. Representing all 16 scientific councils, JAHA is the voice of the entire American Heart Association and American Stroke Association. The journal’s mission is to provide a holistic approach to publishing that offers every AHA/ASA member the opportunity to share unique interests across all cardiovascular and cerebrovascular fields.

In less than two years, JAHA has accelerated scientific discovery and enriched education by providing free online access to, and unrestricted noncommercial reuse of, all published articles.

This year, JAHA is not only leading the Open Access movement in its field, but remains vigilant and committed to:
• Quality Science: JAHA underwent a rigorous evaluation of published content before being accepted by Thomson Reuters.
• Compliance: JAHA became fully compliant with new mandates from Research Councils UK and Wellcome Trust.
• Expanded Reach: Articles are now automatically deposited in PubMed Central (new PMC) on publication as required by the National Institutes of Health, Wellcome Trust and other funding agency mandates. This benefits authors and readers alike.

Other Highlights and facts about JAHA's progress:
• In 2012, more than 40 percent of submissions came from outside the United States, including 8 percent from Japan, 5 percent from the United Kingdom, 5 percent from Canada and 4 percent from Germany.
• Median time from submission to first decision is less than 25 days.
• Articles are posted online within four weeks of acceptance, after payment of the Article Publication Charge. As an Open Access journal, the payment of an Article Publication Charge is required prior to publication. AHA/ASA members are eligible for discounted Article Publication Charges.
• JAHA offers authors the ability to present all aspects of their work. There are no restrictions on article length and there is unlimited use of color images and video.
• Immediately on publication, JAHA content is available in MEDLINE®/PubMed®/Index Medicus and PMC, the free full-text archive of PubMed, as well as 17 additional databases.
• An iPad®/smartphone app is available for free to download providing any-time access to JAHA articles. Scan the QR code to access. You can pick up a free JAHA booklet with featured articles, information for authors, and more at AHA HeartQuarters (booth 339) and from Wiley (booth 1012). Visit online at jaha.ahajournals.org.

IN THE TREATMENT OF ACUTE CORONARY SYNDROME

HELP MAKE AN IMPACT WITH BRILINTA

BEYOND 30 DAYS, BEYOND THE HOSPITAL, BETTER EFFICACY THAN CLOPIDOGREL

AT 30 DAYS, BRILINTA plus aspirin reduced the primary composite end point of cardiovascular (CV) death, myocardial infarction (MI), or stroke by 15% RRR (ARR 0.6%) vs clopidogrel plus aspirin.‡

IMPORTANT SAFETY INFORMATION ABOUT BRILINTA

WARNING: BLEEDING RISK
• BRILINTA, like other antiplatelet agents, can cause significant, sometimes fatal, bleeding
• Do not use BRILINTA in patients with active pathological bleeding or a history of intracranial hemorrhage
• Do not start BRILINTA in patients planned to undergo urgent coronary artery bypass graft surgery (CABG). When possible, discontinue BRILINTA at least 5 days prior to any surgery
• Suspect bleeding in any patient who is hypotensive and has recently undergone coronary angiography, percutaneous coronary intervention (PCI), CABG, or other surgical procedures in the setting of BRILINTA
• If possible, manage bleeding without discontinuing BRILINTA. Stopping BRILINTA increases the risk of subsequent cardiovascular events

AT 12 MONTHS, BRILINTA plus aspirin significantly reduced the primary composite end point by 16% RRR (ARR 1.9%) vs clopidogrel plus aspirin. The difference between treatments was driven by CV death and MI with no difference in stroke.∥

WARNING: ASPIRIN DOSE AND BRILINTA EFFECTIVENESS
• Maintenance doses of aspirin above 100 mg reduce the effectiveness of BRILINTA and should be avoided. After any initial dose, use with aspirin 75 mg–100 mg per day

CONTRAINDICATIONS
BRILINTA is contraindicated in patients with:
• History of intracranial hemorrhage
• Active pathological bleeding such as peptic ulcer or intracranial hemorrhage
• Severe hepatic impairment because of a probable increase in exposure; it has not been studied in these patients
• Severe hepatic impairment increases the risk of bleeding because of reduced synthesis of coagulation proteins
• Hypersensitivity (e.g. angioedema) to ticagrelor or any component of the product

‡ ARR = absolute risk reduction, RRR = relative risk reduction
∥ CV death secondary end point: RRR with BRILINTA plus aspirin vs clopidogrel plus aspirin.
**Eat Less Salt** offers recipes and tools to lower salt consumption

With processed foods and restaurant meals contributing more than 75 percent of the sodium in our diet, American Heart Association Eat Less Salt can be a resource to help your patients reduce their sodium intake whether they’re eating out or at home.

Far more than a cookbook, this is a healthy lifestyle book that offers easy, realistic advice for cutting down on sodium — from understanding nutrition labels to recognizing popular “salt traps.” It also provides tips for keeping sodium in check when eating out and encourages readers to watch the salt in foods such as processed cheese, seasoned bread crumbs, canned broth or vegetables, and even fresh poultry.

Experts agree that increasing awareness is the first step to reducing sodium.

“Read the label, read the label,” said Rachel Johnson, PhD, MPH, RD, FAHA, chair of the American Heart Association’s Nutrition Committee and professor of nutrition and medicine at the University of Vermont in Burlington. “The sodium has to be listed. Also, be careful when considering herb mixes because they may include salt.”

**Eat Less Salt** also includes 60 new recipes for popular foods that are usually high in sodium. They include lower-sodium versions of take-out favorites such as beef and broccoli, hot and sour soup, chicken nuggets and pizza; classic comfort foods including country-fried chicken, lasagna, chili, chicken pot pie, potato salad and green bean casserole; and popular restaurant dishes such as tortilla soup, pad Thai, enchiladas and chicken Parmesan.

“A big limiting factor to reducing sodium is that not enough people are cooking. So much of our salt is from prepared, processed and restaurant foods,” Johnson said. “Until we can further reduce the amount of sodium in our food supply, lower-salt recipes are so helpful.”

Considering that Americans consume an average of more than 3,400 milligrams of sodium daily — far more than the American Heart Association recommends — **Eat Less Salt** provides important health information. It explains how too much sodium can raise your blood pressure, putting you at risk for heart attack, stroke and other cardiovascular diseases.

**Eat Less Salt** was released in March and is available at ShopHeart.org, bookstores and other online book sellers.
Heart-Check leads consumers to quality heart, stroke care

The American Heart Association is making it easier for patients to identify the best medical care for their heart health. Building on the success of the Heart-Check mark that consumers have used to recognize healthy food in the grocery store for 18 years, the AHA has launched a revamped interactive website that lets patients easily identify medical centers that have earned the Heart-Check hospital accreditation and/or certification.

Using the website, patients can identify accredited and certified hospitals for the type of care they’re seeking, locate the nearest centers and learn what the accreditation means for patient care.

“There’s nothing more important for improving the health of our nation’s heart disease patients than the existence of a high-quality, well-supported center that can deliver optimal care,” said Gregg C. Fonarow, MD, FAHA, FACC, chair of the American Heart Association’s Stroke Council and director of the Ahmanson-UCLA Cardiomyopathy Center.

The AHA has granted accreditation and/or certification to more than 1,100 hospitals in the United States since the Hospital Certification program was launched in 2011. The accreditation and certification program comprises several levels reflecting the expertise of the facility, including:

- Comprehensive Stroke Center Certification
- Primary Stroke Center Certification
- Advanced Certification in Heart Failure
- Heart Attack (STEMI) Receiving Center Certification
- Heart Attack (STEMI) Referring Center Accreditation

The hospital accreditation and certification underscores the important role that patients and their caregivers must take in understanding their condition and the need for them to be better informed about which treatments meet AHA standards. Fonarow said.

“Better-informed choices and selecting hospitals where evidence-based therapies are more consistently applied will help lead to better outcomes as well as a lower risk of recurrent cardiovascular or stroke events,” in the future,” he said.

Fonarow said the Hospital Accreditation and Certification programs are an important tool for patients.

But he cautioned that it shouldn’t overshadow the time and effort needed for an emergency situation.

“The time that someone is having an acute myocardial infarction or a stroke is not the time to go online and find a hospital with the Heart-Check mark,” Fonarow said.

“Those individuals need to call 9-1-1 and activate EMS for immediate care.”

For more information regarding the American Heart Association’s Hospital Certifications or any other questions, visit www.heart.org/accreditation or www.heart.org/myhospital.

BRILINTA® (ticagrelor) Tablets

WARNING: BLEEDING RISK

BRILINTA, like other antiplatelet agents, can cause significant, sometimes fatal bleeding.

- Do not use BRILINTA in patients with active pathological bleeding or a history of intracranial hemorrhage. See CONTRAINDICATIONS. (5.1)

- Do not use BRILINTA if the patient is undergoing an emergency procedure that can only be performed with an antithrombotic agent. See CONTRAINDICATIONS. (5.1)

- Do not start BRILINTA in patients planned to undergo urgent coronary artery bypass surgery (CABG). When possible, discontinue BRILINTA at least 5 days prior to any surgery. See Warnings and Precautions. (5.1)

- Suspected bleeding in any patient who is hypotensive and has recently undergone coronary angioplasty, percutaneous coronary intervention (PCI), CABG, or other surgical procedures in the setting of BRILINTA. See Warnings and Precautions. (5.1)

- If possible, manage bleeding without discontinuing BRILINTA. Stopping BRILINTA increases the risk of subsequent cardiovascular events. See Warnings and Precautions. (5.1)

- General Risk of Bleeding

- Maintenance doses of aspirin above 100 mg may reduce the effectiveness of BRILINTA and should be avoided. After any initial dose, use with aspirin 75-100 mg per day. See Warnings and Precautions and Clinical Studies. (14) in full Prescribing Information.

- WARNING: ASPIRIN DOSE AND BRILINTA EFFECTIVENESS

- Maintains sodium of aspirin above 100 mg may reduce the effectiveness of BRILINTA and should be avoided. After any initial dose, use with aspirin 75-100 mg per day. See Warnings and Precautions and Clinical Studies. (14) in full Prescribing Information.

BRILINTA is contraindicated in patients with hypersensitivity (e.g. angioedema) to ticagrelor. See Warnings and Precautions. (5.1)

BRILINTA has not been studied in patients with moderate hepatic impairment because of a probable increase in exposure, and it has not been studied in these patient populations. See Clinical Pharmacology. (12.3) in full Prescribing Information.

Active Bleeding: BRILINTA is contraindicated in patients with active pathological bleeding such as peptic ulcer or intracranial hemorrhage. See Warnings and Precautions. (5.1) and Adverse Reactions (6.1) in full Prescribing Information.

Severe Hepatic Impairment: BRILINTA is contraindicated in patients with severe hepatic impairment because of a probable increase in exposure, and it has not been studied in these populations. See Warnings and Precautions. (5.1) and Adverse Reactions (6.1) in full Prescribing Information.

ADVERSE REACTIONS

Clinical Trials Experience

The following adverse reactions are also discussed elsewhere in the labeling:

- Dyspnea (see Warnings and Precautions. (4.4) in full Prescribing Information)

- Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in practice. BRILINTA has been evaluated for safety in more than 10,000 patients, including more than 3,000 patients treated for more than 1 year. Among PLATO and the following bleeding severity categorization:

- Major bleed
- Bleeding: bruising, hematomas, intracranial hemorrhage (ICH), fatal/hemorrhagic shock, retroperitoneal, retroperitoneal hemorrhage, splenic hemorrhage, pulmonary hemorrhage, cerebrovascular accident, subarachnoid hemorrhage, myocardial infarction, or a stroke

- Minor bleed
- Bleeding: ecchymosis, purpura, superficial hemorrhage, epistaxis, subcutaneous, cutaneous, gastrointestinal, intramuscular, subdural hemorrhage, subarachnoid hemorrhage

- Major bleed
- Bleeding: bruising, hematomas, intracranial hemorrhage (ICH), fatal/hemorrhagic shock, retroperitoneal, retroperitoneal hemorrhage, splenic hemorrhage, pulmonary hemorrhage, cerebrovascular accident, subarachnoid hemorrhage, myocardial infarction, or a stroke

- Minor bleed
- Bleeding: ecchymosis, purpura, superficial hemorrhage, epistaxis, subcutaneous, cutaneous, gastrointestinal, intramuscular, subdural hemorrhage, subarachnoid hemorrhage

- Major bleed
- Bleeding: bruising, hematomas, intracranial hemorrhage (ICH), fatal/hemorrhagic shock, retroperitoneal, retroperitoneal hemorrhage, splenic hemorrhage, pulmonary hemorrhage, cerebrovascular accident, subarachnoid hemorrhage, myocardial infarction, or a stroke

- Minor bleed
- Bleeding: ecchymosis, purpura, superficial hemorrhage, epistaxis, subcutaneous, cutaneous, gastrointestinal, intramuscular, subdural hemorrhage, subarachnoid hemorrhage
Taking aim in the global fight against NCDs

For the first time, governments worldwide will be accountable for progress against heart disease, stroke and other non-communicable diseases, thanks to an international plan to prevent and control NCDs. As member of the Noncommunicable Disease Alliance (NCD Alliance), the American Heart Association advocated strongly to help develop the World Health Organization’s global monitoring framework, which includes nine global prevention and control targets and 25 progress indicators. In May, U.N. member states unanimously adopted the framework and endorsed the WHO’s Global NCD Action Plan.

The most ambitious target is the “25 by 25” goal, which calls for a 25 percent reduction in premature mortality from NCDs by 2025. Other targets aim to combat physical inactivity, sodium intake, raised blood pressure, obesity, diabetes and other modifiable risk factors; to promote drug therapy to prevent heart attack and stroke; and to increase availability of medicines and technologies to treat NCDs. More than 36 million people die worldwide each year from cardiovascular diseases, cancer, respiratory diseases, diabetes and other NCDs combined, according to analysis by the WHO. That number is expected to climb to 44 million by 2020.

Economically, the global burden of NCDs is projected to top $7.5 trillion in treatment costs and lost wages over the next two decades, according to a 2011 study from the World Economic Forum and the Harvard School of Public Health. The economic impact of cardiovascular diseases is estimated to increase from $863 billion in 2010 to more than $1 trillion by 2030. As the AHA and other NCD experts stress, it is critical to address what has become a global crisis.

American Heart Association CEO Nancy Brown served as a representative for non-governmental organizations on the U.S. delegation to the U.N. negotiations on NCDs. It was only the second U.N. meeting ever to deal with health, the first targeting HIV/AIDS.

“The 2025 goals aren’t meant to be easy,” said AHA Past President Ralph Sacco, co-chair of the U.S. delegation. “It is the charge of AHA’s International Committee and chairman of neurology at the University of Miami Miller School of Medicine. “It’s going to take a lot of collaborative, aggressive, preventive efforts. The AHA has been there from the start and is actively engaged in trying to get these targets reached, both domestically and internationally.”

Aggressive targets set

In addition to the overall mission to improve the cardiovascular health of all Americans, the framework calls for programs targeting hypertension, healthy diet and physical activity, the AHA’s domestic agenda includes ensuring Americans receive preventive and secondary care to avoid complications and the need for any of or any change in BRILINTA therapy [see Clinical Pharmacology (12.3) in full Prescribing information]. Other Concomitant Therapy BRILINTA can be administered with unfractionated or low-molecular-weight heparin, UFH, glycoprotein inhibitors, platelet inhibitors, angiotensin-converting enzyme inhibitors, and angioplasty receptor blockers.

US SPECIFIC POPULATIONS

Pediatric Use

BRILINTA has not been studied in pediatric patients. In animal studies, ticagrelor caused structural abnormalities at maternal doses of 21 to 63 mg/kg/day. In PLATO, the rate of study drug discontinuation attributed to adverse reactions was 7.4% for BRILINTA and 5.4% for clopidogrel. Bleeding caused permanent discontinuation of study drug in 3% of patients in the BRILINTA group and 2% of patients in the clopidogrel group. No deaths were reported in this study.

Geriatric Use

No age-related differences in efficacy or safety were observed in the PLATO trial. The use of BRILINTA in elderly patients, greater sensitivity of some older individuals cannot be ruled out.

Renal Impairment

No dosage adjustment is needed in patients with renal impairment. Patients receiving dialysis have not been studied [see Clinical Pharmacology (12.3) in full Prescribing information].

OVERDOSAGE

There is currently no known treatment to reverse the effects of BRILINTA, and ticagrelor is not expected to be dialyzable. Treatment of overdose should follow local standard medical practice.

NONCLINICAL TOXICOLOGY

Carcinogenicity, Mutagenesis, Impairment of Fertility (see section 16 in full Prescribing Information).
Welcome, New 2013 American Heart Association Fellows

As a Fellow of the American Heart Association/American Stroke Association, you are a part of one of the world’s most eminent organizations of cardiovascular and stroke professionals. The American Heart Association recognizes your scientific and professional accomplishments and volunteer leadership and service.

Fellows, stop by the FAHA Lounge in the Hall B to relax, network and recharge.
If you are interested in Fellowship, please stop by Booth 339 to learn more.
Association Fellows
Booth 339 to learn more.
If you are interested in Fellowship, please stop by scientific and professional accomplishments
American Heart Association recognizes your one of the world's most eminent organizations American Stroke Association, you are a part of As a Fellow of the American Heart Association/
What FAHA Means to Me

“Receiving the FAHA designation was an honor and privilege. Being a FAHA is a sign of excellence that we earn from our colleagues who recognize our scientific and clinical accomplishments.”

Hossein Ardeshir, MD, PhD, FAHA
Northwestern University, Feinberg School of Medicine
Chicago, IL
Council on Basic Cardiovascular Sciences (BCVS)

“As a young investigator in Canada, being a FAHA has provided a greater sense of belonging within the AHA and opportunities for mentorship and collaboration within the broader cardiovascular community.”

Kristian B. Fillion, PhD, FAHA
Assistant Professor of Medicine
McGill University, Montreal, QC, Canada
Council on Epidemiology and Prevention (EP)

“FAHA means peer acknowledgement of contributing to a professional group of experts and leaders in cardiovascular and cerebrovascular science and medicine by research, clinical practice, teaching, and volunteering.”

Kenneth I. Maynard, PhD, FAHA
Heart, External Innovation, TSU Aging
Sanofi US, Inc, Bridgewater, NJ
Stroke Council

“It is an honor to be a FAHA, which to me means I am one small part of the ‘heart’ of the organization — the remarkable network of devoted volunteers who work with the AHA to achieve its goals of improving cardiovascular health for all Americans.”

Darksah Mozaffarian, MD, DrPH, FAHA
Co-Director, Program in Cardiovascular Epidemiology
Associate Professor of Medicine and Epidemiology
Harvard School of Public Health, Boston, MA
Council on Lifestyle and Cardiometabolic Health

“Becoming FAHA is an honor by the AHA of excellence in volunteer service and scientific and clinical contributions, and a statement of my commitment to furthering the mission of the AHA to build healthier lives, free of cardiovascular diseases and stroke.”

L. Kristin Newby, MD, MHS, FAHA
Professor of Medicine
Duke University Medical Center, Durham, NC
Council on Clinical Cardiology (CLC)

“Being a FAHA in the Council for High Blood Pressure Research is an honor since it is recognition by my peers of service to the Council and my scholarly activities.”

Jane F. Reckelhoff, PhD, FAHA
Billy S. Guyton Distinguished Professor Director
Women’s Health Research Center University of Mississippi Medical Center, Jackson, MS
Council for High Blood Pressure Research (CHBP)

Criqui is a past chair of the AHA’s Interdisciplinary Committee on Prevention and a chair of the Council on Epidemiology and Prevention from 2000 until 2002. Criqui, who now serves as Distinguished Professor and Chief, Division of Preventive Medicine at the University of California, San Diego School of Medicine, said the name of the honor may have changed over the years but the importance hasn’t.

“In my judgment, the most important professional organization I belong to is the American Heart Association,” he said. “I am proud of being a FAHA.”

Have Another Serving of Science!

AHA Cardiovascular Evening Symposium
When the day ends at the convention center, AHA science keeps going. Join us at the evening sessions for compelling education that you can apply to your practice.

Diabetes and Cardiovascular Disease: Current Controversies

MODERATORS
Valerie Fuster, New York, NY
David Schneider, Colchester, VT

Medical Therapy for Patients with Diabetes in Primary and Secondary Prevention: An Update
Paul Poirier, Quebec, QC, Canada

Diabetes and Stable CAD: Medical Therapy is The Proven Option
William Weintraub, Newark, DE

There is Still a Role for Drug-Eluting Stents in Selected Patients with Diabetes Who Have Multi-vessel CAD
David Holmes, Rochester, MN

CAD is the Right Option for Almost All Patients with Diabetes and Multivessel CAD
Marc Reit, Ottawa, ON, Canada

Challenges to Treatment: Adherence and Compliance
Christi Deaton, Manchester, UK

Supported by an educational grant from Merck

Complimentary registration will begin at 6 p.m. and will be followed by a modest dinner. Seating is limited, so please arrive early to get your seat!

Scan the code for full program and CME/CE information

WELCOME TO DALLAS
American Heart Association
Scientific Sessions® 2013

BIG things really do happen in Dallas. With five professional sports teams, 14 entertainment districts, a vibrant arts district, family activities, western heritage and a 600 tax-free shopping possibilities for international visitors, Dallas has something for everyone! It all starts at VisitDallas.com.
American Heart Association Teaching Gardens planted at elementary schools in 31 states are educating kids firsthand about the importance of healthy diets.

The AHA teamed with child-nutrition activist and philanthropist Kelly Meyer to create these real-life learning laboratories, where children are taught how to plant seeds, nurture growing plants, harvest produce and ultimately understand the value of good eating habits. More than 200 gardens are reaching more than 93,000 students and countless parents and siblings.

In Dallas, Moss Haven Elementary School has created a “farm” with multiple herb, vegetable and fruit beds, a compost area, row crops, native plants, indoor hydroponics and chicken coops.

“This has made an impact on our whole community, and the kids are leading the way for change,” said Kim Aman, a Moss Haven teacher and Teaching Garden champion.

“When we started our farm we wanted kids to get outside more and learn about science in the field. As we got going, we noticed that we were impacting our students’ health as well. We compost in our cafeteria and bring it to the farm for soil amendment.”

While the country struggles to address childhood obesity, Teaching Gardens are beginning to change the culture of healthy eating at schools. Research shows:

• Students are more interested in vegetables.
• Teachers believe kids are eating more vegetables at school—from sack lunches to the serving line.
• The cafeteria has fewer fried vegetables and more fresh vegetables.

Some areas of the country have even adopted Vertical Teaching Gardens, which can be grown inside classrooms in climates where growing can’t be done outdoors during the school year.

Aman thinks everyone should take a look at their habits and what they’re serving their kids. “Being unhealthy crosses all walks of life. The more we can get Teaching Gardens in our schools, the better off the health of our nation will become,” Aman said. “Getting involved at the district decision-making level is important as well. They have funding and resources that can support this movement.”

For more information, visit heart.org and teachinggardens.wordpress.com.

For more information visit Adempas-US.com
focusing on therapies that are known to be the most effective. Adempas accounts for one-third of hospitalizations for atrial fibrillation. The number of AFib patients is expected to rise to 12 million by 2050 as the U.S. population ages. Over the past two decades, hospital admissions of AFib patients grew by 66 percent, with treatment costs reaching an estimated $26 billion annually.

“We believe that if you can control the complications of atrial fibrillation, then you can reduce hospital readmissions,” said William Lewis, MD, chief of cardiology at MetroHealth Medical Center, Director of Heart and Vascular Center at MetroHealth Medical Center, professor of medicine at Case Western Reserve University and Chair of the Get With The Guidelines-AFIB Clinical Work Group. The program includes data elements and measures associated with the use of blood thinners or anticoagulants for treating AFib patients. While studies have shown that such therapy can reduce patient mortality, only about 10 percent of eligible patients who can benefit from and are appropriate for blood thinner therapy. The program also provides hospitals and physicians with patient education materials to better equip them to achieve guideline recommendations for managing their condition and associated risk after discharge from the hospital. A retrospective analysis of AFib patients who already had experienced a stroke showed the potential benefits of using Adempas. Guidelines program focused on stroke team patients could significantly improve the use of blood thinners, increasing the number of eligible patients who could receive the drug therapy to 95 percent. “We were able to move the bar higher in our goal of saving lives,” Lewis said.

The appropriate use of blood thinners isn’t the only treatment promoted in Get With The Guidelines-AFIB. The program also helps healthcare providers monitor the use of antithrombotic therapy and heart rate controlled drug prescriptions from a dedicated field team. The program features access to clinical tools and resources, including webinars, and enables a hospital to collect data that can be benchmarked against other U.S. hospitals.

Get With The Guidelines-AFIB was developed by an advisory group composed of electrophysiologists, clinical cardiologists, an advanced practice nurse, and experts in heart failure management, neurology, hematology, pharmacology and anticoagulation management. Enrollment for Get With The Guidelines-AFIB began in June. Overall, more than 42 percent of U.S. hospitals participate in the AHA’s Get With The Guidelines program, comprising a database of nearly 5.5 million patient records. The 12-year-old program also offers modules for the treatment of stroke, heart failure, resuscitation and ACTION Registry.

Atrial Fibrillation

Adempas (riociguat) tablets, for oral use
Initial U.S. Approval: 2013

BRIEF SUMMARY of prescribing information

CONSULT PACKAGE INSERT FOR FULL PRESCRIBING INFORMATION

WARNING: EMBRYO-FETAL TOXICITY
Do not administer Adempas to a pregnant female because it may cause fetal harm (see Contraindications (4) and Use in Specific Populations (8.1)). Females of reproductive potential: Exclude pregnancy before the start of treatment, monthly during treatment, and 1 month after stopping treatment.

Prevent pregnancy during treatment and for one month after stopping treatment by using acceptable methods of contraception (see use in Special Populations (8.6)).

For all female patients, Adempas is available only through a restricted program called the Adempas Risk Evaluation and Mitigation Strategy (REMS) Program (see Warnings and Precautions (8.2)).

1 INDICATIONS AND USAGE

1.1 Chronic-Thromboembolic Pulmonary Hypertension Adempas is indicated for the treatment of adults with persistent/recurrent chronic thromboembolic pulmonary hypertension (CTEPH, WHO Group 4) after surgical treatment, or inoperable CTEPH, to improve exercise capacity and WHO functional class (see Clinical Studies (14.1)).

1.2 Pulmonary Arterial Hypertension Adempas is indicated for the treatment of adults with pulmonary arterial hypertension (PAH), (WHO Group 1), to improve exercise capacity, WHO functional class and to delay clinical worsening. Efficacy was shown in patients on Adempas monotherapy or in combination with endothelin receptor antagonists or prostanooids. Studies establishing effectiveness included predominately patients with WHO functional class II–IV and etiologies of idiopathic or heritable PAH (PAH-I) or PAH associated with connective tissue diseases (25%) (see Clinical Studies (14.2)).

2 CONTRAINDICATIONS

4.1 Pregnancy Adempas may cause fetal harm when administered to a pregnant woman. Adempas is contraindicated in females who are pregnant. Adempas is consistently shown to have teratogenic effects when administered to animals. If this drug is used in pregnancy, or if the patient becomes pregnant while taking this drug, the patient should be apprised of the potential hazard to the fetus (see Use in Specific Populations (8.1)).

4.2 Nitrates and Nitric Oxide Donors Co-administration of Adempas with nitrates or nitric oxide donors (such as amyl nitrite) in any form is contraindicated (see Drug Interactions (7.3), Clinical Pharmacology (12.4)).

4.3 Phosphodiesterase Inhibitors Concomitant administration of Adempas with phosphodiesterase (PDE) inhibitors, including specific PDE-5 inhibitors (such as sildenafil, tadalafil, or vardenafil) and nonspecific PDE inhibitors (such as dipyridamole or amyl nitrite) in any form is contraindicated (see Warnings and Precautions (5.4), see Warnings and Precautions (5.3)).

5 WARNINGS AND PRECAUTIONS

5.1 Embryo-Fetal Toxicity
Adempas may cause fetal harm when administered during pregnancy and is contraindicated for use in women who are pregnant. In females of reproductive potential, exclude pregnancy prior to initiation of therapy, advise use of acceptable contraception and obtain monthly pregnancy tests. Adempas is contraindicated in females who are breastfeeding (see Warnings and Precautions (8.2) and Use in Specific Populations (8.1, 8.6)).

5.2 Adempas REMS Program
Females can only receive Adempas through the Adempas REMS Program, a restricted distribution program (see Warnings and Precautions (5.3), see Warnings and Precautions (8.3)).

5.3 Use in Specific Populations

5.3.1 Pregnancy
Females can only receive Adempas through the Adempas REMS Program, a restricted distribution program (see Warnings and Precautions (5.3), see Warnings and Precautions (8.3)).

5.4 Bleeding
In the placebo-controlled clinical trials program, serious bleeding occurred in 2.4% of patients taking Adempas compared to 0% of placebo patients. Serious hemorrhosis occurred in 5 (1%) patients taking Adempas compared to 0% in placebo patients, including one event with fatal outcome. Serious hemorrhagic events also included 2 patients with vaginal hemorrhage, 1 with cerebral hemorrhage, 1 with subdural hematoma, hematomas, and intradural hemorrhage.

5.5 Pulmonary Veno-occlusive Disease Pulmonary vasculitis may significantly women the cardiovascular status of patients with pulmonary veno-occlusive disease (PVOD). Therefore, administration of Adempas to such patients is not recommended. Should signs of pulmonary edemas occur, the possibility of associated PVOD should be considered. If confirmed, discontinue treatment with Adempas.

6 ADVERSE REACTIONS

The following serious adverse reactions are discussed elsewhere in the labeling:

- Embryo-Fetal Toxicity (see Warnings and Precautions (5.1))
- Hypertension (see Warnings and Precautions (8.3))
- Bleeding (see Warnings and Precautions (5.4))

6.1 Clinical Trials Experience
Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in practice.

The safety data described below reflect exposure to Adempas in two, randomized, double blind, placebo-controlled trials in patients with inoperable or recurrent/persistent CTEPH (CHEST-1) and treatment naive or pre-treated PAH patients (PATENT-1). The population (Adempas: n = 490; Placebo: n = 214) was between the age of 18 and 80 years (see Clinical Studies (14.1, 14.2)).

The safety profile of Adempas in patients with inoperable or recurrent/persistent CTEPH (CHEST-1) was similar to the safety profile of Adempas in patients with inoperable or recurrent/persistent CTEPH (PATENT-1) and treatment naive or pre-treated PAH patients (PATENT-1) were similar. Therefore, adverse drug reactions (ADRs) identified from the 2-week placebo-controlled trials for adverse drug reactions (CHEST-1) and CTEPH patients were pooled, and those occurring more frequently than on placebo (≥3%) are displayed in Table 1 below. Most adverse events in Table 1 are caused to the vasodilatory mechanism of action of Adempas.

The overall rate of discontinuation due to an adverse event in the pivotal placebo-controlled trials were 2.9% for Adempas and 5.1% for placebo patients.

Table 1: Adverse Reactions Occurring More Frequently (∼>3%) on Adempas than Placebo

<table>
<thead>
<tr>
<th>Patient Population</th>
<th>Adempas %</th>
<th>Placebo %</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEST-1 and PATENT-1</td>
<td>(&lt;3%)</td>
<td>(&lt;3%)</td>
</tr>
</tbody>
</table>

Other events that were seen more frequently in riociguat compared to placebo and were not considered by the investigators as drug-related were: asthenia, epistaxis, dysphagia, abdominal distension and peripheral edema. With larger clinical trials of discontinuation due to an event in the pivotal placebo-controlled trials were 2.9% for Adempas and 5.1% for placebo patients.

7 DRUG INTERACTIONS

7.1 Pharmacodynamic Interactions with Adempas

Adempas: Concomitant use of Adempas with nitrates or nitric oxide donors (such as amyl nitrite) in any form is contraindicated because of hyperproliferation of the vessel wall and increased risk of bleeding (see Contraindications (4.4), Clinical Pharmacology (12.4)).

POE Inhibitors: Co-administration of Adempas with phosphodiesterase (PDE) inhibitors, including specific PDE-5 inhibitors (such as sildenafil, vardenafil, and tadalafil) and non-specific PDE inhibitors (such as dipyridamole or amyl nitrite), is contraindicated because of hypotension (see Contraindications (4.3), Clinical Pharmacology (12.4)).

7.2 Pharmacokinetic Interactions with Adempas

Adempas is not cleared by 50-60% compared to non-smokers. Based on pharmacokinetic modeling, for patients...
Hands-Only CPR kiosk helps teach travelers lifesaving skill on the fly

S
ome people play games on their phones, read a book or nap while waiting for a flight. But travelers at Dallas/Fort Worth International Airport can use their idle time to learn how to save lives at a Hands-Only™ CPR kiosk.

The kiosk, which was placed in Terminal C, Gate 7, allows hands-on practice with a CPR manikin and an automated practice-while-watching CPR program. It’s part of the American Heart Association’s goal of increasing the number of people trained to save lives.

“All of you at the airport are sitting around, and they have some down time, and they can put that down time to good use and learn how to do CPR,” said Ahamed Idris, MD, a professor of Surgery and Internal Medicine at the University at Southwestern Medical Center in Dallas. Idris, who also serves as a volunteer for AHA’s Emergency Cardiovascular Care (ECC) programs, said a critical shift in thinking occurred within the last decade after a shortened training course resulted in improved CPR performance. Trainees who took a 20-minute course showed better performance than those taking a three- to four-hour class. Those results also held over time, Idris said.

“This was a real paradigm shift in our understanding of how people learn CPR,” said Idris, who, along with other ECC volunteers, help create and revise the AHA Guidelines for CPR and ECC every five years.

Hands-Only CPR fast, simple

Even without formal training, anyone can be a lifesaver by remembering the two steps to Hands-Only CPR: First call 9-1-1, then push hard and fast in the center of the chest, to the beat of the classic disco song, “Stayin’ Alive,” until help arrives. With Hands-Only CPR, you don’t use rescue breaths.

The DFW kiosk’s video program shows the steps of Hands-Only CPR, followed by a practice session and a 30-second CPR test. Through the aid of a touch screen, the kiosk provides feedback about the proper hand placement and the depth and rate of chest compressions.

Results are electronically sent to the AHA, which has teamed with American Airlines and DFW Airport on the six-month pilot program. The results are being analyzed to help determine the overall effectiveness of the kiosk as a training methodology and to determine any revisions that the machine could enhance the user’s experience.

In the first few days it was in place, some 700 people used the kiosk, exceeding expectations, Idris said. By mid-November, roughly 4,500 passengers had used it.

“We hope the Hands-Only CPR kiosk at DFW Airport really takes off,” he said.

“We’d love to see other high-traffic places do the same so more people can learn this lifesaving skill.”

Jeral Ahtone, MD, area medical director with American Airlines Occupational Health Services, said travelers can take comfort in this innovative sort of training.

“The more lifesavers we have at the airport, the better off we all are,” he said. “It takes just a couple of minutes, and you never know when or where you might need to save a life.”

For more information about Hands-Only CPR, visit www.heart.org/handsonlycpr.
in 2009 and 2010. “There is so much to hear, so many people with whom to interact and so much new information that may directly impact your day-to-day job no matter your specialty or interests. It is thrilling and relevant.”

With everything spread across 26 programming tracks, there is clearly plenty for everyone. Yet a handful of activities merit special recognition.

**Clinical Practice Guidelines**

In 2008, the National Heart, Lung, and Blood Institute initiated a series of cardiovascular prevention guidelines by sponsoring rigorous, comprehensive, systematic evidence reviews on assessment of cardiovascular risk, lifestyle modifications that reduce risk, and management of elevated blood cholesterol and body weight in adults. In 2013, the AHA and the American College of Cardiology were assigned the task of finalizing these cardiovascular prevention guidelines, along with other stakeholder and professional organizations.

Pending publication of the Clinical Practice Guidelines for Cardiovascular Prevention, on Wednesday, these guidelines will be the subject of in-depth examination by the presidents of both AHA and ACC, as well as panelists representing the writing groups for each guideline. Harrington described the session as a discussion of “how we got here, and where we’re taking it from here.”

“Maybe the most fun and interesting will be a panel discussion to flesh out some of the questions everybody wants to know and put it all in perspective,” Harrington said.

**Global Congress on Physical Activity**

Did you pack any athletic shoes? Be sure to wear them with your “work clothes” Tuesday. “Sneaker Day” is part of an expanded approach to the five-day series of seminars and how-to sessions befitting the annual “congress” element of Sessions, this year focusing on physical activity and fitness.

“Every discipline from discovery science to hardcore exercise science up to public policy will be covered in the Global Congress,” said Harrington, who will be sporting heart-disease-awareness-red running shoes. “We’re going to have public figures talking about the impact of physical activity from a public policy standpoint. And we’re going to be doing some really fun, visible things within the convention center to bring more attention to physical activity. I think it’s going to be fantastic.”

One of those fun things is a Walking Path staked by decals on the floor throughout the convention center – along with a Walking Challenge. Attendees are encouraged to register through my.americanheart.org or at the Walking Challenge booth. The first 2,000 to sign up will receive a bluetooth-enabled tracking device that will count their steps; it pairs with an iPhone/iPad app that will tally a leaderboard shown on monitors throughout the convention center. The top 20 individual walkers will be recognized Wednesday morning, as will the top five Councils. A 1-mile Walk/5K Fun Run is back for the 21st straight year, as well, held Tuesday morning.

Harrington noted the work of program chairs Ross Arena, PhD, PT, FAHA, and Jean-Pierre Després, PhD, FAHA, in pulling together the meeting agenda. It will include keynote presentations by former U.S. Olympic swimmer Gary Hall Jr. and Kenneth H. Cooper, MD, the “Father of Aerobics.”

**Early-career emphasis**

Traditionally, Saturdays have been devoted to early-career investigators. That is still the case – and then some.

Many Saturday sessions will be moderated both by senior leaders and early-career investigators in hopes of providing a deeper perspective around topics like job searches, writing articles, getting grant funding, mentoring – topics that are important regardless of science specialty. Harrington himself is moderating a session along with a junior faculty member from Stanford.

“Usually, the early-career investigators are sitting in the audience listening to senior members talk,” Harrington said. “Now we’re bringing them in to actually plan the discussions and to help moderate so we can stay on topic to what’s important to their generation. You’ll see a lot of our abstract sessions will have a junior and a senior leading it. The junior person can really learn from a senior colleague about how to moderate, and us seniors can learn from the juniors about what areas interest them the most.”

That focus continues through the Early Career Engagement Lounge and Professor Rounds. The lounge, outside the poster hall, is where early-career investigators can network with peers and senior investigators can reach out for mentoring sessions and other conversations. AHA staff will be on hand to discuss volunteering, grants and leadership opportunities.

As the name implies, Professor Rounds are similar to doctors making rounds at the

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Continued from previous page

Scientific Sessions

hospital: Professors will visit each poster, most of which are done by early-career attendees.

“Jokingly called it ‘No Poster Left Behind’ because the goal is for every single poster to be visited by a professor who will engage that presenter,” Harrington said.

Also noteworthy

Harrington noted several more sessions that address hot topics, including one on cardio-oncology and another on data sharing and open data.

Whether to share data in a very open-source manner is another growing, fascinating subject.

“We can hear from different stakeholders: why funders think it’s important, and what investigators think are the challenges,” he said. “We have an AHA volunteer – a layperson – who is going to talk about the public perception, what it means to patients. Even if I’m not helping with this session, I will absolutely be there as an attendee.”

Late-Breaking Clinical Trials are always headliners, and Harrington said there was a record crop of exactly 100 submissions. Among the 20 that will be featured are CORAL, which studied renal stenting for treatment of hypertension, and ENGAGE, which looked at a novel anticoagulant for atrial fibrillation. Other interesting studies include a randomized trial investigating optimal temperature for hypothermia in cardiac arrest patients, and one on the effectiveness of teaching cardiovascular health to preschool children.

“It’s just a fantastic group of trials,” he said.

There also will be 19 Clinical Science: Special Reports spread over four sessions, with one devoted to regenerative science.

Basic science attendees will want to block time to attend a reception Monday night that will spotlight the Top 30 basic science abstracts as well as 20 late-breaking basic science abstracts.

And back for another year, with an updated format are the “Case Theaters: Learning at the Movies.”

Considering the vast options, an attendee could be overwhelmed. So Harrington recommends planning ahead.

The AHA makes it easy to narrow the agenda to your interests through filtering tools available on scientificsessions.org and the app, which has been updated with an activity feed that helps connect attendees.

“And 26 tracks, we’ve tried to make the meeting a little more accessible based on what your interest is,” said Harrington, who is giving a talk Saturday about how to navigate the meeting. “We have search tools – especially on the app – to help you search a lot of different ways: by topic, track, speakers.

“My advice is to take some time with the program and use the online tools to personalize the meeting based on your interests. You can then download a calendar based on that.”

Scientific Sessions began in 1925 – the year after the American Heart Association was founded – and has run continuously ever since, save for a hiatus during World War II. This is the eighth time Sessions has been in Dallas since 1978, but the first since 2005. The convention center has been remodeled and the new Omni Hotel is connected.

The ease of access should make Sessions’ return to the American Heart Association’s hometown more comfortable.

“We want people to walk around and meet people,” Harrington said. “We’re trying to create the spirit of community, where people can not only learn about their type of science but also find colleagues and work with them.”

Relationships Harrington built and/or nurtured through Sessions are instrumental in this colossal undertaking being such a success. This includes the last two years he spent as CSSP Vice Chair under current AHA President-elect Elliot Antman, MD, FAHA, and the efforts of his own Vice Chair, Kenneth D. Bloch, MD, FAHA. Harrington said the support of Jessup and the entire AHA staff also was invaluable.

“It’s a huge amount of work, but sort of a labor of love,” he said.

While much of the information presented will be available online, that is only one element of the Sessions experience. It’s also about networking, socializing, hallway conversations, exchanging business cards – all the benefits of being somewhere in person.

“What you can’t get off the Web is that interaction where you bump into a colleague and say, ‘I just saw this. Can I ask you about it?’” Harrington said. “That’s the essence of science, those serendipitous conversations. You’ve got to interact to have those. You’ve got to shake hands.”

His career wouldn’t be the same without it.

“The bulk of my research over the last two decades has been in collaboration with colleagues around the globe, and Sessions has been invaluable for the opportunities to meet regularly with these colleagues – to share ideas, what we’re doing and to continue building our friendship and working together.”

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Training students in CPR saves lives

The American Heart Association is working to train a new generation of lifesavers by encouraging states to require CPR training as a requirement for high school graduation. These advocacy efforts already have yielded laws in 12 states, which will produce more than 822,000 trainees each year.

“Lives are at stake,” said Michael R. Sayre, MD, professor of emergency medicine at the University of Washington and a past chair of the AHA’s Emergency Cardiovascular Care committee.

The AHA has recommended CPR training for students and teachers be part of standard preparation for responding to medical emergencies on school campuses since 2004. Advocacy efforts stepped up in 2012 with the launch of BeCPRSmart.org.

Laws or standards that encouraged inclusion of CPR curriculum content in school programming were in place for 36 states as of the 2009-2010 school year. But the AHA wants that training to be more consistent and comprehensive, including hands-on practice. The 12 states that have passed legislation are Alabama, Arkansas, Iowa, Georgia, Minnesota, North Carolina, Rhode Island, Texas, Tennessee, Virginia, Vermont and Washington.

Cardiac arrest is a leading cause of death in the United States, with emergency medical services teams called to nearly 360,000 cases each year outside of a hospital setting. Studies have shown that the rapid implementation of CPR or use of an automated external defibrillator by bystanders before EMS teams arrive plays a critical role in patient survival.

People who suffer cardiac arrest outside of a hospital have at least twice the chance of surviving if a bystander starts CPR, Sayre said. The problem is that bystander CPR is performed in less than half of those cases.

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Sayre said watching his own kids undergo CPR training in high school underscored the message for him about how empowering it can be.

“They felt like they could really make a difference,” he said.

AHA’s advocacy effort for CPR training targets state legislatures, but Sayre noted that individuals can make a big difference by simply lobbying their local school boards to include the training and volunteer to help get a training program started.

“Even if it’s not a state requirement, you can make a difference,” he said.

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Nitroglycerin Sublingual Tablets, USP

BRIEF SUMMARY OF PRESCRIBING INFORMATION

INDICATIONS AND USAGE

Nitroglycerin is indicated for the acute relief of an attack or acute prophyaxis of angina pectoris due to coronary artery disease.

CONTRAINDICATIONS

Allergic reactions to organic nitrates are extremely rare, but they do occur. Nitroglycerin is contraindicated in patients who are allergic to it.

Sublingual nitroglycerin therapy is contraindicated in patients with early myocardial infarction, severe anemia, increased intracranial pressure, and those with a known hypersensitivity to nitroglycerin.

Administration of NITROSTAT is contraindicated in patients who are using a phosphodiesterase-5 (PDE-5) inhibitor (e.g., sildenafil citrate, tadalafil, vardenafil hydrochloride) since these compounds have been shown to potentiate the hypotensive effects of organic nitrates.

WARNINGS

The benefits of sublingual nitroglycerin in patients with acute myocardial infarction or congestive heart failure have not been established. If one elects to use nitroglycerin in these conditions, careful clinical or hemodynamic monitoring must be used because of the possibility of hypotension and tachycardia.

PRECAUTIONS

General: Only the smallest dose required for effective relief of the acute anginal attack should be used. Excessive use may lead to the development of tolerance. NITROSTAT tablets are intended for sublingual or buccal administration and should not be swallowed.

Severe hypotension, particularly with upright posture, may occur with small doses of nitroglycerin. This drug should therefore be used with caution in patients who may be volume-depleted or who, for whatever reason, are already hypotensive. Hypotension induced by nitroglycerin may be accompanied by paradoxical Bradydysrhythmia and increased angina pectoris.

Nitrate therapy may aggravate the angina caused by hypertrophic cardiomyopathy. As tolerance to other forms of nitroglycerin develops, the effects of sublingual nitroglycerin on exercise tolerance, although still available, is blunted. In industrial workers who have had long-term exposure to unknown (presumably high) doses of organic nitrates, tolerance rarely occurs. Chest pain, acute myocardial infarction, and even sudden death have occurred during temporary withdrawal of nitrates from these workers, demonstrating the existence of true physical dependence.

Several clinical trials of nitroglycerin patches or infusions in patients with angina pectoris have evaluated regimens that incorporated a 10- to 12-hour nitrate free interval. In some of these trials, an increase in the frequency of anginal attacks during the nitrate free interval was observed in a small number of patients. In one trial, patients had decreased exercise tolerance at the end of the nitrate interval. Hemodynamic rebound has been observed only rarely; on the other hand, few studies were so designed that rebound, if it had occurred, would have been detected.

Nitrate tolerance as a result of sublingual nitroglycerin administration is probably possible, but only in patients who maintain high continuous nitrate levels for more than 10 or 12 hours daily. Such use of sublingual nitroglycerin would entail administration of scores of tablets daily and is not recommended.

The drug should be discontinued if blurring of vision or drying of the mouth occurs. Excessive dosage of nitroglycerin may produce severe headache.

Information for Patients: NITROSTAT is a sublingual tablet and should not be chewed, crushed, or swallowed.

If possible, patients should sit down when taking NITROSTAT tablets and should use caution when returning to an upright position. This eliminates the possibility of falling due to lightheadedness or dizziness.

One tablet should be dissolved under the tongue or in the buccal pouch at the first sign of an acute anginal attack. The dose may be repeated approximately every 5 minutes until relief is obtained.

If chest pain persists after a total of 3 tablets in a 15-minute period, or if the pain is different than is typically experienced, prompt medical attention is recommended.

NITROSTAT may be used prophylactically 5 to 10 minutes prior to engaging in activities that may precipitate an acute attack.

Nitroglycerin may produce a burning or tingling sensation when administered sublingually; however, the ability to produce a burning or tingling sensation should not be considered a reliable method for determining the potency of the tablets.

Headaches can sometimes accompany treatment with nitroglycerin. In patients who get these headaches, the headaches may be a marker of the activity of the drug.

Treatment with nitroglycerin may be associated with lightheadedness upon standing, especially just after rising from a recumbent or seated position. This effect may be more frequent in patients who have also consumed alcohol.

Nitroglycerin should be kept in the original glass container and must be tightly capped after each use to prevent loss of tablet potency.

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Nitroglycerin should be kept in the original glass container and must be tightly capped after each use to prevent loss of tablet potency. Inhalation and brief exposure to nitroglycerin vapor is not hazardous.

Drug Interactions: Patients receiving antihypertensive drugs, beta-adrenergic blockers, or other compounds have been shown to potentiate the hypotensive effects of organic nitrates. A decrease in therapeutic effect of sublingual nitroglycerin may result from use of long-acting nitrates.

Drug/Laboratory Test Interactions: Nitrates may interfere with the Zitkis-Zak color reaction, causing a false report of decreased serum cholesterol.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Animal carcinogenesis studies with sublingually administered nitroglycerin have not been performed.

Rats receiving up to 434 mg/kg/day of dietary nitroglycerin for 2 years developed dose-related fibrotic and neoplastic changes in liver, including carcinomas, and interstitial cell tumors in testes. At high doses, the incidences of hepatic cell carcinomas in males was 48% and in females was 33%, compared to 0% in untreated controls. Incidences of testicular tumors were 52% vs. 8% in controls. Lifetime dietary administration of up to 1058 mg/kg/day of nitroglycerin was not tumorigenic in mice.

Nitroglycerin was weakly mutagenic in Ames tests performed in 2 different laboratories. Nonetheless, there was no evidence of mutagenicity in an in vivo dominant lethal assay with male rats treated with doses up to about 383 mg/kg/day, PO, or in an in vivo cytogenetic tests in rat and dog tissues.

In a 3-generation reproduction study, rats received dietary nitroglycerin at doses up to about 434 mg/kg/day for 6 months prior to mating of the F2 generation, with treatment continuing through successive F2 and F3 generations. The high dose was associated with decreased feed intake and body weight gain in both sexes at all matings. No specific effect on the fertility of the F2 generation was seen. Interfertility in subsequent generations, however, was attributed to increased testicular cell tissue and aspermato generesis in the high-dose males. In this 3-generation study, there was no clear evidence of teratogenicity.

Pregnancy Category C: Animal reproduction and teratogenicity studies have not been conducted with nitroglycerin sublingual tablets. Teratology studies in rats and rabbits, however, were conducted with topically applied nitroglycerin ointment at doses up to 80 mg/kg/day and 240 mg/kg/day, respectively. No toxic effects on dams or fetuses were seen at any dose tested.

There are no adequate and well-controlled studies in pregnant women. Nitroglycerin should be given to a pregnant woman only if clearly needed.

Nursing Mothers: It is not known whether nitroglycerin is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when nitroglycerin is administered to a nursing woman.

Pediatric Use: The safety and effectiveness of nitroglycerin in pediatric patients have not been established.

Geriatric Use: Clinical studies of NITROSTAT did not include sufficient numbers of subjects aged 65 and over to determine whether they respond differentially from younger subjects. Other reported clinical experience has not identified differences in responses between the elderly and young adult patients. In general, a dose for an elderly patient should be cautious, usually starting at the low end of the dosing range, reflecting the greater frequency of decreased hepatic, renal, or cardiac function, and of concomitant disease or other drug therapy.

ADVERSE REACTIONS

Headache that may be severe and persistent may occur immediately after use. Vertigo, dizziness, weakness, palpitation, and other manifestations of postural hypotension may develop occasionally, particularly in erect, immobile patients. Marked sensitivity to the hypotensive effects of nitrates (marked dizziness, nausea, vomiting, weakness, diaphoresis, pallor) may occur in therapeutic doses. Syndrome due to nitrate vasodilatation has been reported. Flushing, drug rash, and exfoliative dermatitis have been reported in patients receiving nitrate therapy.

OVERDOSAGE

Hemodynamic Effects: The effects of nitroglycerin overdose are generally the results of nitroglycerin’s capacity to induce vasodilatation, venous pooling, reduced cardiac output, and hypotension. These hemodynamic changes may have protein manifestations, including increased intracranial pressure, with any or all of persistent throbbing headache, confusion, and moderate fever; vertigo; palpitations; tachycardia; visual disturbances; nausea and vomiting (possibly with colic and even bloody diarrhea); syncope (especially in the upright posture); dyspnea, later followed by reduced ventilatory effort; diaphoresis, with the skin either flushed or cold and clammy; heart block and bradyarrhythmia, coma, seizures, and death.

No specific antagonist to the vasodilator effects of nitroglycerin is known, and no intervention has been subject to controlled study as a therapy of nitroglycerin overdose. Because the hypotension associated with nitroglycerin overdose is the result of venodilatation and arterial hypovolemia, prudent therapy in this situation should be directed toward increase in central fluid volume. Passive elevation of the patient’s legs may be sufficient, but intravenous infusion of normal saline or similar fluid may also be necessary.

The use of epinephrine or other arterial vasocostrictors in this setting is likely to do more harm than good.

In patients with renal disease or congestive heart failure, therapy resulting in central volume expansion is not without hazard. Treatment of nitroglycerin overdose in these patients may be subtle and difficult, and invasive monitoring may be required.

Methemoglobinemia: Methemoglobinemia has been rarely reported in association with oral nitrites. The diagnosis should be suspected in patients who exhibit signs of impaired oxygen delivery despite adequate cardiac output and adequate arterial Po2. Classically, methemoglobinemia blood is described as chocolate brown, without color change on exposure to air. If methemoglobinemia is present, intravenous administration of methylene blue, 1 to 2 mg/kg of body weight, may be required.

Based on USP, May 2011 N57601301-01
NITROSTAT (Nitroglycerin Sublingual Tablets, USP) is indicated for the acute relief of an attack or acute prophylaxis of angina pectoris due to coronary artery disease:

- Onset of vasodilatory effect occurs approximately 1 to 3 minutes after sublingual administration and reaches a maximum by 5 minutes.
- May be used prophylactically 5 to 10 minutes prior to engaging in activities that might precipitate an acute attack.

Important Safety Information:

- Sublingual nitroglycerin therapy is contraindicated in patients with early myocardial infarction, severe anemia, increased intracranial pressure, and those with a known hypersensitivity to organic nitrates including nitroglycerin.
- Administration of NITROSTAT is contraindicated in patients who are using a phosphodiesterase-5 (PDE-5) inhibitor (e.g., sildenafil citrate, tadalafil, vardenafil hydrochloride) because these compounds can increase nitroglycerin’s hypotensive effects.
- The benefits of sublingual nitroglycerin in patients with acute myocardial infarction or congestive heart failure have not been established. If used for these conditions, careful clinical or hemodynamic monitoring must be practiced because of the possibility of hypotension and tachycardia.
- Only the smallest dose required for effective relief of the acute anginal attack should be used. Excessive use may lead to the development of tolerance. NITROSTAT tablets are intended for sublingual or buccal administration and should not be swallowed.
- Severe hypotension, particularly with upright posture, may occur with small doses of nitroglycerin. This drug should therefore be used with caution in patients who may be volume-depleted or who, for whatever reason, are already hypotensive.
- Hypotension induced by nitroglycerin may be accompanied by paradoxical bradycardia and increased angina pectoris.
- Nitrate therapy may also aggravate the angina caused by hypertrophic cardiomyopathy.
- The drug should be discontinued if blurring of vision or drying of the mouth occurs.
- Concomitant use with antihypertensive drugs, beta-adrenergic blockers, phenothiazines, calcium channel blockers and alcohol may cause or aggravate hypotension.
- If chest pain persists after a total of 3 tablets in a 15-minute period, or if the pain is different than is typically experienced, prompt medical attention is recommended.
- Headache that may be severe and persistent may occur immediately after use. Vertigo, dizziness, weakness, palpitation, and other manifestations of postural hypotension may develop occasionally, particularly in erect, immobile patients. Marked sensitivity to the hypotensive effects of nitrates (manifested by nausea, vomiting, weakness, diaphoresis, pallor, and collapse) may occur at therapeutic doses. Syncope due to nitrate vasodilation has been reported. Flushing, drug rash, and exfoliative dermatitis have been reported in patients receiving nitrate therapy.

Please see brief summary of full Prescribing Information for NITROSTAT on previous page.

References:

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