# ACCE News

Newsletter of the American College of Clinical Engineering

January-February 2013 Volume 23, Issue 1

NEW ORLEANS HIMSS13 ANNUAL CONFERENCE & EXHIBITION

See you in New Orleans, March 3

**In this Issue:**



## President's Message

Welcome to the New Year! This is an exciting and busy time for ACCE as we are finalizing plans for the upcoming conference season, continue with our many activities and initiatives, and continue to welcome new members to our organization. I'd like to thank our Board and committee members along with our many volunteers for their hard work and commitment. You should all be very proud of your accomplishments. They are what make ACCE such a great organization. I'd also like to acknowledge the great work of our many colleagues in the clinical engineering profession. So many of you are setting excellent examples for how to best support the technology needs of our healthcare organizations and patients.

We've got a big event for ACCE coming up at the Annual HIMSS conference in New Orleans, LA. For the second year in a row we are hosting an educational session at the conference. Former ACCE President Jennifer Jackson and my ECRI Institute colleague Erin Sparnon will be presenting on integration of infusion pumps. Jennifer and Erin will be providing guidance on assessing a facility's technological readiness for infusion pump integration, reviewing best practices for communicating the infrastructure requirements for successful integration to clinical and IT departments, and sharing their perspectives on how to assemble and lead a project team to most effectively plan for and oversee a pump integration project.

Erin is also leading a roundtable discussion that will be providing an update on proprietary vs. third-party vs. standards-based device integration. This will be a nice complement to the pump integration session. Erin's roundtable will review the benefits and disadvantages of the various approaches to device integration; provide advice on choosing an approach that best fits a healthcare organization's budget, goals, and expectations; discuss effective approaches for reviewing and analyzing supplier offerings; and review the advancements and achievements in medical device integration over last year. The pump integration and the roundtable sessions will be a great opportunity to demonstrate the value that the clinical engineering profession can bring to our healthcare organizations, especially regarding such an important and strategic initiative like device integration.

We are very excited to be co-sponsoring the Clinical Engineering and IT Leadership Symposium for another year. This year's symposium continues with the integration theme from Jennifer's and Erin's sessions. The symposium title is "Executing your Medical Devices Integration Roadmap". I had the pleasure to participate on the symposium planning committee and I think we put together a great program with some real heavy hitter faculty. They include David Classen, MD, who is one of the authors of the recent IOM report on HIT and Safety; Benjamin Cantor, MD, Chief Medical Information officer for Palomar Pomerado Health System; Harry Greenspun, MD, Senior Advisor for Health Care Transformation and Technology for Deloitte Center for Health Solutions; and Marc Petre, Ph.D, Executive Director for Clinical Engineering at the Cleveland Clinic. The program will discuss any common ground that may exist between patient safety and medical devices from an

*(Continued on page 3)*

# CCE Certification Program Sponsorship to Change

The certification program for clinical engineers (CCE) was revitalized a number of years ago through the combined efforts of dedicated individuals, the American College of Clinical Engineering and the Healthcare Technology Foundation. Today, the certification program is vibrant and active with a steady flow of applicants who complete the three stage certification process to become certified clinical engineers.

The current certification program is international in scope and delivered by two Boards of Examiners, one in the United States and one in Canada. The program is managed by the Healthcare Technology Certification Commission (HTCC) which is sponsored by the Healthcare Technology Foundation (HTF). Details of the present certification program may be found on the Healthcare Technology Foundation website www.thehtf.org.

The Healthcare Technology Foundation was instrumental in creating the current certification program. When the program was re-started a number of years ago, it required leadership, start-up funds and administrative support, all of which the Foundation provided. As time has progressed and the number of engineers applying and becoming certified increased, the certification program has become self-sustaining. This increased stability has implications, however, on the relationship between the Commission and the Foundation. An internal assessment conducted by the Foundation of its operations relative to recent changes in US tax laws with respect to charitable organizations concluded that the Foundation can no longer serve as the sponsoring body for the Commission. Consequently, it is the intent of the Commission to formally separate from the Foundation by January 1, 2014. By this date, the Commission will transfer all of its functions from the Foundation to a new organization. The Commission intends to execute the transfer in collaboration with the Foundation, respecting its strong leadership of clinical engineer certification for many years and the Foundation's continued interests in securing an organizational structure founded on integrity, quality, security, confidentiality and sustainability.

The HTCC has set in motion a process to effect its separation from the HTF by the required date. One part of that process is apprising the broad clinical engineering community about the upcoming changes to the certification program which the Commission is doing this through this ACCE newsletter article. In another part of the process, the Commission has already written all engineers certified through the current certification program to apprise them of upcoming changes to the program and to solicit their input on options for future organizational models. A further part of the process is the convening of a meeting between the Commission and organizations that are key stakeholders in clinical engineer certification, including but not limited to: 1) The American College of Clinical Engineering; 2) The Association for the Advancement of Medical Instrumentation; 3) The Canadian Medical and Biological Engineering Society; and 4) The American Society for Healthcare Engineering. The purpose of the meeting is to engage senior representatives from these organizations in determining the best future organization model for clinical engineer certification.

The Certification Commission wishes to include the broader clinical engineering community in determining the future organizational model for the certification program. The Commission invites you to write and express your thoughts on this matter. For example, should the Commission actively seek to form a relationship with one of the stakeholder organizations listed above to act as a new sponsoring body for certification? Are there other organizations that should be considered? Or should the Commission stand alone as an independent body? Are there other structures or alignments that you think are superior and should be considered?

The Commission would like to hear from you at this time. Please take a few moments to send a letter or email to the Commission Secretariat at: certification@thehtf.org.

*Petr Kresta*

*Chairperson, Healthcare Technology Certification Commission*

## Would You Like to Write for ACCE News?

The ACCE News is always looking for good, short (~ 500—1,500 words), previously unpublished articles. Short technical articles, case studies, controversial issues, opinion pieces (in good taste of course), Other Clinical Engineering-related material is always welcome. If you have any ideas about a one-time article or a continuing series or a column, please contact one of the editors and we will discuss it with you.

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## ACCE News

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# President's Message: HIMSS

*(Continued from page 1)*

integration perspective; integration in the ICU; automation of physiologic monitoring data into the HER; and future directions we can expect, and should plan for, with device integration.

The annual HIMSS award banquet is on Tuesday night, March 5th. I will have the pleasure to formally present the winner of the ACCE-HIMSS Excellence in CE-IT Synergies Award at the banquet. The award recognizes individuals who have best demonstrated leadership in promoting or implementing significant synergies between the clinical engineering and information technology professions. This year's award winner is Paul Frisch, Ph.D. Paul is a faculty member and Chief of Biomedical Engineering in the Department of Medical Physics at Memorial Sloan Kettering Cancer Center in New York, and a visiting professor at Binghamton University. One of Paul's research interests has been the transition of clinical devices from stand-alone to networked systems sharing and distributing information between clinical applications and devices. He has extensively researched how these devices have expanded their functionality to use wireless technologies as a medium for conveying this critical information. I recently got to see some of Paul's accomplishments first hand during a visit to his hospital. Paul and his team have been gathering real-time infusion pump utilization data using their RTLS system. Paul's data shows, on a month-by-month basis, the percent of time their pumps are actually delivering fluids to patients. This will be an excellent tool for his hospital to use to establish a realistic inventory of infusion pumps and is likely to generate significant savings. Congratulations on your well-deserved award Paul!

ACCE will be co-hosting the CE-IT reception with HIMSS (on March 4th). This is an opportunity to network with fellow ACCE members and HIT professionals, recognize the accomplishments of our colleagues through the advocacy awards, and learn about upcoming ACCE and HIT-related activities. ACCE Past-President Mario Castaneda has been leading our efforts to secure sponsorship for this program. We hope you'll have a chance to join us at the reception. It's always a great time. If you make it, please be sure to thank our sponsors. Their contributions are very important to the operations of a modestly budgeted volunteer-based organization like ours. And Mario, thank you for your fundraising efforts. You've been doing a great job.

My final HIMSS note is that we will have another ACCE booth at this year's conference. The booth will be manned by ACCE Board members and other member volunteers. We'll be sharing information about our organization with HIMSS attendees, networking with potential new members, and showing off various ACCE literature and accomplishments. ACCE Secretary of the Board Pratyusha Mattegunta is organizing a list of volunteers at our booth. Please let Pratyusha know if you are attending HIMSS and are interested in helping to man the booth. She can be reached at secretary@accenet.org. We'd appreciate any time that you can provide.

I mentioned the work of ACCE's committee members at the start of this article. I'd like to highlight an initiative that the International Committee is working on with the World Health Organization (WHO). Under the leadership of Adriana Velasquez, WHO is planning to hold another Global Medical Device Forum in 2013. One of the expected deliverables is a book on "Human Resources for Medical Devices". The goal for the book will be to provide a for guide for prospective and current practitioners of biomedical engineering on the main fields in the profession, the various certification and accreditations programs that are available or required, and information on what kind of profile is required to work in biomedical engineering. A general plan for the book is to integrate the knowledge, experience, and perspectives of different people currently working in the profession. The book will emphasize that biomedical engineers can do more than "just repair" and that critical and even necessary functions should include serving in leadership roles for the planning, overall management, and procurement of medical technology. The initiative will be looking for examples of success stories to include in the book to serve as a motivator for newcomers to the profession. The planning committee is looking for volunteers to help with planning for the book and in the development of content. Please contact Tom Judd at Tom.Judd@kp.org if you are interested in learning more about this initiative or if you would like to volunteer in any way.

I'll wrap up with another example of a good work from one of our clinical engineering colleagues. AAMI Foundation's Healthcare Technology Safety Institute (HTSI) just released a Safety Innovations paper on alarm management from Beth Israel Deaconess Medical Center. The paper is entitled Plan, Do, Check, Act: Using Action Research to Manage Alarm Systems, Signals, and Responses". The paper describes a comprehensive effort at Beth Israel to improve alarm-related safety that was initiated from concern over two sentinel events. The project used a multidisciplinary team that identified numerous areas for improvement that, for example, majorly cut down the number of unnecessary alarms in patient care areas.

Jeff Smith, lead clinical engineer specialist, was a key member of the Beth Israel team. His role was to provide hardware and operational support and answer questions on how to interpret data presented in the system. According to the AAMI report, the "clinical engineering perspective and technical expertise were important early on in testing the acoustics, placing the speakers and visual marquees, and in developing a process for

*(Continued on page 4)*

# Perspectives from ECRI Institute: Addressing Surgical Robots and ROI

Surgical robots are an important emerging technology and will play an ever increasing role in surgery in the years to come. The past decade has seen a steady rise in the implementation of the da Vinci Surgical System from Intuitive Surgical, Inc. The da Vinci is the only multipurpose robotic surgery system cleared for marketing in the United States.

ECRI Institute recently reviewed the literature and interviewed administrators and surgical staff at 9 hospitals that operate robotic-assisted laparoscopic surgery (RALS) programs based on the da Vinci. Our findings are presented in *Da Vinci Decisions: Factors to Consider before Moving Forward with Robotic Surgery*, a guidance article published in the January 2013 issue of *Health Devices* journal.

ECRI found that the purchase of the da Vinci system is typically driven by the following objectives: Improving surgical outcomes; gaining or keeping a competitive edge in the local/regional healthcare provider market; and recruiting and retaining skilled surgeons interested in incorporating robotic-assisted laparoscopic surgery (RALS) into their practice

These objectives are among the major themes presented in da Vinci marketing materials. Proponents say the system improves patient outcomes, and that it could provide hospitals with a positive return on investment (ROI).

ECRI's conclusion after reviewing the published literature was that the clinical outcomes evidence is unclear. Studies looking at clinical outcomes of the da Vinci system are high in quantity but low in quality, and they have inconsistent results. Furthermore, ECRI also found that achieving a positive ROI with the da Vinci is dependent on those improvements in clinical outcomes.

Achieving the desired improvement in outcomes is highly dependent on surgical staff proficiency with the system. So, healthcare provider organizations with a RALS program need to pay particular attention to training and credentialing. A Steering Committee should oversee standardized processes for RALS privileging. Surgeons and surgical nursing staff should receive initial basic training, advanced procedure-specific training, and periodic skill audits.

There is currently less that hospitals can do about the cost side of the ROI. The da Vinci has a high cost of ownership comprising a substantial capital investment and high maintenance and per-procedure cost for consumables. The hospitals that we interviewed told us that, in the absence of a competitor, they have been forced to pay list price for both the da Vinci system and its consumables. They also reported having no alternative to vendor-provided service for the system.

Competition is expected in the next few years, but in the present situation with only one product on the market, no special reimbursement for RALS, and a limited range of procedures supported, achieving a positive ROI with the da Vinci system is far from certain. ECRI recommends that hospitals carefully define their objectives and tolerance for financial risk before investing in RALS technology. Specifically, before purchasing any robotic surgery system, facilities should assess their likelihood of achieving the procedure volumes and improved outcomes necessary to achieve a positive ROI.

Members of ECRI Institute's SELECTPlus, Health Devices Gold, and Health Devices System programs can view our robotics report from their member webpages. The following link will take you right to the Health Devices issue after entering a valid user name and password.

https://members2.ecri.org/Components/HDJournal/Issues/hd420101.pdf

Feel free to contact me at esacks@ecri.org if you have any questions about our robotics report or if you would like to learn how to access this information if you don't have the necessary ECRI Institute login credentials.

*Eric Sacks*

*Director, Healthcare Product Alerts*

# President's Message:

*(Continued from page 3)*

standardizing the default alarm settings on devices". Check out the AAMI report and learn more about the excellent contributions that Jeff and his team made towards improving patient safety at their hospital. Their project is nicely detailed in the AAMI document and can be used as a good template to start an effort to improve alarm management at your hospital. If enough of us take the kind of initiative that Jeff and his team did at Beth Israel Deaconess Medical Center we can bump alarm hazards from the number one spot on ECRI Institute's Top Ten Hazard list.

For those of you heading to HIMSS in New Orleans, please stop by the ACCE booth to say hello and make sure to come to our reception. Feel free to contact me at the e-mail address for ACCE's President (president@accenet.org) to let me know about any great projects that you've been involved in that you'd like me to share in my next President's report.

*Jim Keller*

*president@accenet.org*

# AAMI Update:

## The Top Medical Device Challenges, a Summit Report on Medical Device Interoperability, and New Awards

### HTM Survey

Healthcare technology management (HTM) professionals working in hospitals say their top challenge is the management of medical devices and systems on information technology networks, according to a survey commissioned by AAMI. The survey results point to a changing world for HTM professionals—one in which routine duties, such as preventive maintenance checks, are part of a workday that increasingly contains more sweeping responsibilities such as helping to implement a hospital-wide medical device integration plan.

According to the survey results, the top 10 medical devices challenges are: Managing devices and systems on the IT network (72%), Integrating device data into electronic health records (65%), Broken connectors (50%), Battery management (50%), Alarm management (49%), Maintenance of infusion pump systems (48%), Cybersecurity of medical devices and systems (47%), Setting preventive maintenance strategies (44%), Medical device incident reporting and investigations (42%), and Medical devices brought in by patients (42%).

"This annual survey commissioned by AAMI is incredibly helpful in validating and prioritizing the major challenges facing the HTM field," says Steve Campbell, AAMI's chief marketing and communications officer. "The AAMI leadership and staff are reviewing these results to look for ways in which AAMI could help make a meaningful difference in solving a challenge or problem."

### Interoperability Summit Report

Adopting systems engineering principles to advance patient safety, improving regulatory clarity, and having shared goals and standards are just three of the priorities named in a new AAMI publication on how to best achieve interoperability in healthcare technology.

The report, *Medical Device Interoperability: A Safer Path Forward*, describes lessons learned at a joint AAMI-FDA summit held this past fall on medical device interoperability and takes a nuanced look into how to assure the safety and effectiveness of connectivity for the wide array of medical and information technologies available today.

To download a free PDF copy of *Medical Device Interoperability: A Safer Path Forward,* go to: www.aami.org/publications/summits/2012_Interoperability_Summit_Report.pdf

### Wireless Summit Report

Separately, AAMI has also released the publication titled *Healthcare Technology in a Wireless World*, the result of an invitation-only workshop, held immediately after the summit. That event—which was convened by AAMI, the American College of Clinical Engineering, the American Society for Healthcare Engineering, and ECRI Institute—attracted 75 experts, who discussed wireless challenges in healthcare. They developed five priorities that need to be addressed, including the need to clarify roles and responsibilities, and also drafted a list of the top 10 mistakes in implementing wireless technology in healthcare.

The two-day summit in early October drew roughly 260 attendees who gathered at a hotel in Herndon, VA, outside Washington, D.C., to discuss and debate challenges and solutions related to interoperability. Participants included safety advocates, clinicians, healthcare technology management professionals, as well as representatives from manufacturers; standards-setting organizations; regulatory bodies; and academic and professional groups.

Four additional priorities—or "clarion themes"—are identified in the report: aligning incentives, expectations, roles and responsibilities to improve quality and safety; understanding interoperability as a sociotechnical system with a focus on human behavior to reduce risk; streamlining clinical workflow to improve return on investment; and removing barriers with shared, continuous learning to increase transparency.

For a copy of *Healthcare Technology in a Wireless World*, go to: www.aami.org/publications/summits/2012/_Wireless_Workshop_publication.pdf

### Awards Program

Seeking to better recognize and honor outstanding leaders in medical technology, AAMI has revamped its awards program, creating two new awards entirely and updating the names of others.

"We felt that the awards need a bit of a 'freshening up,' " says Steven Yelton, chairman of the Electrical Engineering Technologies Department, Center for Innovative Technologies at Cincinnati State Technical and Community College in Cincinnati, OH. Yelton is a member of AAMI's Board of Directors and sat on a task force that evaluated the awards. "I believe that the board also feels that the new awards are consistent with AAMI's mission and strategic plan."

AAMI presents its awards at its annual conference, which for 2013 will take place in Long Beach, CA., June 1-3. The awards are administered by AAMI and its Foundation.

The Young Professional Award—one of the new honors—will be presented to someone under 40 who "exhibits exem-

*(Continued on page 6)*

# Adequate vs Perfect: When is Good Enough?

A day-to-day challenge for those devoted to their tasks (and aren't all ACCE members?) is deciding how much effort can and should be devoted to any one project along with the level of achievement that is necessary for that project to fulfill its expectations. In this regard we all recognize that time and effort are finite resources, and that we are often in the struggle of conflicting demands and prioritization. While we certainly don't want to leave a project in an inadequate state, we also can't necessarily bring it an ideal solution. In this regard I learned what seems to be conflicting philosophies on defining appropriate achievement.

In patient safety circles I learned the phrase (after Voltaire) "perfect is the enemy of good", meaning that seeking the perfect solution to a problem, and not acting until the perfect solution is at hand, can interfere with achieving a good solution that will be reasonably effective, even if there might be room for further improvement. In some cases this good solution might be considered an interim measure, subject to later iteration. The idea here is not to be paralyzed by the inability to optimize a solution, but to act expediently on the basis of available resources, a reasonable time to accomplishment, and a rationale expectation of reasonable effectiveness. This seems like a realistic philosophy of being effective given real world restraints and uncertainties.

Then, in a chess magazine (of all places), I saw a phrase along the lines of "good is the enemy of best". The meaning here was that one should not be satisfied with a solution (chess move) when further analysis might reveal an even better solution. This appears in its extreme to be more-or-less the opposite of Voltaire. And it argues against too easy self satisfaction or complacency as an end to striving. However this might not apply if you were playing speed chess in which each player has a total of 5 minutes available for the entire game. Perhaps there is a resource analogy here, i.e. if you only have a limited resource you do the best you can within that limit. But one might note that the consequences of bad chess moves in most environments are not catastrophic as they might be in clinical engineering.

In the design world the adequate/best dichotomy also comes up on a regular basis since in many cases if you seek the perfect solution you will never finish the design. In fact, as the design effort progresses, you will quite often realize that there are better ways to have done what has already been done. If you repeatedly abandon what is already completed in favor of the new method, then the process becomes endless. At some point the design must be frozen in order to move on. One exception here is that if you realize that the design that is about to be finalized is seriously and dangerously flawed you must correct the deficiencies. However, if the issue is it could be a little better, or here is another feature we could add that would be nice but not essential, then an appropriate decision is to put those changes on hold until the next upgrade.

As with all expressions, neither Voltaire's version nor the chess versions is quite adequate or fully true, and certainly not all the time. More often the correct actions are somewhere in between. But these actions should be a result of conscious assessment rather than mindless or disinterested effort.

We should crave excellence in completing our tasks but not be daunted or dismayed by not always achieving excellence, as long as we have achieved reasonable solutions in a suitable time frame given appropriate effort and the available resources. Yet this is certainly not a call for, or an excuse for, complacency or poor efforts or accomplishments in addressing the tasks before us. Similarly, clearly inadequate resources is not an excuse for a clearly inadequate solution without, at a minimum, a firm effort to inform those above that the problem has not been adequately addressed.

*William Hyman*

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## AAMI Update continued, Awards

*(Continued from page 5)*

plary professional accomplishments" with at least three years of experience in healthcare. Yelton says the new award is meant, in part, to recognize and address one of the demographic challenges that the healthcare technology field faces.

"It is a fact that we have a somewhat graying workforce, and AAMI is working hard to help cultivate new leaders," says Yelton. "The *Young Professional Award* will help us achieve that goal."

The new Spirit of AAMI Award recognizes an outstanding contribution from an AAMI volunteer. Ideal candidates will have a long record of AAMI service, have led committees, and helped bring together diverse stakeholders to forge consensus.

The titles for some of the existing AAMI awards changed. For example, the *AAMI Clinical/Biomedical Engineering Achievement Award* is now AAMI's Healthcare Technology Management Leader of the Year Award. The AAMI & Becton Dickinson Professional Achievement Award is now the AAMI & Becton Dickinson's Patient Safety Award.

The other awards are the: AAMI Foundation's Laufman-Greatbatch Award, AAMI Foundation & ACCE's Robert L. Morris Humanitarian Award, AAMI Foundation & Institute for Technology in Health Care's Clinical Solution Award, AAMI & GE Healthcare's BMET of the Year Award, Standard Developer Award and the AAMI Technical Committee Award.

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# The View from the Penalty Box

It is my feeling that 2013 will not be a great year for most of the world's population. We have the problems in the mid-East, much of Europe is in financial trouble, and much of the rest of the world is still having problems feeding its population let alone providing them with good health care. Here in the US we have our financial problems, which our elected officials don't seem to want to address.

Good news. The election is over, most of the less than stellar senators and representatives were re-elected and the new ones coming in sure don't appear to be very bright. Most are more interested in their own re-election than solving the problems facing the nation, which is bad news. Also, by not being involved or watching what is happening in healthcare, we have various agencies making regulations that go against what we have been doing for years, CMS on risk based inspections is a prime example of a potential money pit.

Just consider what the big companies will charge if we cannot do the PMs as they prescribe. Many years ago a major vendor had a line in a pressure module test procedure where it had to be tested once a year using a Gertz Ratio Transformer. There was not one of these transformers at a hospital in New England so there was no sharing. We used to share test equipment back then and people and parts but that all has gone away. Back to the transformer. Being a "smart ass", I issued a purchase order to the vendor to come in and test all the pressure modules, but guess what happened? After several weeks the service manager finally admitted that the company did not have the transformer and it was put into the procedures by mistake. If you believe that one, I have a bridge that is for sale and I will give you a great deal on it. They got caught and we still need to be careful on what is "required" by vendors and what they supply.

As a group, we are starting to work on the "Right to Repair" legislation, but if CMS pushes their present rules costs will go up and quality of care may be compromised. Those of you working in hospitals will have some major headaches coming at you, and those of you working with service organizations may really be in for some problems in getting documentation. At least in a hospital we have" the power of the pen". That power is simply if the vendor does not supply the repair information they do not get the order for the system. This will take some in-house arm twisting because often the vendor is also the organization lending the money to the hospital so the item can be purchased. Plus all the trips, free meals, symposiums and golf outings that some physicians and administrators pick up from the companies can make our jobs much more difficult. Document everything to protect yourself if an audit is done on capital purchases.

As a profession, we need to really get into the problem lists that have been generated by ECRI Institute and others and talk with the vendors of the problem devices to see if they have some solutions that can be instituted in your facility. To me the first step in the alarm problem is to turn most of the alarms off. Just because an alarm setting is available on the device does not mean it has to be used all the time or in most situations at all. Talk with your clinical staff and educators to see what can be turned off without compromising patient outcomes. Again document the meetings and any agreements that are made because someone will question what was done and why or why not.

Good news. One grandson, who plays hockey, is skating with the varsity; more good news another grandson wants to get into clinical engineering. No bad news here.

Good news. Various groups around the country are working on getting legislation together on the right to repair clinical equipment. If you are part of such a group please contact me at dave@sbttech.com, and I will get information on what others are doing out to you so not everyone is reinventing the process. The potential bad news is that some vendors or agencies will put up road blocks because if we are doing the work, it will take money out of their pockets. Remember that the patient always come first.

I was recently asked by one of my daughters-in-law to help her come up with risk rankings and life expectancies on devices used in the operating room and other parts of the hospital. With a database going back some 30 years and work in over 70 hospitals around the world I said sure no problem. There was a problem in that the inventory of that hospital used different descriptions on many items so a quick job became a little slower. We really need to standardize our terminology so everyone understands what device we are looking at. What I did was to take an old Health Devices Source book, and used the number they assign to items in the inventory. So I have a document that has a good description, a standardized identification number, a risk ranking and a life expectancy.

Best wishes to all and please let others know your thoughts because those thoughts may be the keys to major breakthrough in equipment management and healthcare.

*Dave Harrington*

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# International: Innovative Approach Produces Successful Advanced Clinical Engineering Workshop in Peru

Lima, Peru was the site of the first Advanced Clinical Engineering Workshop (ACEW) since July 2010. The outstanding ACCE volunteer faculty included ACCE Past President Mario Castañeda, HealthiTek, ACCE Board Member Ismael Cordero, clinical engineering consultant, ACCE Advocacy Committee Chair Tom Judd, Kaiser Permanente, and Healthcare Technology Foundation (HTF) President Tobey Clark, University of Vermont, who was the faculty leader. Antonio Hernandez acted as an advisor to the group and Frank Painter provided support for the ACEW.

The partner in Peru was Health Technopole CENGETS, the 2010 ACCE-ORBIS ACEW award winner. CENGETS co-directors Luis Vilcahuamán and Rossana Rivas' promotion of the event, coordination of all parties, interaction with the participants, contribution to the contents of the program, and leadership in the workshop was outstanding.

The primary sponsor of the November 12-16, 2012 workshop was Pontificia Universidad Católica del Peru (PUCP). For the first time in ACEW history, the International Federation of Medical and Biological Engineering (IFMBE) also was a sponsor. IFMBE was an appreciated, and hopefully continuing, ACEW partner with Herb Voigt, Past President of IFMBE initiating this sponsorship and also participating as a speaker in the workshop. Supporting organizations included the Ministry of Health, PAHO, DIGEMID, INMP-Maternity Hospital of Lima, APBIO, CENETEC, CORAL, IEEE/EMBS Peru and University of Vermont who has an institutional partnership with PUCP.

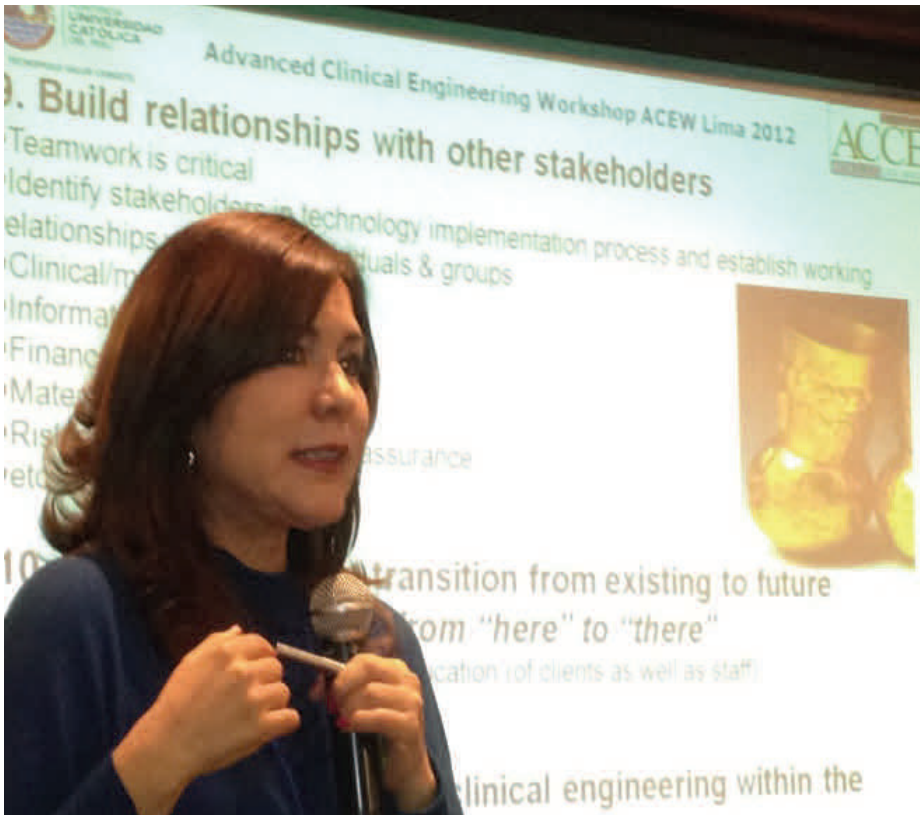
The workshop theme was Leadership and Innovation. Each day focused on a specific aspect of healthcare technology includeing: Public Policy for Health Technology Planning and Management, Role of public and private organizations in Healthcare Technology Planning, Healthcare Technology Management-HTM for a modern health system, and Better Access to Health Information through EHR, Telemedicine and eHealth. Case Studies from Peru & Mexico and Participants were also presented.

The ACEW presenters included the ACCE faculty team, CENGET directors and staff, Dr. Cesar Cabezas, National Institute of Health, Dr. Pedro Mascaro, Maternity Hospital of Lima (INMP), Dr. AmeliaVillar Lopez, PAHO, Herbert Voigt, Boston Univ., Walter Rios, IEEE/EMBS Peru, Eduardo Toledo, PUCP, Alvaro Velasquez, HMC Architects South America, Dr. Walter Curioso, Ministry of Health Peru (EHR leader), Roberto Ayala, CENETEC (Mexico), and Drs. Pedro Yarasca and Dr. Silva Perez, DIGEMID (FDA of Peru),

Health Technopole CENGETS provided an outstanding presentation on their program with a focus on the work at Maternity Hospital of Lima (INMP), the nation's center for maternal and child care. The Healthcare Technology Management department employs PUCP graduates who went through a five month clinical engineering internship at the University of Vermont.

The average daily attendance was thirty-five in Lima and twenty via videoconference from other regions of Peru, Paraguay and Guatemala. The audience consisted of Ministry of Health, ESSALUD (social security hospitals), and private hospital administrators, physicians, and engineers, PUCP faculty and biomedical engineering students, and other disciplines. Simultaneous English to Spanish translation was provided for all participants and the quality was excellent. To accommodate participants work schedules, the workshop was held between 2pm and 8pm each day. All presentations and other documents were available on the ACEW Peru website. In addition to the virtually accessible materials, ACCE

*(Continued on page 9)*




Rossana Rivas engages the audience with her presentation on Project Management

# International Committee Report: Peru

*(Continued from page 8)*

brochures and other documents were printed for distribution to all attendees. HTF provided hardcopy materials including CCE application and candidate handbooks and the Spanish version of the Patient Education guides. AAMI also provided 30 pounds of valuable materials!

Participant case studies were an important part of the workshop. Three participant groups were created to develop presentations and/or role play activities. The case study groups were led by ACCE faculty facilitators: Policy and planning (Mario Castaneda & Tom Judd), Safety (Ismael Cordero) and Maintenance (Tobey Clark). The three groups showed significant self-initiative in developing topics and brainstorming, and all developed role play "sitcoms" combined with presentations to demonstrate their case studies. The studies showed good use of the principles of the workshop and more importantly the enthusiasm of the groups. As a prize for the group's performances, Dyro's Clinical Engineering Handbook donated by Tom Judd was signed by all participants and will be shared through placement in the Universidad Nacional Mayor de San Marcos library.

An innovation added to the workshop was the inclusion of two interactive sessions each day facilitated along the lines of the AAMI Summits to identify top priorities related to the topics. The final day extended session collated of all the topic priorities into actionable and sustainable goals for the country. The workshop participants came to a consensus on the most important actions to take so Healthcare Technology Management and Clinical Engineering can leapfrog current practice to have high value in Peru:

**Law/policy:** Raise the awareness of healthcare technology management at the national level through policy creation; Create laws mandating every hospital require a clinical engineering team, Reform the health laws so that maintenance and calibration is included in the health laws.

**Education:** Educate the population regarding the role of health technology, Training and education in colleges and universities in biomedical and clinical engineering, Research and development in HTM and biomedical and clinical engineering.

**General Proposals:** Creation of vice health ministry level healthcare technology assessment(HTA) position, Streamline and organize national HTM processes, Combined proposal to MoH from multiple universities; socialize proposals with all relevant entities, Start fresh with new hospitals, Peru healthcare catch-up in informatics and digital health and Plan for equipment by multidisciplinary team.

The workshop evaluation showed the content and effectiveness of presenting the workshop topics receiving high marks along with the knowledge of the presenters, quality of the presentations, and meeting the objectives of the workshop. It was very encouraging to see that 85% of the attendees will use the knowledge at their healthcare workplace.

The program was extremely successful both in terms of the evaluation and the energy and engagement as evidenced by the positive interactions. In Peru, ACCE should continue to support CENGETS, biomedical society growth, clinical engineering education and certification. Healthcare technology management and clinical engineering activities will continue to grow in Peru as a result of the foundation provided *by the ACEW.*

*Tobey Clark*

*President, HTF*

*Tobey.Clark@ITS.UVM.EDU*


ACEW Faculty visit Neonatal ICU graduates party: "Feast of premature child" at Maternity Hospital of Lima

# Chinese Clinical Engineering Certification

The 2012 Chinese Congress of Clinical Engineering & Information Technology (CEIT) took place from November 8 to November 10, 2012 in Ningbo, Zhejiang, China. This Congress was jointly organized by the Medical Engineering Society of Chinese Medical Association and National Scientific Data Sharing Platform for Population and Health. For the opening session, Yadin David made a presentation about the global professional evolution of Clinical Engineering and the expansion of needed new skills.Yadin noted examples seen around IFMBE and ACCE societies.

In conjunction with the meeting, the 6th International Clinical Engineer Certification Training and Examination were offered. The Certification of Clinical Engineers in China is administered by the Medical Engineering Society under the auspices of the Chinese Medical Association. The certification program is similar to the HTCC program for the CCE in the US and Canada. Applicants for certification must have at least a Bachelor's degree in biomedical engineering and at least five years clinical engineering experience. Applicants must be able to complete the written exam in English. The written exam is based on the Body of Knowledge developed by the American College of Clinical Engineering, however, without topics related to U.S. accreditation and regulatory compliance.

Yadin David and James Wear presented a half day clinical engineering review for about 60 clinical engineers who qualified to take the examination. The review course was presented with translation. Even though the attendees have reasonable English skills, some have difficulty following oral presentations.

Forty-seven of the attendees took the written certification exam in the afternoon. The written exam is 100 multiple choice questions and the applicants are allowed four hours to complete it. That evening the exams are graded and the successful applicants are informed that they can take the oral exam the next day.

Thirty-six applicants passed the written exam and were allowed to take the oral exam. They were divided into two groups and each individual was subjected to thirty minutes of the oral exam. At the beginning of their oral exam, candidates were allowed to choose one of three scenarios to discuss and answer specific questions about it. The three scenarios were based on clinical engineering situations that might occur in the hospital setting. One examining team was Yadin David with a Chinese university clinical engineering professor. The other team was James Wear and two experienced Chinese Certified Clinical Engineers, one being a PhD. The Chinese examiners served as translators as needed and to be sure that the responses met Chinese situations.

Thirty-two individuals passed the oral exams and became Certified Clinical Engineers.

The applicants were from several different schools and some had masters level degrees representing various regions of China including Inner Mongolia in the north and Hunan in the south. Most had worked in hospitals; however a few had experience in companies manufacturing medical equipment. About fifty percent of the applicants were woman. In general, candidates demonstrated fair knowledge of their job and of relevant literature. However, they realize that their understanding of systems' risk mitigation and of system administration is a challenge they will need to overcome.

*Yadin David*

david@biomedeng.com

*James Wear*

wearjam@cswnet.com

# Welcome New Members

Let's welcome our newest members:

**Individual Members:**

**Nawaf M. Alrashidi -** Biomedical Engineer II/ Clinical Engineering at National Guard Hospital, Saudi Arabia

**Jillyan Morano -** Clinical Engineer at ABM Health, MA

**Upgrade to Individual Member Status**

Jacob Johnson - Clinical Systems Engineer at Kaiser Permanente, CA

Amy Song Klemm – Manager/Program Development & Support at Sodexo Clinical Technology Management, TN,

**Candidate Members:**

Meet Patel – grad student at UCONN and Clinical Engineer Intern at University of Connecticut Health Center, CT

**Organizational Members:**

**University of Toronto, Institute of Biomaterials and Biomedical Engineering (IBBME), Canada**

Alex Mihailidis - Associate Professor & Grad Coordinator-Clinical Engineering (Associate Representative)

Tony Easty - Associate Professor & Senior Scientist at Centre for Global eHealth Innovation (Individual Representative)

Joseph Cafazzo - Senior Director and Centre Lead at Centre for Global eHealth Innovation/Toronto General Hospital (Associate Representative)

*James Wear*

wearjam@cswnet.com

# Six New CE-IT Community Virtual Town Halls Scheduled

The landmark series of Virtual Town Hall Meetings sponsored by the CE-IT Community will be continued in 2013 with a group of six new and exciting topics. Formed in 2008, the CE-IT Community is a collaboration among members of ACCE, The Association for the Advancement of Medical Instrumentation, (AAMI), and the Healthcare Information and Management Systems Society (HIMSS). It is designed to pool resources and expertise to develop educational sessions, resources, and best practices.

Since its inception in 2011, the Virtual Town Hall has met 13 times, with strong participation from both the Clinical Engineering and IT professions. Topics have included: Interoperability, Integrating Medical Devices & Clinical Systems, Wireless Issues in the Healthcare Setting, Human Factors and Technology Convergence, and Clinical Alarms.

The Town Hall concept is intended to help professionals navigate the convergence of healthcare and information technologies using a virtual and highly interactive town hall format. This year, the CE-IT Community will hold a series of virtual Town Hall meetings as part of its continued effort to bring together clinical engineering and healthcare technology management professionals with their counterparts in information technology. The scheduled topics for 2013 are: The role of Middleware Companies in Integration (February 25), Why CE-IT Matters to Clinicians, and What Clinicians Need From Us (April 10), Regulatory Agency Perspectives and Trends (June 12), mHealth and Apps (August 14), EHR Certification and Testing (October 9) and Wireless Issues (December 11).

The Town Hall meetings, which are free and held from 12 p.m. to 1:30 pm Eastern Time, are moderated by Elliot Sloane, president of the Center for Healthcare Information Research and Policy. Each session provides an opportunity for attendees to submit questions and listen to responses from the expert panelists.

Since their inception, more than 1,000 hospitals, manufacturers and other organizations have participated in the Town Hall meetings. Each session is recorded and archived online for easy access and future reference.

Additionally, the CE-IT Community features an e-mail-based listserv through which participants can ask questions, share best practices, and exchange ideas with colleagues who are facing similar technology convergence-related issues. For further information, or to register for the Town Hall meetings, go to www.ceitcollaboration.org.

*Ray Zambuto*

# Malaysia Innovation Symposium

James O. Wear, PhD, CCE, FACCE was the invited International Keynote Speaker for the Symposium on Innovation and Commercialization for Medical Electronic Technology (ICMET 2012) in Malaysia. His topic was "Global Perspectives on Competency Certification of Medical Electronic Graduates in the Fast Changing Healthcare Engineering Field".

There was a lot of interest in certification of both biomedical engineering technicians and clinical engineers. The Malaysian government is looking at certification as a requirement to repairing medical equipment so the schools want to train students who can be certified. The Commission for the Advancement of Healthcare Technology Management in Asia (CAHTMA) is a certifying body in Malaysia and is working with schools.

The symposium was attended by about 200 faculty members from technical colleges in Malaysia and Indonesia as well as medical electronic industry and government personnel. Most of the attendees were female since most of the technical college instructors in electronic and electrical engineering are female. It was a very different experience to look out at an audience of mostly women very colorfully dressed. The sessions were on the commercialization of medical electronic devices that had been developed at the various technical colleges. Many of these developments were student projects.

There was also an exhibit hall with about a dozen exhibitors from industry and technical colleges. One of the exhibits was by Next Level Technologies Sdn Bhd, which is a new company owned by Azman Hamid, a member of ACCE in Malaysia.

The last day was attended by executives from Universities and Medical Equipment Companies in Malaysia. The symposium was closed by a presentation by the Minister of Education for Malaysia.

*James Wear*

*wearjam@cswnet.com*


James Wear. (l), with the meeting planning committee. Most engineers in Malaysia are women.

# Healthcare Technology Foundation News

The HTF joint project with AAMI, **Managing Risks of Integrated Systems & Networks in Healthcare Environments**, is moving forward strongly following a highly successful national survey of over 500 ACCE, AAMI, ASHE members to determine the gaps and needs for training in network systems, integration, risk management, and leadership. The initial project idea was developed by Yadin David as part of HTF strategic planning efforts, and he continues to lead the effort. Responses to the survey from CE, IT, facilities and other healthcare leaders revealed a self-assessment showing most responders at a starting level in the use of network risk management tools. Yadin has been working with the AAMI adult education consultant who visited hospitals in Houston for face-to-face meetings to verify survey findings and build on them to move the project forward. The next steps are to utilize this data and expert input to develop an RFP for course content development.

HTF is excited to introduce our newest board member, Izabella Gieras, CCE MS MBA. As former president of ACCE, she served on the HTF board from 2004-2006 as an advisory member. Izabella is currently the Director, Clinical Technology at Huntington Memorial Hospital in Pasadena, CA. She continues to contribute to ACCE activities as a CE & IT Community committee member.

In addition to sponsoring the Clinical Engineering Certification Program this year, three areas have been identified by HTF in our strategic planning process as key programs: *Patient Education on Technology Safety, Clinical Alarm Management, and Managing Risks of Integrated Systems & Networks in Healthcare Environments.* The bilingual patient education brochures found on the website at http://thehtf.org/publications.asp have been developed jointly with ECRI Institute with distribution to associations, hospitals, individuals, and internationally as part of the ACEW programs in Latin America. The scope of funding, media and distribution is planned to expand. A hallmark program of HTF, *Clinical Alarms Management*, continues with additional publications, surveys and education planned directly and with partners such as AAMI HTSI. Several ideas are on the table for contributions to support hospitals in dealing with the Joint Commission proposed NPSF on Alarm Management for 2014. Lastly, *Managing Risks of Integrated Systems & Networks in Healthcare Environments* is our newest program area discussed above.

Don't forget about HTF for your donation opportunity. We will accept them anytime and they are always tax deductible! Please visit our website: http://www.thehtf.org.

*Jennifer C. Ott, MSME, CCE, Secretary, HTF*

*secretary@thehtf.org*

*Tobey Clark, MSEE, CCE, President, HTF*

*president@thehtf.org*

# Frisch Wins ACCE/HIMSS CE and IT Synergy Award

Paul H. Frisch, PhD, FHIMSS, received the 2012 ACCE-HIMSS Excellence in Clinical Engineering and Information Technology Synergies Award, a joint award sponsored by ACCE and HIMSS. The award recognizes individuals who have best demonstrated leadership in promoting or implementing significant synergies between the clinical engineering and information technology professions. Dr. Frisch has over 30 years of professional experience and contributions to the field; and is a long-standing of member of HIMSS & ACCE. One of his research interests has been the transition of clinical devices from stand-alone to networked systems sharing and distributing information between clinical applications and devices. He has extensively researched how these devices have also moved to expand their functionality to use wireless technologies as medium for conveying this critical information. Dr. Frisch will be honored at the 2013 Annual HIMSS Conference & Exhibition Awards Recognition Banquet on March 5, 2013, from 6:30 – 9 p.m. at the Hyatt Regency New Orleans during the 2013 Annual HIMSS Conference & Exhibition. Tickets for the dinner can be purchased on the HIMSS13 website.

## 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, which prints the ACCE News in each issue, is interested in papers from you. If you have an urge to write, and good clinical engineering activities or thoughts 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. He can be reached at w-hyman@tamu.edu.

Completed manuscripts can be sent to William or Michael Leven-Epstein at lecomm1@aol.com

# HIMSS 2013

March 3-7, 2013

New Orleans

Register Today (ACCE is a HIMSS13 Overall Collaborator)

# CCE Oral Exam Review

Teleconference

Wed, April 24, Noon to 1:45 EST

$100 members, $115 non-members

Faculty: Frank Painter, Register by March 22

Note: Oral exam will be given on May 31 and June 1 at AAMI in Long Beach CA. Anyone taking the oral exam must have previously passed the written exam and registered to take the oral at certification@thehtf.org

# ACCE Calendar

## Teleconferences

**February 14, 2013**
Wireless Networks

**February 25, 2013**
CE/IT Community Presentation on Middleware

**March 14, 2013**
Succession Planning/Developing Leadership
Click here for more information on the ACCE Teleconference series.

## Events

**March 3-7, 2013**
HIMMS Conference 2013 (New Orleans, LA)

March 4: HIMSS CE-IT/ACCE Awards Reception
Please RSVP

March 7: HIMSS: ACCE Educational Session #161: *Are you Ready for Integrated Infusion Pumps?* By Erin Sparnon and Jennifer Jackson
For more information see http://www.himssconference.org/Education/EventDetail.aspx?ItemNumber=1197

**June 1-3, 2012**
AAMI Conference & Expo (Long Beach, CA)

ACCE
AMERICAN COLLEGE OF CLINICAL ENGINEERING

## The ACCE Board and Committee Chairs

| | |
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