



ACCE News

Newsletter of the American College of Clinical Engineering

September-October 2013

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Barranquilla
Colombia
ACEW
pictures

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President's Message Growth of the Clinical Engineer and the Clinical Engineering Profession



This summer I was invited to be the keynote speaker for the 31st International System Safety Society conference in Boston Massachusetts. The International System Safety Society (ISSS) is a non-profit organization dedicated to supporting the Safety Professional in the application of Systems Engineering and Systems Management to the process of hazard, safety and risk analysis. Its focus is largely on the airline and aerospace industry and has a small representation from the medical device industry. I was asked to present on the health technology-related safety work of ECRI Institute and on the role of clinical engineering in supporting safety in the healthcare setting. This was an impressive meeting and it was an honor for me to represent ECRI Institute and ACCE as the conference keynote.

ISSS was celebrating its 50th anniversary at this year's conference. The ISSS conference committee selected "Safety for the Long Run" as the theme for the conference. It was a well-intended theme that projected a message of looking beyond ISSS's strong history and towards an even stronger future. Unfortunately the logo for the conference was selected before this year's Boston Marathon and it depicted a runner moving along ISSS's "long run for safety". It was a little unnerving attending a conference with a running and marathon theme literally blocks away from where the Boston Marathon explosions occurred a few months earlier. However, it definitely gave me pause to think about and pray for the many, many people who were impacted by that tragedy – and to be thankful for our Boston area health professional colleagues who served that day.

The only other negative from the ISSS conference is that it has a very strong military presence. You're probably wondering why that would be a negative. But think about the current sequestration environment in our government. Many of the regular attendees for the conference were on restricted government travel budgets because of sequestration and were not able to attend this year's ISSS meeting. Let's hope we get past the current government budget wrangling and our colleagues in the US Government will have the budget dollars to participate in important educational and networking activities like those offered by ISSS.

ISSS and ACCE have a lot of parallels. Both are volunteer run organizations each with a passionate focus on improving safety. It was interesting to learn that ISSS has some of the same generational challenges that we have in clinical engineering. The System Safety profession has large group of near-retirement-age members. I heard some of the same discussions that we've frequently heard at the AAMI conference and other recent clinical engineering-related gatherings. It's that the more experienced members of our profession must set the stage for their newer colleagues to fill in the gaps that will soon be vacated by a large group of retirees. By the way, I thought about writing "our" instead of "their" newer colleagues in that last sentence but I think I have a few more years until I need to do that.

I brought home what I think is a great idea from my discussions with ISSS conference attendees about succession planning for our profession. That is for ACCE to set up a mentorship program to help

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President's Message: Mentoring New CEs

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with the development of our newer clinical engineers. ISSS has set up a formal mentorship program where experienced System Safety Engineers are teamed up with newer members of the profession. The goal of the ISSS program is to impart the experience and perspectives of the senior members of the System Safety profession onto the newer generation. I think this can serve as great model for ACCE. One surprising results from the ISSS mentorship program is that the mentors seem to get as much or more out of the program than the mentees. One of the mentors told me about how the mentorship program brought renewed energy and fresh perspectives to his work. One of the mentees told me how grateful she was for her mentor's guidance and how influential he has already been with her career development.

I shared the mentorship idea at an ACCE Executive Board meeting after my return from the ISSS conference. The Executive Board was very enthusiastic. The ACCE Board just met and we approved a measure for ACCE to formally establish a mentorship program and that we set up a task force to get the program off the ground. I would be very interested in hearing from ACCE members who would like to help with the task force. I'd also be interested in hearing from members who are interested in serving as mentors or taking advantage of the program as mentees.

Many of you have heard me talk about the recent CNN Money report stating that clinical engineering is projected to have the second highest ten year growth rate among American jobs. That's a great thing. But I don't think it will happen without help from our organization and other stakeholders in our profession. The mentorship program is an important way to help (i.e., to prepare our newer profession members to take on the many opportunities that will come up over the next ten years). Another measure which I think is even more important is to help expand the educational opportunities for clinical engineers. Tom Judd is leading an ACCE task force to do just that.

By the time this article is published I hope that most of you will have participated in our second virtual membership webinar in 2013. The webinar is scheduled for October 3rd and will be highlighting the efforts of Tom's task force. His Clinical Engineering Education Task Force is specifically charged with developing tools and resources to help grow the educational and early training opportunities for clinical engineers.

One of the deliverables for the task force is to develop a white paper that can be used, for example, by university-based research and design-oriented biomedical engineering programs to expand their offerings into the clinical engineering realm. Frank Painter's clinical engineering program at the University of Connecticut is being used as a model for the white paper. It has an excellent curriculum and an impressive internship program that is coordinated with hospitals throughout

the New England regions. If you end up missing the live virtual membership webinar, you will be able to listen to a recording on ACCE's website. Keep an eye out for announcements for when the webinar recording will posted on the site.

One last thing. ACCE hit a nice membership milestone. We are now over 500 strong. It's an impressive number for a relatively young organization – at least compared to the 50 year old ISSS. But considering how many hospitals and technology challenges that exist we have a lot of room to grow. Let me know about your ideas for how we can expand our profession and expand the support we provide for our hospitals' technology challenges in the years to come. I can be reached at president@accenet.org

Jim Keller, President, ACCE

ACCE News

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Journal of Clinical Engineering Subscriptions for ACCE Members

ACCE members receive a discounted subscription to the Journal of Clinical Engineering for only \$99! (Originally \$222) Visit LWW.com and enter code WDK136ZZ at checkout.

Journal of Clinical Engineering Call for Papers

The Journal of Clinical Engineering prints selections of the ACCE News in each issue and is interested in papers from you. If you have an urge to write, and good clinical engineering activities or ideas to share, please consider JCE as one of your outlets. One type of article not seen in a while is the Department Overview which presents how your department is structured and how it performs its functions. Shorter "Perspective" pieces are also welcome. You can discuss manuscript ideas with fellow member William Hyman, who is one of the editors of JCE. Contact: w-hyman@tamu.edu.

Send manuscripts to William or Michael Levenepstein at: Michael.levenepstein@gmail.com

AAMI Update: Awards, Networking, FDA and more

Interoperability Publication Aimed at HTM Professionals

With medical technology becoming increasingly complex, ensuring that devices can communicate with one another has been a top priority for leaders in healthcare. To help healthcare delivery organizations understand the major challenges to interoperability and develop potential solutions, AAMI has created *Achieving Interoperability*, a free resource that provides insight and practical guidance to the healthcare technology management community.

The 35-page compilation includes articles that originally appeared in AAMI's peer-reviewed publications and examines a range of best practices for ensuring interoperability. Topics covered include how to integrate devices into information technology (IT) networks and how infusion pumps can communicate with the server via a wireless network.

One theme echoed in several of the articles is the need to apply systems engineering principles to address interoperability challenges. "The motivation that I have for bringing more systems theory to the healthcare environment is that I see people constantly reinventing the wheel," says Pat Baird, an engineering director with Baxter Healthcare Corporation, in a cover story from *BI&T (Biomedical Instrumentation & Technology)*, AAMI's bimonthly journal. "Many of the challenges in healthcare are the same challenges other industries have faced decades ago. Healthcare needs to catch up, and I think that 'systems thinking' could help speed the process," he concludes.

Another article features advice from Karen Delvecchio, lead systems engineer for patient monitoring networks for GE Healthcare. In her article on risk management, Delvecchio starts off with an overview of *IEC 80001-1: Application of risk management for IT-networks incorporating medical devices*. She then discusses the steps organizations must take when assessing risk for medical IT networks, including identifying potential hazards.

To download the compilation, please visit AAMI's special "hot topics" page on interoperability by going to www.aami.org/hottopics/interoperability/.

Journal Scoops Up Awards

AAMI's peer-reviewed journal, *BI&T (Biomedical Instrumentation & Technology)*, has picked up two awards in a competition open to publications nationwide.

In the 25th annual program, the Awards for Publication Excellence, known as the APEX awards, honored *BI&T* in two categories.

The first Award of Excellence was in the category of health and medical writing, and went to the January/February 2012 cover story, "Achieving Interoperability" by Jill Schlabig Williams, a former member of the AAMI staff.

The second Award of Excellence was in the category of feature writing and went to the May/June 2012 cover story, "Safe and Secure? Healthcare in the Cyberworld" by Martha Vockley, a freelance writer for AAMI.

The APEX honors come in the wake of three awards that AAMI won in May from the American Society of Healthcare Publications Editors (ASHPE). The honors in that competition were:

- A Gold Award for best special supplement for the fall 2012 edition of *Horizons* that focused on mobile health.
- A Gold Award for single issue of a newsletter for the April 2012 edition of *AAMI News*.
- A Bronze Award for best news coverage for the cybersecurity cover story in *BI&T*.

"The awards reflect the work of a top-notch Editorial Board and staff who are committed to identifying and covering the stories that matter the most to the healthcare technology community," said Steve Campbell, the chief marketing and communications officer for AAMI. "In

each issue of *BI&T*, we look to shed light on the biggest challenges and trends in the field. The articles and papers in *BI&T* don't simply cover the problems, but they offer solutions and guidance, and highlight the people who are making a positive difference."

BI&T is published six times each year and mailed directly to approximately 7,000 influential healthcare technology professionals. Readers include clinical engineers, biomedical equipment technicians, hospital C-Suite executives, medical device manufacturers, academics, regulators, and sterilization professionals. For more information about the journal go to:

www.aami.org/publications/BI&T/

Consistent Terminology Urged for Cybersecurity Guidance

AAMI has asked the U.S. Food and Drug Administration (FDA) to ensure that terms it uses in draft guidance on cybersecurity considerations for medical device manufacturers are consistent with those used by industry and standards developers.

The FDA released the draft guidance in June to identify cybersecurity-related issues that device makers should take into account when preparing their premarket submissions. It cited cybersecurity as a growing concern, particularly with the increased use of wireless, Internet-, and network-connected devices, as well as the electronic exchange of health data.

In a comment dated Sept. 4, AAMI recommended that the agency make modifications in the draft guidance when necessary "to better align" definitions, thus helping to "eliminate or reduce misunderstandings and provide more consistency."

AAMI further noted that several key terms are not defined in the draft document. To reduce the potential for confusion, the comment suggested adding a section titled "Terms and Definitions," as AAMI does in its standards. Terms the

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International Committee: Barranquilla Colombia ACEW Workshop

The beautiful city of Barranquilla, the “Golden Door of Colombia” where the Magdalena River meets the Caribbean Sea, was the place for the 49th ACEW, August 22-24, 2013.

This workshop was oriented towards “Health Technology Management and Innovation (HTM&I)” as part of a series of four workshops on healthcare systems. The participants were exposed to the challenges and opportunities for developing a project for planning and implementing a “continuum of care model for Barranquilla,” with scalability to the northern Caribbean coast of Colombia.



Left to right: Local coordinators Alexis Messino and Vladimir Quintero with the workshop faculty: Mario Castaneda, Tobey Clark, Elliot Sloane, Antonio Her-

This program is a public, private and academic initiative of the Simon Bolivar University, the Chamber of Commerce of Barranquilla, and the SENA (National Education Program). It was focused to strengthen the Chamber’s Health Cluster Strategy for improving the healthcare system in the city and to prepare a group of health professionals, young entrepreneurs, academics, and health sector industry professionals for the development and implementation of the continuum of care model. The programs also opened the opportunity for

development of technologies and software tools to support the model.

The workshop was oriented to present the state of the art on healthcare technology based on the convergence of information and communication Technologies with healthcare technologies. An important part of the activities was related to interoperability and connectivity and its role as the backbone for the continuum of care model. The remaining workshops covered the healthcare operations and administration, healthcare economics and finance, and implementation of healthcare models.

The venue of the workshop was in one of the auditoriums of the Simon Bolivar University. Tobey Clark, Elliot Sloane, and Antonio Hernandez, with Mario Castaneda as the team leader, implemented the three-day workshop. The local coordinators were Dr. Vladimir Quintero, Eng. Alexis Messino from the University, and Paul Pelaez from the Chamber of Commerce. Forty two professionals actively participated in the workshop.

The workshop developed and strengthened organizational capacity for evaluating, planning, and managing health care technology with emphasis on activities on the continuum of care. The themes addressed were: Leadership, Innovation, Management,

and Interoperability. The methodology was based on interactive presentations, discussions sessions after each theme, and identification of priority actions in support of the continuum of care model.

Participants got an overview of IHE. The IHE topic caught the audience’s attention due to the opportunity to include interoperability standards in the design of tools for the model. As a conclusion, an initiative was presented for the group of stakeholders in Barranquilla to start IHE-Colombia. Several organizations represented in the workshop started to register in the IHE, with the recognized leadership of Elliot Sloane on guiding and supporting this process.

The workshop was evaluated by the participants with high ratings and it was considered as one of the best activities of the year. In the closing ceremony, each participant received a Certification of participation. Also, each participant got an ACCE pen, a tradition of the workshops.

ACCE looks forward to the implementation of the “continuum of care model” and expressed interest in continuing the support of this initiative.

Antonio Hernandez, Chair

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Course attendees listen to workshop speakers in Barranquilla Colombia

Clinical Rotations in CE Education

One of the defining characteristics of modern healthcare is the abundant use of medical technology to provide clinical care and diagnosis to patients. In today's hospital, the patient is at the center of an intricate network of clinicians and medical devices that make up healthcare delivery. For this reason clinical engineering departments, whose responsibility is to manage and maintain healthcare technology, often interact with nearly every healthcare service at the hospital. This unique perspective allows clinical engineers to better understand the patient-clinician-technology interface, clinical workflows, and the importance of supportive services such as infection control and facilities engineering.

As part of the University of Connecticut's Clinical Engineering Master's Program, interns at various New England hospitals enroll in a clinical rotations course to become better familiar with technology intensive areas throughout the hospital. The course requires students to spend four to five hours a week as direct observers in technology intensive areas throughout the hospital. Although there are no restrictions on which areas can be chosen, it is recommended that students plan out a themed itinerary of specific locations in order to get an all-around view of interconnected groups within the hospital.

During my time as a first year intern at the VA Boston Healthcare System the clinical rotations course was instrumental in allowing me to directly observe clinicians using medical equipment on patients. Reading about the tools, procedures, and OR setting is informative, but physically observing a procedure such as an open heart valve replacement provides a higher level of understanding that must be experienced firsthand. From the sawing of the sternum to the use of the heart-lung machine, the operating room showcased an array of medical devices being used in harmony. Even observing the care taken in handling the mundane instruments such as scalpels and clamps gave

me a greater appreciation towards the role central sterilization plays within the surgical workflow. The task of managing the cycle of preparing surgical tool carts and organizing re-sterilized equipment proved to be just as detail-oriented as the cases themselves. My experience in the OR also allowed for a first-hand look into the importance of optimizing the positioning and accessibility of the aforementioned equipment. Each of the personnel in the room was efficiently managing their respective equipment from a meaningful location. From the anesthesiologist located slightly above and behind the patient's head with a clear of all vital signs information, to the circulating nurse distributing additional supplies from the corner documentation area.

Understanding clinical workflows within, and between, different departments is important knowledge for a clinical engineer. Projects including equipment procurements, department renovations, and turnkey designs all require an intimate knowledge of how the medical equipment will be used in the context of the clinician's roles and responsibilities within a given unit. During my rotation in the progressive care unit, I was able to shadow the nursing staff and learn the workflow of the unit from admission to discharge. Highlights during this process included gaining better insight on the nursing schedule, observing which devices and features were most important to their level of patient care, and finally looking at how nurses interacted with patients with regards to medical equipment.

Looking closer into the aforementioned interaction, I found that medical equipment often times created a sense of reassurance with the patient, but could also be a source of problems. This was sometimes the case when it came to alarms and medical equipment whose connections to the body could create discomfort. In addition spending time with nurse managers and assistant nurse managers provided insight into the some of the higher level chal-

lenges facing their departments such as alarms management. They also shared their thoughts on what additional training their staff could benefit from in regards to medical equipment. All of this information would prove to be extremely useful in coordinating a new physiological monitoring replacement project for the unit. Having interacted with the PCU nursing staff and leadership, I was able to help procure monitors that would meet the needs of the unit, develop a training plan for the new equipment, and facilitate the configuration of the equipment to match the type of care being delivered.

Although the majority of my time was spent in departments directly related to patient care, there were several other services I was able to shadow to gain a broader view of how the hospital is supported. Facilities/engineering provided an in depth look at the emergency power system at the hospital, as well as power quality engineering testing done by the department. A strong emphasis was placed on the fact that many emergency power issues arise from power-switching issues that result in a less than expected quality of power from one or more generators. Therefore facilities should identify the essential functions and minimum electricity needs to ensure life critical areas in the hospitals can continue to function. This includes prioritizing emergency power allocation to key resources such as HVAC systems, ventilators, and patient monitors.

Likewise spending time with a nurse epidemiologist from infection control helped provide a closer look at best practices related to medical equipment management. This included infection prevention strategies when interacting with medical equipment, as well infection standards that should be taken into account when procuring or implementing equipment to be used in a clinical setting.

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View from the Penalty Box

As I write this it is early September with great weather and a sense of frustration with what our government cannot seem to do, that is get along for the sake of all of us poor people who are so fully involved with healthcare.

Every day there seems to be another study published by “very smart people” that conflicts with what was published the day before and what is coming the day after. Why is healthcare such a problem? Very simply, information is not shared. Everyone is wrong except me. Who cares what the actual costs are as long as the government and insurance companies keep on paying? Unfortunately, the end of the line is getting closer and as that famous movie line, “SHOW ME THE MONEY”, may soon become “Where’s the beef?”. All of us in healthcare will have to be able to show actual costs, not wild guesses in the engineering design field. When we as engineers try to bring solutions to problems that involve more than just a device, the push-back that we often get is “Well we have always done it this way and it will be difficult to change our way of doing things”. How many hundreds of companies have gone out of business because of their refusal to change how things got done? Hospitals are falling into the same trap They may have a great looking lobby, but the rest of the facility is dirty. Too many of the workers are just there to collect a paycheck and not really to work changing things. Some may be driven by unions; others by loyalty to the past or just plain don’t care as long as the pay check is there. We need to change our way of doing business making sure that the patient is always first and that we do our very best to treat that patient well and get them out of the hospital as soon as safely possible.

In talking with an employee of a medical software company, a very big one, it was mentioned that they just went through a major internal battle over email. Some years back they developed an in-house program, but had to develop other programs for email as not all divisions had the same software. Finally in September of

2013 they agreed to go to Outlook, but the conversion was slow. After several years and several millions of dollars they stopped the development of a transcription program and are going with an off-the-shelf program. Maybe this company will live on now that it has gotten away from the “NIH” syndrome, (Not Invented Here). If something is working well and is reasonable in cost we should accept it and bring it into healthcare as it will keep costs down.

For the past few years most of my time has been spent developing products and services for the international markets. The lessons I’ve learned as a clinical engineer for over 20 years are sure helping in the development of the products and services. Over those years we have seen about every possible bad design, wrong application of a good technology or just too many features, controls or options for a good device that can be used by almost anyone. During those 20 plus years working in hospitals I learned that if it can be used wrong it will be. Coffee will be spilled into the unit. It will be dropped, several times. It will have to pass the “tape test” for repairs. White tape if done by a nurse. Red tape if done in CPD Black tape if the electrician got to it or worst of all, duct tape. It will have a sign taped to it saying “BROKEN” with no information as to what is wrong so we start the troubleshooting from the very beginning. It is surprising how many of these “BROKEN” devices we test and find nothing wrong. But we also cannot find who put the sign on the device and why. This is why communications between departments is so critical.

In addition, the hospital-vendor link is extremely important and all of us need to utilize it as much as possible. I am not sure what has happened over the years on this link but all too few exist today. One person said to me that it is due to the FDA and that the manufacturers are leery of having any negative information as the FDA might jump on it and force the company to recall a device or issue warnings on its usage. Whatever the reason, we need to get that link back in place so



improvements can be made to devices, programs and other services.

Last item, what are your thoughts on the ratings that Consumer Reports did on hospitals? Hopefully it humbled some of the hospitals that are living on past glory and not working to keep the patient first.

See you at the rink.

Dave Harrington

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Clinical Rotations

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Medical devices are only one piece in the large puzzle of delivering effective patient care. As an intern who had previous experience working with medical devices, the clinical rotations course has helped me expand my knowledge of how the devices are used within their respective workflows. Looking forward I hope to use this knowledge on future projects in order to help provide the best environment of care for those using medical technology, and ultimately the patient.

Jaspreet Mankoo

Jaspreet.Mankoo@va.gov

Jaspreet Mankoo is a Master's candidate in the UConn clinical engineering program and entering his second year of internship with the VA Boston Healthcare System.

Welcome New Members

Name	Class	Job Title	Company	Country
Chirag J. Pujary, MS	Individual	Clinical Engineering Manager	UMASS Memorial Medical Center Worcester, MA	USA
Semarjit Singh Bhular	Individual	Regional Director	Smart Instruments Sdn. Bhd	Malaysia
Abdullah Farid, MSEE	Individual	Chief Biomedical Engineer	Rawalpindi Institute of Cardiology	Pakistan
Oscar Sady Orellana	Individual	Biomed eng Consultant/Professor Biomedical Engineering	Interamerican Development Bank. Central American Technological University	Honduras
Samantha M. Herold	Candidate	Clinical Engineer Intern/Graduate Student	ABM/UCONN	USA
Jagadesh Kumar Dhayalan	Associate	Biomedical Engineer	Madras Medical College & Rajiv Gandhi Government General Hospital	India
Darcy Del Dotto	Candidate	Clinical Engineer Intern/Graduate Student	Mass General Hospital/UCONN	USA
Hannah M. Frank	Candidate	Clinical Engineer Intern/Graduate Student	Brigham and Women's Hospital/UCONN	USA
Mahesh D. Shukla, BE	Individual (Institutional)	Chief of Biomedical Engineering	Lebanon VA Medical Center, PA	USA
Leslie Baggesen, BME	Associate (Institutional)	Biomedical Engineer	New Mexico VA Healthcare	USA
Whitney St. Pierre	Associate (Corporate))	Dir. Of Marketing	Extension, INC. Wayne, IN,	USA
Brian McAlpine BSEE	Associate (Corporate))	VP of Product Management and Marketing	Extension, INC. Wayne, IN,	USA
Neil Henry	Associate (Corporate))	Sr Product Manager	Extension, INC. Wayne, IN,	USA
Jenny Kakasuleff	Associate (Corporate))	Marketing Manager	Extension, INC. Wayne, IN,	USA

2014 ACCE Advocacy Awards: Call for Nominations



The ACCE Board and Advocacy Committee recognize the past award winners and are pleased to announce that nominations are now being accepted for these awards. Please take the time to nominate worthy colleagues today and contact students to submit their papers. Just email the nomination form with recommended individual(s), justifications, and/or papers to advocacychair@accenet.org by January 17, 2014.

These awards will be presented at the 2014 ACCE Awards Banquet to be held at HIMSS in Orlando FL in February 2014. Awardees will also be recognized on Sunday June 1, 2014 at the AAMI conference-ACCE membership meeting in Philadelphia PA.

Thank you for submitting nominations!

Awards criteria

Ilir Kullolli

ACCE Vice President

Perspectives from ECRI Institute: Mentoring



Eric Sacks, Director of ECRI Institute's Healthcare Products Alerts

In his President's Message this month, Jim Keller puts forward the idea of an ACCE mentorship program to help guide the emerging generation of clinical engineers to leadership roles in the profession. A lot has changed in clinical engineering over the past three decades and with the ongoing development, implementation, and improvement of HIT, change will likely accelerate over the next decade. A profession once focused on equipment calibration, component-level circuit repair, and electrical safety testing is now fully engaged in: network integration of most devices and systems; ensuring that those devices deliver information reliably into EMR and other data-driven systems; cyber security; technology planning; and other aspects of life-cycle asset management. These technology management demands are behind much of the projected growth in the Clinical Engineering profession that Jim noted in his message. There is a great deal of experience that today's Clinical Engineering leaders can bring to a mentorship by sharing both clinical and technical knowledge, and professional and business wisdom. And there is another important inheritance that we can bestow to the next generation and that is a definition of the most important technology management problems that we have never been able to solve combined with a challenge to use their "next generation" information technology skills to solve them.

The emergence of HIT and the pending implementation of UDI (Universal Device Identifier) present huge opportunities to enhance the science of healthcare technology management and the business of healthcare. Think of a day when we won't have to manually search for recalled monitoring leads because hospital inventory data includes not only the dates that affected catalog numbers were purchased, but also a) the specific storage locations of affected lot numbers currently in stock throughout a healthcare provider organization and b) which patients have been treated with affected product before the recall was initiated. Think of a world where devices are not only easy to locate for maintenance and repairs, but where software updates and even repairs can be reliably applied remotely. Think of a world in which a much larger proportion of healthcare technology is used in the homecare setting and where it is practical for Clinical Engineers to provide the same level of service and consultation to homecare nurses and patients that they currently provide to the nurses in the ICU at the hospital where their office is located.

It would be impossible to predict with any reliability which specific opportunities will be realized and which will ultimately have the biggest influence on patient care. It would be even more unlikely to predict how such technology developments will be accomplished. So we can't provide a cookbook or even a roadmap for the next generation of Clinical Engineers, but we can provide a definition of the problems. The problems we were never able to solve with today's technology. The risks we could only partially mitigate. The inefficiencies that we were forced to endure until a day when a better way is innovated.

As you think about the serving on ACCE's mentorship task force or participating as a mentor, consider how you can define our current technology management limitations and the specific roadblocks to overcoming them. Whether the problems be mechanical or electro-

magnetic or digital or political, by defining these problems, you will equip the next generation with challenges that will inspire them to apply their next generation skills to innovate a healthcare technology world that we can't even imagine. And while you are waiting for that future to arrive, please share your thoughts on these challenges with this newsletter and with ECRI Institute. The current generation of clinical engineers still has many milestones to reach before passing the torch. Collaboration is the way.

Eric Sacks

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AAMI Update

(Continued from page 3)

agency should define include cybersecurity risks, cybersecurity risk analysis, and cybersecurity risk management, she said.

In addition, AAMI asked the agency to clarify whether "fail-safe" is a defined regulatory term. If so, the FDA should include it with other definitions, according to the comment. The draft guidance uses the term when recommending that companies implement "fail-safe" features to ensure a device's functionality, "even when the device's security has been compromised."

The comment also recommended that the FDA consider two standards—ANSI/AAMI/ISO 14971:2007, *Medical devices – Application of risk management to medical devices* and ANSI/AAMI/IEC 62304:2006, *Medical device software – software life cycle processes*—to ensure consistency and harmonization. To read the draft guidance go to: <http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/ucm356186.htm>

AAMI staff

Healthcare Technology Foundation News

Welcome new Board Members!

HTF extends a warm welcome to Barrett Frankin and Steve Merritt, two new board members. Both are ACCE members. They will attend their first meeting in September. We look forward to their contribution on HTF initiatives.

Advisory Panel

HTF is continuing to look to strengthen its advisory panel. Various groups have been in contact with partner organizations with the goal to foster collaboration which may result in additions to the advisory panel. Organizations including AARC, HIMSS, American Association for Home Care, and Georgia Tech Research Institute. Let us know of any other groups that you think would fit our mission.

Members Making Noise (or helping reduce!)

HTF board members have been heavily engaged with AAMI HTSI on the alarms management webinar series. Marge Funk has been assisting as developer and moderator. Tom Bauld will be a speaker on "Educating and Training Staff". See <http://www.aami.org/htsi/events.html> for more information.

Tobey Clark and Jim Keller will be speakers at the AAMI/FDA Summit on Healthcare Technology in the Nonclinical Setting. Jim will participate in the session on Environment of use considerations. Tobey will participate in the session *lenticled nstructions for Use: Ensuring That Patients and Caregivers Understand*. It is a perfect opportunity to share our Patient Safety and Education focus efforts. Are you aware of this focus for HTF? Please visit <http://www.thehtf.org/patient.asp> for more information and checkout the patient education brochures.

We also had a group of members participate in the kick-off ACCE Teleconference session: *Alarm Management Best Practices*. Tom Bauld, Izabella Gieras and Jim Keller hosted this webinar to provide resources

and proven systems based on best practices to enhance alarm management and meet the Joint Commission recommendations.

Patient Education on Technology Safety

Our newest patient safety brochure entitled *Home Infusion – A Safety Guide for Patients and Caregivers* is currently being translated into Spanish and will also be posted on the HTF website. A video based on the brochure has just been completed will also soon be on the website.

We are also making good contacts with partner organizations encouraging them to distribute and announce or patient education materials. Plans for future topics are being finalized. The next topic is expected to cover beds utilized in the home setting. If you have any suggestions on patient education materials please contact Jennifer Ott at secretary@thehtf.org

Clinical Alarm Management

With regard to clinical alarms, Marge Funk is working on two separate articles. One for the American Journal of Critical Care which will summarize the nursing results from the clinical alarm survey, and a second on a review of the comments from the last survey. HTF members were also part of an AAMI News article further discussing the Alarms Systems Management Roundtable. This is such a hot topic and we are pleased to have people engaged at various levels.

Managing Risks of Integrated Systems & Networks in the Healthcare Environment

Significant progress has been made on HTF's newest high impact project. RFPs were reviewed with AAMI and writers were selected. All writers are of excellent quality and have experience representing the hospital community, industry and standard organizations. Copyright for the training material is to be shared between HTF and AAMI. Two face-to-face training workshops are planned for Febru-



Improve healthcare delivery outcomes by promoting the development, application and support of safe and effective healthcare technologies.

ary and April and additional workshop (after coordinating schedules) will be offered in conjunction with the AAMI annual meeting. HTF project task force (and any other willing assistants!) will review the training material and approve prior to final acceptance of the project deliverables. HTF is working with AAMI on creating a folder on their website for promotion. We are looking for at least two medical centers that are willing to host a workshop. Any volunteers? Any recommendations? The feedback from the workshops will be used to modify the content as needed and prepare it for conversion into eLearning modules on AAMI university project.

Supporting Organization

HTF is proud to support the 5th Annual Medical Device Connectivity Conference and Exhibition. It will be held in Herndon, VA on November 21st and 22nd. Please see <http://tcbi.org/mdc2013/> for further information.

Be sure to visit the HTF website to see all the latest news from the foundation, our programs, and resources. While you are there, feel free to hit the DONATE NOW button. We will accept them anytime and they are always tax deductible!

Tobey Clark, MSEE, CCE, President

president@thehtf.org

Jennifer C. Ott, MSME, CCE, Secretary

secretary@thehtf.org

2013/2014 ACCE Webinar Series:

Solution edition

The American College of Clinical Engineering is putting on the 2013/2014 webinar series to address challenges facing today's clinical engineering professionals. This year's "Solutions Edition" moves beyond the issues and into real life solutions and strategies providing a "back of the book" answer key to today's biggest issues as authored by the industries top talent. This year's program will include ten web-based sessions occurring once a month running from September 2013 through June 2014. Sessions will include Alarm Optimization, Integrated Clinical Systems Management, RTLS 2.0, and CE's Role in the Continuous Care Model: Home, Hospital and Back Again. Information on the series can be found [here](#). Please check the ACCE website for updated information and registration. The [ACCE calendar](#) has also been updated with the dates for the webinar series.

Jacob Johnson, Education Committee Chair

ACCE Job Opportunities

To view information on available job opportunities, visit the [ACCE Job Postings site](#)

For information on posting job opportunities, please contact Dave Smith at advertising@accenet.org

ACCE Calendar

October 3, 2013

ACCE Fall 2013 Virtual Membership Meeting

October 8-10, 2013

ACEW—Location: Florianopolis, Brazil

November 21-22, 2013

5th Annual Medical Device Connectivity Conference and Exhibition, Herndon, VA

January 27-31, 2014

IHE North America Connectathon
Chicago, Illinois

February 23-27, 2014

HIMSS 2014
Orlando, FL

May 31-June 2, 2014

AAMI 2014, Philadelphia, PA

June 1, 2014

ACCE membership meeting & awards reception
Philadelphia, PA



AMERICAN COLLEGE OF CLINICAL ENGINEERING

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