

ACCE News

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For International
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President's Message



"Meet the new boss..."

Some of you 'more senior' members may recognize the previous line. For the rest, it's a line from "Won't Get Fooled Again" by the Who (the music is also the theme song for one of the CSIs). So, here I am, your new president. This article will reflect some of my recent experiences, how I can learn and grow from them and how I hope my term unfolds.

First, my gratitude to the prior Board. You have done a lot to move ACCE forward, I hope I can continue the progress. And, of course, thanks to all of you for selecting me as your new President. I had left the Board for a couple of years while serving as the Healthcare Technology Certification Commission (HTCC) chair and thought that was it. Then, shortly before I was to retire from the VA, Jennifer Jackson calls me. She wanted to make sure I didn't get bored when I retired and had a deal for me...and here I am

On to some thoughts.

Our careers. At the last Manny Meeting, I met a new CE from the VA. Apparently, I'm now some kind of legend there and she asked for some career advice. Since my career followed anything but a traditional path, I wasn't sure I could help. Thinking about it, maybe my experience and choices can help; so here goes.

First, follow your passion. I stumbled into this field as a work-study student while achieving my BSEE. I looked at the options after a year working in the medical records file room and saw Biomedical Engineering. I called and met with the shop supervisor; when I saw what they did, I could think of nothing better to do with my skills than help my fellow veterans. That passion guided my entire VA career. It may not have 'advanced' my career like others, but I never regretted that choice.

Who is your boss? One of my peers said his job was to make his boss look good. Strangely, I never really considered that directly. I focused on doing the best I could to improve patient care. That usually, but not always, made my boss look good. Occasionally, it put me in direct conflict with my boss and risked them looking bad. My 'boss' was always the patient and those supporting them.

Learn from everyone. Don't assume that someone without your level of education is not as smart as you. Even now, education is as much a matter of circumstance as ability. By the way, I came into this late; I was 28 when I started on my degree, and that was ONLY because my veterans disability forced me to change careers. One of the smartest men I knew was a commercial fisherman with a high school education. One department manager said he'll never hire a CE without a MS; if my first boss (who was also his) felt that way, I wouldn't have had a career. I still 'only' have a BSEE: I'm mostly self taught in this field; I still managed to do a lot of good, achieve certification, and have a great career.

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View from the Penalty Box

In hockey, the penalty box, sometimes called the “sin bin”, is where players who don’t play by the rules go to spend some time, 2 minutes for most penalties, 5 minutes for fighting and 10 minutes for “mouthing off” to the officials or other players. Having spent some time in that location, you got to see the game in a different way. Not being involved for the time you are in the box is difficult and if the player is smart, they watch carefully to see if they can learn anything, even if it is how to get away with what they just did. Perhaps we should think about bringing the penalty box to our lawmakers and other government officials as a motivating tool to get things done. Our industry needs that motivation also as technology is growing so fast that too many of us are being left in the dust and patients are often not getting the care that is needed.

To illustrate the problem look at the cost of the drug for Hepatitis C. Hep C treatment costs about \$84,000 to cure. Politicians and pundits say that it is too much but what is the cost to the patient and society for not using the drug to cure the patient. Over the life of the patient I am sure that it is a lot more than the \$84,000. I am sure that, when cured, the quality of life of the patient and their family becomes better, more productive and less of a burden for everyone involved.

Look at the new technology that is getting some press coverage. There is a robotic system that is put onto a person so they can walk and use their arms. New computer driven arms are coming onto the market costing under a million dollars. However, a high school student, using a 3-D printer built a working hand for a friend for under \$300, A high school student did it, not some graduate student or PhD so things can be done for less money if we just work at it. Just think of all the injured soldiers we could help with good and low cost technology.

What many of our readers may not know is that in the 1950’s to 1975 range a majority of engineers in hospitals were involved with patient comfort, mobility, rehab devic-

es and specialty items for surgeons. We made things, got involved with patients and went home at night thinking of what we could do to improve the patient’s life, not how many needless PM’s or electrical safety tests that still needed to be done. We need to get more involved with creating new devices and procedures, gathering the data to support their benefits to everyone, not just a few, and sharing what we know with others via publishing or presenting. We, as a profession, need to get back to our roots of technology and applying that technology for the benefit of patients, their families and all of us who use the healthcare system. We know there will never be one device or program or interface that will solve all the problems that we have. We need to select the best technology to benefit the most people and move on. But there are these angry animals called lawyers and their colleagues called regulators that will take years to agree on the technology and allow for its use. Why does it take so long for approvals here in the US compared to other countries?

Statistics show that the US, compared to other countries, ranks well down the list on life spans, infant mortality, cancer treatments and general healthcare but is at the absolute top of the list, by a very wide margin, on the cost of our healthcare system. We need to relook at what we do and how we do it making sure that the patients receive the best healthcare for the best possible prices. We can do it, we did it in the past and we now just need to put the patient first, not the paperwork and legal documents. Just my opinion for what it is worth.

In closing, I saw a report in a newsletter about a device that clears up sepsis acting as an artificial spleen, but it will not be approved for sale for another 4 to 5 years. I do not want to be the person that has to tell the family that the recent death of a loved one could have been prevented but we are not allowed to use the items as it has not been approved by the right agency for use on the general population. Before the 1976 Safe Medical Device Act, if a physician needed something to save a life that



we, as engineers could provide, he or she would simply write a prescription for the device, we would make it and it would be issued. Nine times out of ten the patient got better and the patient that was lost probably had to wait too long for the device.

It is time to do more for patients!!!

Dave

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ACCE News

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International Committee

Appropriate Healthcare Technologies for Low Resource Settings



On September 17-18, 2014 the 8th International Conference on Appropriate Healthcare Technologies for Low Resource Settings - AHT2014 took place in London, UK. ACCE members Bill Gentles and Ismael Cordero presented and chaired sessions at this important event.

Research carried out by the World Health Organization (WHO) reveals that almost 95 percent of clinicians practicing in less developed countries are reliant on medical technology that has been imported. More than half of this technology, however, is not utilized since there are insufficient means to maintain the equipment or insufficient knowledge to operate it.

Subsequently, there is inadequate provision for administering healthcare in the developing world. Other problems include unreliable power and water supplies, inappropriate donations of equipment, consumables and pharmaceuticals, unsafe disposal of medical equipment and waste, political instability and war. The need is for appropriate, affordable, sustainable and quality equipment, supplies and support in both development and emergency situations.

The 8th Institution of Engineering and Technology (IET) International Conference provided delegates with a great opportunity to learn about the key issues surrounding healthcare provision in the developing world

and to network with international colleagues. All the abstracts are available on the following webpage:

<http://www.theiet.org/communities/healthtech/aht/seminars.cfm>

Everyone is invited to participate in the current post-conference on-line debate on the electronic discussion forum INFRATECH. For those who have not already subscribed to INFRATECH, instructions on how to subscribe can be found on the INFRATECH website.

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Peru: First Annual Conference on Innovation in Healthcare

ACCE member Frank Painter was invited to give a presentation at the First Annual Congress on Innovation in Healthcare in Lima, Peru on August 14, 2014. This two day program was attended by more than 300 hospital department heads and hospital administrators. The title of Painter's presentation was "Developments in Healthcare Technology – Planning for the Future" which focused on the value of planning before purchase, the importance of planning for maintenance at the time of purchase and how life cycle cost analysis can improve the reliability and availability of healthcare technology. Other speakers included leaders from universities, telecommunications, healthcare systems, National Academy of Medicine, and the Peruvian Social Security healthcare administration. Painter's hosts included ACCE member Mery Vidal from AUNA, a large healthcare system in the Lima area, Clinica Delgado, a new 250 bed state of the art hospital just opening in Lima and Seminarium, the congress organizer.,



Frank Painter

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Frank Painter, ACCE Fellow, makes a point during his presentation in Peru on "Developments in Healthcare Technology– Planning for the Future".

Update: Certification in Clinical Engineering

It's a new year for the Certification in Clinical Engineering (CCE) Program. Last year, a tremendous amount of work went into determining the appropriate path for the CCE program and transitioning to a new sponsoring organization. The Healthcare Technology Foundation (HTF) and ACCE worked diligently to help ensure a seamless transition of the CCE program.

The Certification in Clinical Engineering program consists of the Healthcare Technology Certification Commission and two Boards of Examiners, one in the US and one in Canada. The Commission is the governance organization. It manages and ensures the integrity of the certification processes, oversees the work of the Boards of Examiners, communicates to candidates, and helps to promote certification. Membership of the Commission includes 4 officers, 2 board

chairs, 5 individual at-large members, and 6 organizational representatives that represent the clinical engineering profession. The commission recently elected its officers, gained a new VA representative, and elected two new individual at large members, all with a great amount of experience in the profession. This year, the Nominating Committee employed a new campaign to solicit new members and received an overwhelming response with over 15 applicants for 2 positions. It's great to see such a large response from the clinical engineering community. It's important to the Commission to have a mix of experience and backgrounds to carry the knowledge of our history while planning for the future of certification in clinical engineering. The Boards of Examiners develop the examination content, review applicant eligibility and renewals, maintain the applicant handbook con-

tent, and conduct the oral examinations. The US Board has 11 members and the Canadian Board has 10 members, each including 4 officers. The CCE program Secretariat also provides a great amount of support for both Boards and the Commission.

The Commission and Boards of Examiners are energized and looking forward to working more directly with ACCE to better promote Certification in Clinical Engineering and streamline our communication. We are currently working with ACCE on updates to the certification website and better developing our communications through the various outlets that ACCE offers.

Matt Wheeler, HTCC Chair

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Volunteers Needed to Develop a BMET Certification Program for Developing Countries

There is no existing BMET professional certification program in developing countries. There is an opportunity now to create a flexible program that can make a difference for both public and private hospitals and health systems in many countries. A study group, facilitated by ACCE, is being formed to address this challenge, led by Pat Lynch.

Background: There are an estimated 200 WHO member countries; this is the potential audience. One major challenge in these countries is donated medical equipment, one of several management issues they face.²

There are hundreds of very well-meaning organizations which collect medical equipment and send it to struggling, poorly resourced countries. They collect anything and everything and ship it to other countries. Unfortunately, most of these organizations have no medical maintenance expertise, so the items sent are often incomplete, outdated, missing essential components, or unable to operate in the harsh environments that they are placed into. Given that the equipment is old, incomplete and the users are not

properly trained, the vast majority of donated equipment in developing countries ceases to treat patients within a year.

Here is where BMET (biomedical equipment technician) skills are needed. They – once properly trained and resourced - have the ability to operate almost any type of medical equipment. They know – or can rapidly learn - its function, operation, safety concerns and also know how to fix it when it breaks. These skills are rare. These resources can help improve the quality of life for many, many people, and save lives.

Why Now? Engineering World Health (EWH), www.ewh.org, is currently working with Ministries of Health (MoH) in five developing countries in Africa and Latin America to not only train qualified BMET candidates, but also to set up HTM programs. Because of EWH's sustainable track record, the GE Foundation has helped them, currently with \$1.5M funding, and a challenge to take this program to another 10 countries in the next five years.

Other entities have and continue to work on BMET training challenges in developing countries; certainly there is intent to partner with these groups to participate in this program, eg, WHO-PAHO, various local & global NGOs and hospital systems, Houston Rotary in Haiti, etc. However, to date, there has been no sustainable effort to develop BMET Certification programs for this audience. We believe we have an opportunity to change this now.

Assessment: At EWH request, there were recent discussions with the International Certification Commission (ICC) and AAMI BMET Certification leaders. They have contributed guidelines and recommendations to this effort, and may assist more later.

Body of Knowledge: Pat Lynch utilized the AAMI BMET Core Curriculum (AAMI 2013) as a baseline, and his extensive international HTM experience, to narrow the Body of Knowledge (BOK) to approximately 30% of

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President's Message

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Keep a sense of adventure- take risks. No real advance is without risk. Will you stumble and fail? Absolutely. Learn from the experience and keep going.

Find balance. The career is important, but don't let it be your life. Find a hobby, I suggest something entirely unrelated. For me, one of them is street rodding. As often as not, I'll be driving my 1940 Chevy to the annual AAMI Conference. I did 80% of the work myself – relearning welding, building the engine, modifying the body, etc. I find that focusing my energy on this helped clarify a lot of my work challenges.

This section closes with a Grateful Dead quote: "What a long strange trip it's been". I haven't followed an expected CE career path, but I don't regret it at all.

I also want to know what you need from us, your Board. Please feel free to contact any of us if you have suggestions and ideas. ACCE's strength is in its broad range of members working in a wide range of environments; that's a lot of wisdom. One member emailed me a couple of weeks back; said he'd like ACCE to focus more on technology and less on data collection and interconnects that everyone seems to not want to do. What do you think? Is there something we're focusing on that we shouldn't. Or is there something coming we need to learn more about? Of course, I may invoke a lesson learned early in this career: If you identify a problem or challenge, you'll likely be responsible for coming up with the solution.

Risking annoying that member that emailed me, I'll talk about interoperability. It's coming and it's going to be more and more important as we move forward. The motivation is basic – money. CMS reimbursements are tied to gathering more information. Our equipment will be the source for a lot of that information. Others are seeing this and acting on it. It's no coincidence that Cerner, one of the largest EHR vendors, is purchasing Siemens Health Services. Here's a link to the

announcement: <http://cerner.com/newsroom.aspx?id=17179877489&blogid=2147483710&langType=1033>. This purchase provides a path for them to provide a seamless package to hospitals. All the data and information flowing into the EHR and billing systems. That's appealing to someone building a new facility. Cerner and Siemens have been very active in the Integrating the Healthcare Enterprise (IHE) project (ACCE is a cosponsor of the IHE Patient Care Devices domain).

Our roles continue to shift and evolve. ACCE is ready to provide the information and guidance to our members and the healthcare world to help us be ready to manage and lead these changes.

Finally, I'd like to leave you with a little homework. In May, the President's Council of Advisors on Science and Technology sent a report on Systems Engineering in Healthcare. Jim Keller sent me the link and some suggested items to review. There's a lot to think about, and I believe Clinical Engineers are the perfect resource to help apply these principals and educate our

fellow healthcare professionals in Systems Engineering. The links to the report and a summary follow; Jim suggested focussing on recommendations 3,4 and 7 – they make a lot of sense.

[HTTP://WWW.WHITEHOUSE.GOV/SITES/DEFAULT/FILES/MICROSITES/OSTP/PCAST/PCAST_SYSTEMS_ENGINEERING_IN_HEALTHCARE_FACT_SHEET_-_MAY_2014.PDF](http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast/pcast_systems_engineering_in_the_althcare_fact_sheet_-_may_2014.pdf)

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With all that, I look forward to serving you for the next year.

Regards.

Paul Sherman

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... Appropriate Technologies

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For the debate, any topic covered by the conference can be raised (see the link to the abstracts above). A good starting point is any of the topics covered by the panel discussions at the end of Day 1 and Day 2 of the conference including:

(i) Training Institutions or Partnerships: In general, what are the advantages and disadvantages of (a) formal academic courses (with qualifications) for Bio-medical Engineering Technicians and (b) on-site hands-on training through partnerships and other organizations. Most delegates thought that it wasn't an either/or choice, but what is the right balance between the two?

(ii) Is AHT worth the effort? It is clear that there are many worthwhile AHT activities throughout the world. Is the effort worth it? Could there be better co-ordination and, if so, how could this be achieved? Any other thoughts?

Ismael Cordero,, ACCE, Board Member at Large

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ACCE Job Website Job Postings

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

AAMI Update

Ventilator Summit Shines Light on Common Terminology, Training; AAMI Asks FDA to Clarify Standards Expectations; OR Humidity Question Addressed with Systems Approach

Creating a culture of safety, having a common ventilator taxonomy, and ensuring competency training for healthcare professionals, are three areas that need to be addressed to improve the treatment of ventilator-dependent patients, according to participants at an AAMI/FDA summit.

Attendees, who included clinicians, regulators, healthcare technology professionals, and industry executives, discussed these and other issues during the two-day ventilator technology summit, held Sept. 16–17 in Herndon, VA.

The summit began with a call for the creation of a culture of safety—a theme echoed by several speakers. “Healthy work environments don’t just happen,” said Connie Barden, chief clinical officer with the American Association of Critical-Care Nurses. “The onus is on us as leaders to promote a culture of safety.”

Barden said communication is key to ensuring patient safety. She cited statistics from The Joint Commission showing that 65% of all sentinel events are caused by communication issues.

“We’ve got to bust up the hierarchies and traditions in healthcare,” she said, adding that having a happier healthcare workforce leads to better patient care. She cited a study in the *Journal of Nursing Administration* that found that patients who are cared for in “better” working environments had a lower chance of dying.

The audience agreed that enhanced communications are needed. Several suggested an information exchange between organizations to share not only evidence and best practices, but also to communicate near misses to help others avoid similar incidents.

Participants emphasized the need for consistent terminology. This inconsistency results in compromised patient safety, a lack

of comparative effectiveness data, and confusion over how to order and use various pieces of equipment.

The potential for further confusion is compounded when pieces of equipment are labeled “ventilator,” when they are something else, such as a resuscitator, said Dario Rodriguez, health services and public health research manager at the U.S. Air Force [School of Aerospace Medicine](#). “Nomenclature can get in the way of giving the appropriate level of care,” he added.

He also pointed out that clinicians may not have adequate exposure to ventilators, so having standardized terminology would help them.

Training also was a recurring theme throughout the summit. Scott Colburn, director of the standards program at the FDA’s Center for Devices and Radiological Health (CDRH), pointed out that healthcare professionals face a difficult situation with the sheer number of ventilator types. “I could be trained on this one ventilator, and turn to another and not know how to use it,” he said.

The audience discussed what culture changes are needed to shift to a better training model. Suggestions included having a standard certification process of training, changing to a risk-based model, and making it acceptable for a healthcare professional to say he or she doesn’t know how to use a piece of equipment.

AAMI has sought clarity on what considerations U.S. Food and Drug Administration (FDA) review staff would like the association and similar organizations to take into account during the standards development and revision processes.

The association made the request in written comments to draft guidance the agency issued in May on the appropriate use of voluntary consensus standards in premarket submissions. The draft guidance builds upon a document released in 2007, adding information on how applicants have used standards inappropriately in their premarket submissions.

In its comments, which generally welcomed the FDA’s revision, AAMI said that it would be helpful “to know more about ‘how’ standards are used incorrectly or inappropriately, so that AAMI can produce tools (e.g., checklists or guides) that make it easier for industry to know what they are doing incorrectly.”

Additionally, AAMI said having a list of what reviewers are looking for in standards would be beneficial, particularly since representatives from the FDA are not always present at standards committee meetings. “AAMI believes it would strengthen standards and improve the medical device industry’s understanding of what’s important in terms of substantive content of standards,” the association said.

AAMI also asked that the agency reorganize the document’s structure to make it more usable as a quick reference guide. It proposed an outline that includes a section on use of standards that is subdivided into “methods of use” and “general process.”

In addition, AAMI suggested that the document include examples or case studies “to better articulate excellent practices” and highlight potential incorrect uses of standards when submitting a premarket application.

AAMI also recommended that the agency reformat the Standards Data Report Form, also known as FDA Form 3654. The example form provided in a link from the draft guidance is “poorly developed” and should be updated so device manufacturers can add pages and lines.

Humidity—a seemingly mundane topic—has become the center of debate involving the safety of operating rooms (OR) and the equipment and supplies used within them. To work through this complicated issue, AAMI will convene a meeting Oct. 23, 2014 to discuss how healthcare delivery organizations (HDOs) can follow new and broader facilities standards allowing lower humidity levels in the OR, while following device manufacturers’ instructions for use.

The intent of the meeting, according to AAMI President Mary Logan, is to bring

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AAMI Update

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together regulators, accreditation organizations, representatives from the medical device industry and HDOs, sterilization experts, and group purchasing organizations to discuss issues related to humidity levels in the OR that have not been addressed by standards and to do so with a systems focus. AAMI has been touting the need for systems thinking in healthcare for several years, and President Obama's Council on Science and Technology affirmed the need in its recent report on systems engineering in healthcare. This problem with humidity in the OR illustrates that need in an easy to understand way.

"Stakeholders have recognized that we have a big problem that has led to confusion in the field," said Logan. "Facilities standards are more permissive and device and supply instructions are stricter. Unfortunately, it's easy to see how we have gotten here, as healthcare has yet to fully embrace a systems approach. Humidity is 'managed' by facilities staff, so they tend to think about it as a facilities issue. This meeting will aim to start broadening everyone's thinking."

Humidity in the OR is not a new issue, but there has been debate over what the correct range should be. The basic issue is that a humidity-level change for ORs that was approved by a federal agency and various groups can conflict with the manufacturer's recommended humidity level for some medical equipment and supplies used in the OR.

In April 2013, the Centers for Medicare & Medicaid Services (CMS) issued a categorical waiver of the Life Safety Code that would allow the anesthetizing locations of HDOs to operate with a relative humidity (RH) of equal to or greater than 20%, rather than the previous requirement of equal to or greater than 35%. The upper limit remained at 60%. The range mirrored a new national standard set by the American Society for Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE), which helps develop standards in the building industry. That organization had lowered the required RH levels from a minimum of greater than or equal to 30% to 20%. ASHRAE collaborated with the National Fire Protection Associa-

tion, The American Society of Healthcare Engineering (ASHE), the Centers for Disease Control, and the Association of Perioperative Nurses (AORN) to determine the 20% to 60% range was acceptable. The Joint Commission also concurred with the change.

Despite the cost savings and other benefits for HDOs, medical device manufacturers have said that setting the humidity levels too low can affect how their products perform. Lower RH can raise the chances of an electrostatic charge buildup. The resulting larger electrostatic discharges potentially can cause the destruction of parts, premature device failure, calibration issues, and erratic device software behavior.

The RH also can affect the shelf life of some sterile supplies, as companies test their products in certain conditions. The instructions for use typically specify the appropri-

ate RH, and manufacturers believe that HDO staff should know and adhere to the correct level.

Indeed, not knowing the level can lead to a citation, as one California hospital discovered earlier this summer. A CMS surveyor cited the organization for setting the humidity level lower than that specified in the instructions for use for certain sterile products being used in the OR.

"We want to avoid having other HDOs being cited when they believe they are following the rules. If we work together to develop a unified approach to this issue, we are less likely to cause chaos and confusion out in the field," said Logan.

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Perspectives from ECRI Institute: Networking with Network Experts



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

At a recent meeting convened by ECRI Institute, leaders of the health technology management community shared their thoughts on the biggest challenges facing the profession today. As has been a trend for the past decade or more, almost every participant raised topics relating to the interfacing of medical devices with IT systems as foremost among their professional challenges.

The problems they identified ranged widely from fundamental device interoperability to effective collaboration with IT professionals. Some of the identified problems were: Difficulties related to systems that run on a PC, but do not work when the machine is updated to the 64-bit version of Windows 7; Difficulties with systems from different vendors that were successfully interfaced until a software update was applied to one of them; and Concerns about being prepared for the 2016 changes in Medicare CT scan reimbursement rates tied to the ability to demonstrate compliance with the NEMA XR-29 CT radiation dose control standard.

There was general disappointment among HTMs about the current stage of electronic medical device data exchange with EHRs and other systems with some lamenting that few systems have been successfully networked to accomplish more than one-way delivery of a few basic parameters from de-

vices. Some conceded that their SmartPump networking implementations were limited to the drug libraries for now and foresaw significant challenges, including potential patient safety risks, in implementing automated programming of pumps.

However, there was optimism that taking information exchange to the next level would have a beneficial impact on clinical workflow and might substantially strengthen the relationship between HTMs and clinicians.

On the subject of working with IT professionals, the trend towards clinical engineering reporting through a CIO seems to be continuing. Importantly, some HTMs have made progress on developing relationships with their IT counterparts in which each understands and appreciates the strengths and expertise that the other can contribute to a project team. The relationship building can be a challenge because of the high rate of turnover in some IT departments.

Finally, consolidation in the healthcare provider industry will continue to force change. The project you complete this year to integrate systems may have to be replaced when your health system merges with another next year. But the skills you develop along the way will serve you well as more technology change is forced upon the healthcare provider setting.

One good way to learn and get advice is to network with other HTMs who may be going through or recently completed the same project that you are starting today. There is presently a [lively discussion titled Medical Device & EMR Connectivity](#) on ECRI Institute's BiomedTalk discussion forum for HTMs and BMETs. To join the free forum, go to biomedtalk.ecri.org and click "Register with ECRI Institute's Biomedtalk."

Eric Sacks

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International BMET Certification Development

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the Core Curriculum detailed skill-sets. Pat envisions gathering a group of volunteers from ACCE and perhaps the wider HTM community to develop a Certification exam and process. The authors believe that 80% of the resulting draft Exam will be generic (eg, electronic equipment theory and troubleshooting skills, and the other 20% country-specific issues.

Cultural Relevance: For example, the CORAL group, the biomedical engineering leaders in Latin America, have agreed to assist this

process to make the exam and process relevant for Latin American BMETs.

Languages/Countries: Exams are envisioned first for the Spanish-speaking candidates, then French and English with other language groups to follow.

Recommendation: ACCE members are asked to volunteer to work with Pat and others to create a BMET Certification exam relevant to developing countries' situation, and to help advise the process to pilot this program.

Next steps: Assemble a team to work on the project, with a first meeting projected for late October 2014. If you are interested in participating, please contact Patrick Lynch (www.BiomedswithoutBorders.com), Ed Hutton at EWH (<http://www.ewh.org/professionals/bmet-training>) or Tom Judd.

Tom Judd, ACCE Advocacy Chair

judd.tom@gmail.com

Welcome New Members: ACCE's Growth Continues

Let's welcome our newest members, approved by the Membership Committee and supported by the Board of Directors.

Candidate Members:

Chiara Mengucci — Graduate Student, Università Degli Studi di Trieste/ Italy

Darshil D. Modi — Graduate Student, University of Connecticut/USA

Jesus Enrique Quintero Lopez — Graduate Student, University of Connecticut/USA

Tyler Moxam — Graduate Student, University of Connecticut/USA

Emmelene Yuan — Graduate Student, University of Connecticut/USA

Abbiramy Arumugam — Graduate Student, University of Connecticut/USA

Danielle Cowgill — Clinical Engineer, Kaiser Permanente/ CA/ USA

Associate Member:

Santiago Yeomans Almada — Service Operations Manager, Doctors Hospital / Mexico

Juan Sanchez Vasquez — Technical Service Manager, Seijito Yazawa Iwai Honduras S.A./ Honduras

Individual Members:

Kimberley J. Greenwood — Director, Clinical Engineering, The Childrens Hospital of Eastern Ontario / Canada

Duane L. Hart — Clinical Engineer, The Ohio State University Wexner Medical Center, Columbus OH, USA

Corporate Members

Megan Bukalew, Clinical Solutions Specialist.— EXTENSION Healthcare, Indiana, USA—Associate Member

Institutional Members:

Cedars-Sinai Medical Center, Los Angeles, CA, Sue M. Clay, Associate, Project Manager.

Department of Veterans Affairs:

Jennifer DeFrancesco, Individual ,Chief Biomedical Engineering ,Indianapolis VAMC

Jonathan Riscica, Individual , Biomedical Engineer ,VA Pittsburgh Healthcare System

Elena Simoncini, Individual ,RTLS Manager , South Central VA Healthcare Network

David Pillittere, Individual ,Chief, Clinical Engineer Providence VA Medical Center

Mohammed S. Rahman, Individual , Chief, Biomedical Engineering , VA Medical Center New Orleans

Keara Ruether, Individual , Supervisory Biomedical Engineer , Syracuse VA Medical Center

Britton McCaskill, Candidate , Biomedical Engineer , Fayetteville VA Medical Center

Jordan E. Anderson, Associate , Clinical Engineer ,Providence VA Medical Center

Dr. Dan Zhou Receives ACCE's Antonio Hernandez International Clinical Engineering Award



On September 26, 2014, three members of the ACCE International Committee (Yadin David, Binseng Wang, and Jim Wear), along with the ACCE Secretariat (Suly Chi) presented the "2014 Antonio Hernandez International Clinical Engineering Award" to Dr. Dan Zhou at the First China International Congress of Clinical Engineering & Information Technology, held in Wuxi, China. Dr. Zhou was unable to attend the ACCE Awards Ceremony held in Philadelphia in June. Fortunately, the International Committee members mentioned above were invited to attend this Congress in which the Chinese College of Clinical Engineers was founded. Drs. David and Wang also presented keynote speeches at this Congress.

James Wear

Membership Committee Chair

james.wear@gmail.com

Healthcare Technology Foundation News

The Healthcare Technology Foundation was privileged to have two board members, Paul Coss and Ronda Bradley, participate in the recent FDA/AAMI Joint Summit on Ventilator Technology held on September 16 and 17. Here is a synopsis of their experience.

We just finished two very intense days focusing on ventilator technology. What's wrong with it, what's right, what are the barriers to improving the technology – technology limitations, market limitations, regulatory hurdles, customer requirements and the issues/concerns of manufacturers? It was a fascinating and frustrating two days, with heated discussions, passionate concerns, focus on making being on a ventilator safer for the patients, easier for staff while also pushing the limits to improve offerings.

Well lead by the AAMI team and their skillful facilitator, we were kept on track.

Discussion was encouraged without going too far off course and we were kept to a proper time schedule. At the end of the first day there seemed to be an impossibly large number of topics for us to address without a clear path to closure.

The second day was more contentious with a focus on the regulatory issues that seem to be keeping technology currently available in the Europe from coming to the US. Manufacturers and the FDA spoke and passionate discussion followed. Several of the key action items are related to these issues.

At the end we worked to trim a huge list of action items into a manageable list and participants will follow up with assignments to working groups. It was a very interesting meeting and clearly we are at an early stage in addressing these issues.

For those who have not had a chance to



participate in one of these summits, we strongly recommend that you find a way to participate. You will be part of determining the direction of health care. Stay tuned for an official report from AAMI on the results.

Please let us know if you have any questions.

Paul Coss, HTF Vice President

vicepresident@thehtf.org

Ronda Bradley, HTF Advisory Board Member

VENTI8@sbcglobal.net

Ventilator Summit Action Items

Common ventilator taxonomy: Define, start teaching, talking and reporting common ventilator taxonomy; want something usable and simple; taxonomy to include coded terminology for communication with ancillary systems; Requiring manufacturers to incorporate common ventilator taxonomy

Competency: Education; training; competency testing; no clinician would be using a device for which they haven't been trained

Human Factors/Usability: Someone could approach any model and would be familiar with the operating set-up; Make ventilators intuitive to use; Enable or facilitate more consistent user interfaces

Interoperability: Better integrate all ventilators to patient monitor, other devices and EMR

Biocompatibility: Need for a consistent and transparent pathway forward for biocompatibility

Alarms standardization: Clear understanding of what is required for alarms standardization and offering customization packages for alarms to end users

Closed Loop System: Identify a clear path to development and implementation of physiological closed loop systems

Collaboration between industry and clinical: stronger, more open ways for industry and clinicians to communicate more regularly to provide a feedback loop beyond a single event; communication pathways between industry and clinicians for continuous learning

Collaboration: Strong need for **cooperation, coordination and collaboration between regulatory bodies**

Create a culture of safety: Overarching theme

Consideration: *Don't limit innovation, research and development and competition*

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). You must [login](#) to the ACCE website to view the code. Then visit [LWW.com](#) to enter code.

Wanted Clinical Engineers: What Is It That We Do?

Join ACCE in helping to answer the question: What does a Clinical Engineer really do at work every day? ACCE is currently looking for interested members to participate in the development of the next Body of Knowledge (BOK) Survey. The BOK Survey is an essential component to understanding the scope of

practice for Clinical Engineers during their day-to-day work. The results of the survey are compiled and analyzed for use in designing questions for the Clinical Engineering Certification exam (CCE). These results will be used to ensure the certification exam closely matches

the knowledge that clinical engineers need to function in their jobs.

If you are interested in participating in this extremely valuable and relevant project, please contact ACCE president Paul Sherman at

paulshermancce@gmail.com

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: whyman@tamu.edu.

Send manuscripts to William or Michael Leven-Epstein at: michael.levinepstein@gmail.com



ACCE Calendar

October 9, 2014

Educational Webinar: IHE PCD MEM—Integrating Device Data to CMMS

November 13, 2014

Educational Webinar: Service and Support Strategies

November 20-21, 2014

[The Clinical Alarm Safety Symposium](#), Herndon, VA

January 28, 2015

IHE North America Connectathon 2015 Conference, Cleveland, OH

April 12-16, 2015

[HIMSS 2015 Annual Conference & Exhibition](#), McCormick Place, Chicago, IL

June 5-8, 2015

[AAMI 2015 Conference & Exhibition](#), Denver, CO

June 19, 2015: ACCE's 25th Anniversary

The ACCE Board and Committee Chairs

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