



ACCE News

Newsletter of the American College of Clinical Engineering

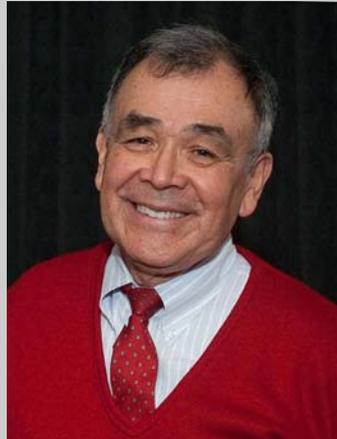
September-October 2011

Volume 21, Issue 4

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President's Report: One Year Later



ACCE's election and ratification process for 2011/2012 officers is completed, and a public announcement is imminent. Meanwhile, I want to take this opportunity to briefly review our journey for the last year, report on the current activities, and comment on our upcoming priorities.

The new ACCE officers and Board of Directors started last year at a time when the global economy was in turmoil and on a cautious path to recovery from the effects of the sharp economic downturn of 2008. The US was experiencing the post-implementation of an expansive bank system reform, and heavy government economic stimulus. As an integral part of the global economic system the US was affected by slower recovery in China and uncertainty in Japan, debt crisis in Europe, and political upheavals in oil-producing countries. To top it all, the US was simultaneously implementing the most

comprehensive health care reforms in recent history.

The intent of the Health Care Reform was enacted to guarantee affordable, quality, and consumer-friendly health insurance coverage for all qualified Americans while reducing the US budget deficit by \$143B by 2020, and \$1.2T by 2040. This transformational goal is fraught with risk but full of opportunity. While being aware of the risks, the Clinical Engineering profession is poised to be a significant contributor in advancing this goal, and ACCE's mission is aligned with promoting quality, service, and affordability in patient care. During the last year, besides completing its regular content-related projects, ACCE has focused its vision; strengthened its infrastructure, and promoted partnership and collaboration with other organizations.

Our current activities align with the strategic themes of Leadership, Stewardship of patient safety and empowering health care providers with the appropriate clinical technologies, and Collaboration and Partnership with organizations that align, complement, and support ACCE's mission. I'll mention four activities that have come to the top of our list.

MEDICAL DEVICE ALARM SUMMIT – ACCE is convening with AAMI, ECRI Institute, FDA, and The Joint Commission this activity to support the solution process for addressing the current concerns surrounding the use of clinical alarms. The main outcome of this summit will be to establish a prioritized set of key issues related to the safety and effectiveness of standalone or integrated medical device alarms.

Alarm safety is in the "top 10" medical device hazards reported by ECRI Institute. ACCE is committed to fully support this important project and to leverage the outcomes of this summit to provide tools for our members to better address clinical alarm issues at their organizations.

Besides the intrinsic benefits of the Medical Device Alarm Summit, ACCE considers that the framework of this collaborative activity is a model that may be used to address unprecedented safety and security issues of national prominence brought about by the increase of volume, complexity, and convergence of medical devices with other complementary technologies; for example, data security for interoperable and interconnected medical devices, mobile medicine, etc. Additional valuable side benefits of this model are the glossaries and lexicons developed to harmonize inter-professional communication.

President's report continued

(Continued from page 1)

HIMSS 2012 – Jon Blasingame and Ilir Kullolli are leading the ACCE group who will be producing and coordinating the meetings and activities for the HIMSS Annual Conference and Exhibition, February 20 to 24, in Las Vegas, NV. The Conference's theme is "Linking People, Potential and Progress."

ACCE is a collaborating partner for this event and the preparations are well underway with a high degree of enthusiasm on both sides. The CE-IT Symposium is in the final stages of planning. The target audience includes biomedical and clinical engineering professionals, clinicians, IT executive leaders, and Informatics professionals. The program was designed to bring these audiences to a common understanding of the challenges and opportunities of the transformational nature of the technologies at play. There is an impressive array of guest speakers who according to the preliminary agenda will speak to the future of nursing in a high technology environment, human factors and the crucial role of this specialty in promoting user friendly, safe, and efficient designs for technology, ITIL/ISO and other processes and tools that promote efficient interactions between IT and CE, and case studies of where institutions are in aligning governance structures, technologies, and processes to maximize the value of both CE and IT professions in the new connected environment. The theme, content, and speakers are aligned to bring record attendance to this event.

The ACCE HIMSS planning group continues to plan for the ACCE reception at HIMSS and the membership meeting. In addition, the group is planning an education activity along the lines of the early breakfast meeting of previous years. Feedback from the participants and organizers of the breakfast corroborated the appropriateness to try a new venue in Las Vegas. Lastly, there will be an opportunity to have more visibility for ACCE at the Exhibit. HIMSS strategic plan for the displays may include a dedicated space for medical device vendors and connectivity. ACCE

will be included as participant on a prominent space and live connectivity displays as this part of the exhibit gets finalized.

CE/IT Community – This is another collaboration project co-founded by HIMSS, ACCE and AAMI in 2008, and now is being re-energized with a series of activities that include: 1) publicity for the Community and supported publications (e.g. *Horizons*) – a press release about the Communities, mission, goals, accomplishments, and plans will be widely distributed on the week of September 26 2) Update of websites – to reflect the latest information, and 3) Virtual Town Hall Meetings – this is a series of web meetings aimed to convene, educate, and share ideas among the stake holders of integrated spaces in clinical engineering, IT, and Health IT. The first Virtual Meeting is scheduled for November 1 and will be introducing, discussing, and reviewing the impact of the US HITECH Act to several constituencies including clinical engineering. Subsequent meetings will be spaced at minimum of four months apart, and the meeting frequency will be evaluated after the first yearly cycle. Each upcoming Virtual Town Hall Meeting will be sponsored by one of the co-founders organization and will include topics on wireless in health care (AAMI); MDDS/ 80001 (ACCE); and follow up from the CE-IT Las Vegas Symposium (HIMSS) – additional subjects and schedules will be considered as the stakeholders request them; and 4) A List serve -- The Steering Committee will monitor and stimulate interchanges at this web page: CE-IT_COMMUNITY@LIST.HIMSS.ORG

Medical Device Innovation, Safety and Security Consortium (MDISS) – This is a collaboration nonprofit public benefit organization recently formed to address security risks in the US biomedical device network. ACCE has been invited to discuss membership as a professional organization

To close, I'd like to acknowledge the great support of the Board of Directors, the Chairs of the standing Committees, and other volunteers who contribute their time last year. Everyone took time from their busy schedules to

support the running of the organization and promote the Clinical Engineering profession. I further want to recognize the incredible work that our Secretariat, Suly Chi, has done in the few months that she has been with us. Her attention to detail and her commitment to streamlining our processes have moved our organizational to a more effective place.

ACCE is poised to embrace the next level and continue building the strategy and infrastructure to support an additional position that has the overall operational responsibility for ACCE staff, programs, marketing, and implementation to its mission.

There is so much yet to do in our space that there are plenty of opportunities for all of us.

Respectfully,

Mario Castaneda

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ACCE News

ACCE News is official newsletter of the American College of Clinical Engineering (ACCE)

ACCE News is a benefit of ACCE membership; nonmembers may subscribe for \$60

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Interview: Kurt Finke, Chief VA Clinical Engineer

Editor's note: Earlier in 2011, Kurt Finke was appointed as the clinical engineering national leader for the VA, the largest single employer of clinical engineers and biomedical equipment technicians in the US. ACCE News Editor Ted Cohen recently interviewed Kurt to find out more about Clinical Engineering and Health Technology Management in the VA system.

Tell us about your new job and the role of the VA national Clinical Engineering office?

I was recently appointed to serve as Director of the Office of Healthcare Technology Management (HTM) in the Veterans Health Care Administration. This Office in VA Headquarters is responsible for establishing policy that governs the management of medical technology and medical devices used within the VA Health Care System. The "HTM Program Office" provides oversight of VA Biomedical/Clinical Engineering policy and practice. Additionally, we are responsible for the deployment of Real Time Location Systems across the VA. Our office consults with clinical program offices to support their technology needs and we coordinate with VA executive leadership to implement policies that support safe, high quality, and cost-effective patient centered health care to our nation's Veterans. Our office represents VA entities external to VA such as major medical equipment manufacturers and suppliers, FDA and other government agencies, and professional organizations. I have an extremely capable team in the HTM Program Office and the VA has exceptionally talented clinical engineers and biomedical technicians across the country.

How large is the total Clinical Engineering operation for the VA?

The VA Health Care is comprised of 1,600 sites where care is delivered, including hospitals, clinics, nursing homes, and readjustment centers. These sites, including 150 hospitals, are divided into 21 Veterans Integrated Service Networks or "VISNs" that manage services for enrolled Veterans in their respective geographic region. The VA has approximately \$5.5 Billion worth of healthcare technology across the country that is

managed and supported by Healthcare Technology Management. Our organization includes approximately 125 clinical engineers and 900 biomedical technicians. These talented professionals provide comprehensive services that include strategic equipment planning and life cycle management, technology assessment and evaluation, implementation coordination, systems integration, maintenance and technical support, and coordination of applications training- all with full attention to safety, risk management, and financial stewardship. VA Biomedical Engineering serves several domains of healthcare technology including general biomedical equipment, imaging systems, laboratory and research instrumentation, telehealth equipment, and medical IT systems.

What is your vision for VA Clinical Engineering?

Simply stated, my vision is to make excellent medical technology available for the care of Veterans. Whether used in surgical procedures, diagnostic exams, clinic appointments, or Veterans' homes, VA will continue to provide top notch medical devices and systems to enhance the care and well being of our enrollees. The management of this technology and the technical services provided to keep it safe and used effectively will be consistently excellent across our health care system. We will continuously improve our internal operations and we will drive industry to improve the products and services it provides to VA. I'm quite excited to facilitate specialized communities of practice to leverage the collective expertise of our Biomedical Engineering professionals across the country. With 150 medical centers, we have an abundance of data available to us; we'll make intelligent use of it.

Recently you "encouraged" eligible VA clinical engineers to take the CCE exam and approximately 40 clinical engineers did take the exam. What is your vision for Clinical Engineering and BMET certification within the VA?

One of my immediate goals is to enhance the professionalism of Biomedical Engineers and Technicians across the VA and to promote our profession within the VA.

Certification demonstrates attainment of substantial knowledge and experience in the profession. I'm encouraging certification and I'm rolling out training programs to enhance capabilities of clinical engineers and biomedical technicians. While we do not currently require certification, we are considering it along with a variety of qualifications as we examine our workforce of the future.

Several large healthcare organizations, including the VA, have made great strides in the past few years in implementing Electronic Healthcare Records(EHR). This is an important (and funded) area in national healthcare policy. What is the role of VA Clinical Engineering in healthcare IT and what is the relationship between VA Clinical Engineering and VA Healthcare IT?

In VA, Biomedical Engineering is responsible for a number of healthcare IT systems such as radiology, cardiology, and dental PACS; automated charting systems including ICU Clinical Information Systems, Anesthesia Information Systems, dialysis information systems, and endoscopy management systems; and a variety of other clinical systems such as ECG management systems, EEG info systems, etc. VA Healthcare Technology Management and VA Information Technology are organizationally distinct departments, but they functionally collaborate extensively to support clinical systems. Generally speaking, Biomedical Engineering is responsible for the medical devices, the server and storage infrastructure for clinical systems, and interoperability of medical devices with medical systems and medical systems with other medical systems. IT is generally responsible for the hospital information system, office automation applications, and network infrastructure. HTM and IT work very closely to assure network performance and reliability related to medical devices, information security of medical devices, malware protection of medical devices, and interfaces between medical systems and hospital information systems. VA has been a leader in medical informatics. While Biomedical Engineering actively collaborates with Informatics, there is opportunity to contribute even

(Continued on page 4)

International Committee Update

ACCE has a rich history with international Clinical Engineering (CE) and health technology management (HTM) issues. Two examples are the 45 ACCE Advanced CE Workshops that began in 1991 involving 63 countries so far, and the many resulting international members we have had that are major contributors to our ongoing global collaboration and partnerships.

Since 2002, Tony Easty, PhD, PEng, CCE, has served as ACCE International Committee Chair. Thanks to Tony for his tremendous leadership and outstanding results during a critical time in our history! With increasing demands in his roles at the University Health Network, the University of Toronto, and the Centre for Global eHealth Innovation, he decided to step down in mid-2011. Prior to that, he led the Committee team through a review of vision, mission, and goals, noted below. As reported in the Summer 2011 ACCE News, Antonio Hernandez, EE, PE, has agreed to become the Committee Chair.

Antonio notes that now more than ever, there is "great opportunity for ACCE members and colleagues" to become involved in International Committee work. So, please let Antonio know where you would like to serve by contacting him at internationalchair@accenet.org.

The **Vision** for the ACCE International Committee is: Excellence in CE / HTM is available to all worldwide; Advocate having every country utilize HTM to improve care delivery in their population; Ensure that everyone knows what CE is and why it is important; and to clarify the differences between HTM and CE. The **Mission** for the committee is to work with in-country partners to facilitate further development of CE / HTM.

Upcoming goals for the committee are: To identify priority activities within HTM and identify partners we can work with to operationalize these activities; Share CE / HTM knowledge through training and information exchange according to the local needs; Promote & advocate CE / HTM and build recognition for the profession of CE/HTM (e.g., help to implement a global ap-

proach to CE/HTM certification).

ACCE has met regularly with the World Health Organization (WHO's Adriana Velazquez), and IFMBE CED (Yadin David). This year we have had monthly calls, to build on the momentum our partner organizations are gaining (see www.who.int/medical_devices/en and CED <http://health.groups.yahoo.com/group/CEGlobal>). One planned short-term collaboration activity is for ACCE to develop a more formal relationship with WHO.

The ACCE International Committee will begin monthly meetings in late September led by Antonio. We will examine priority

countries and needs, and will be making 2011 and 2012 plans. Other current members include Mario Castaneda, Tony Easty, Bill Gentles, Tom Judd, Frank Painter, Jim Wear, Ismael Cordero, Jennifer Jackson, Tobey Clark, and Elliot Sloane. Your voice, ideas, and support are important; please join us!

Tom Judd

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Kurt Finke Interview continued

(Continued from page 3)

more. Watch for tighter integration of Biomedical Engineering and Health Informatics over the next couple years.

What other issues are you concerned about for the VA clinical engineering and clinical engineering in general?

For the most part, my concerns for VA clinical engineering mimic my concerns for clinical engineering as a profession. 1) As health care reform plays out in the United States, we in clinical engineering must solidify our role and contribution in ways that others recognize. We must purposefully and with urgency enlighten healthcare executives to the importance of clinical engineers. 2) As a profession, we must become more agile and able to evolve, as technology and health care systems evolve. We must keep up with, or ahead of, the relentless pace of change in healthcare technology management. 3) We need more clinical engineers. VA has a wonderfully successful training program for clinical engineers, but the industry at large needs to educate, train, and produce more clinical engineers. The days of hospitals getting by without a clinical engineer or with only one clinical engineer are behind us. 4) Variability across VA Biomedical Engineering programs has steadily increased over the past decades. We are implementing strategies to increase consistency of processes, data systems, and

capabilities across the VA. At the same time, we'll leave sufficient local latitude to foster creativity and innovation.

Is there anything else you would like to share with us about yourself and/or VA Clinical Engineering?

I would be remiss not to mention the very special mission of the VA - to serve our country's Veterans. As President Lincoln said, and as engraved on the VA building in Washington DC, we are here "to care for him who has borne the battle." As the largest health care system in the country, VA will provide services to over 6 million Veterans this year. For me, it is a distinct honor and privilege to serve our nation's heroes.

Additionally, I'm quite humbled by the community of clinical engineers and biomedical technicians across the VA. Their talent and expertise is unparalleled. The advancement of VA clinical engineering over the coming years will be testament to their tremendous capabilities.

Ted Cohen

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Perspectives from ECRI Institute: Connecting Vital Signs Monitors to the EMR

Most of the medical device data in today's patient record has been entered by nurses by hand. This can be extremely time consuming and decreases the important time that nurses can spend on direct patient care. It can also take many hours of delay for medical device data to actually be recorded in the patient record and it's prone to data entry errors. The US Government's Meaningful Use incentives are driving hospitals to rapidly adopt EMRs or electronic medical records. As more and more hospitals do this, they will begin to look for ways to improve the efficiency and accuracy of recording medical device information in the patient record. Clinical engineers need to be a key part of this effort.

Vital Signs monitors are among the first devices that hospitals are connecting to EMRs. They are used to periodically measure basic physiologic parameters such as noninvasive blood pressure and temperature. ECRI Institute recently evaluated the ability of seven vital signs monitors to transmit their data to the EMR. The study was published in the September 2011 issue of our *Health Devices* journal. If you are planning or considering a medical device connectivity project I think that you'll find this to be a very useful resource.

As you might guess, we found that connecting vital signs monitors to the EMR does not come easily or cheaply. We also found that some devices are better connectivity choices than others. For example, two of the evaluated devices cannot ensure that vital signs data is associated with the correct patient ID. This can obviously be a serious problem. Other factors that influenced our ratings of the evaluated products included their behavior during network downtime, (2) the ability to detect entry of an invalid ID for a clinician, and the ability to synchronize

time with the hospital's network.

In addition to rating the products, our study discussed general factors hospitals will need to think about when implementing a connectivity solution. For example, we explain and compare several of the costs associated with the evaluated solutions, such as additional hardware (if needed), software, installation, and interface development.

Members of ECRI Institute's Health Devices and SELECT programs can click on the following link to login and view our vital signs monitor evaluation.

<https://members2.ecri.org/Components/HDJournal/Pages/default.aspx>

Feel free to contact me at jkeller@ecri.org if you don't have a member login account and you'd like to learn how to access this information or if you'd like to discuss ECRI Institute's perspectives on connectivity and



vital signs monitors. Jim Keller is Vice President for Health Technology Evaluation and Safety at ECRI Institute and ACCE's President-Elect.

Jim Keller

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Secretary's Update

ACCE was instrumental in securing funding for the Alarm Management survey that will be presented at the October alarms conference. (Clinical Alarms Summit meeting October 4th and 5th in Herndon, VA

(http://www.aami.org/alarms_Materials/2011_Alarms_Horizons_Fall_Summit.pdf.) Thanks to Philips Healthcare for helping to sponsor this important activity.

Planning for HIMSS conference in Las Vegas next February has begun. ACCE volunteers for CE-IT symposium, ACCE educational session, HIMSS reception and exhibit floor events IHE PCD showcase and Medical Device pavilion will be welcome.

The US Board of Examiners for Clinical

Engineering Certification held oral exams for 36 applicants for clinical engineering certification from the VA hospital system across the US in Chicago last week for three days. Eight examiners volunteered their time to conduct the oral examines. We expect to have quite a few more applicants ready for the oral exam next year.

Elections for ACCE board members is now complete and an announcement with the results will be posted on the ACCE website soon.

Jon Blasingame

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Healthcare Technology Foundation News

At the recent Healthcare Technology Foundation (HTF) Annual Meeting we said goodbye to a couple of board members and welcomed some new ones. Two departing members include Dave Dickey and Larry Fennigkoh. Dave has been involved since 2006. He worked diligently to increase the HTF exposure, especially to hospital executives. Larry Fennigkoh was a member for 2 years and helped steer patient safety topics. We thank these two gentlemen for their service and hope they keep HTF concerns in the forefront as they continue on other endeavors. Hank Stankiewicz has been a member since 2006 and has agreed to move from a regular board member to an officer. Wayne Morse has been a member since HTF inception and will continue his role in an advisory capacity.

is to provide public good. The primary way we achieve this is through the Patient Safety and Education committee, currently chaired by James Wear. We have worked on developing educational brochures on a variety of topics: Home Medical Devices, Oxygen Therapy, and Home Hemodialysis Safety. These brochures are available on our website at <http://www.thehtf.org/publications.asp> in English and Spanish. We are currently working on a ventilator topic to be published in the next six months. Historically we have partnered with ECRI Institute on development and publication of these brochures. This has proved to be a beneficial endeavor. We encourage ACCE members to review the brochures and share them with appropriate departments within your organization or other colleagues who you feel would find them



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

(American Association for Respiratory Care). They spread the word and generated a lot of feedback. Now the challenge lies in reviewing the results to distill information in preparation for the AAMI Medical Device Alarms Summit to be held October 4th and 5th in Herndon, VA.

CE Certification has shown growth with the most significant activity being the commitment of the Veterans Administration to promote certification. Through the leadership of Kurt Finke, Director, Office of Healthcare Technology Management, participation was encouraged and opportunities for preparation were provided resulting over 43 applying for Clinical Engineering Certification. This is an excellent advocacy opportunity on behalf of the VA for the program and the importance of certification. Sixteen clinical engineers outside the VA have applied for the November 2011 exam. To learn more about how you can obtain your CCE please see <http://www.thehtf.org/certification.asp>.

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/>

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Current Board Members

Officers		Members	Advisory
President	Tobey Clark	Tom Bauld	Mario Castañeda
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Treasurer	Henry Montenegro	Nancy Pressly	Wayne Morse
Past President	William Hyman	Donald Tucker	Paul Sherman
President Emeritus	Yadin David	James Wear	
		Marcia Wylie	

We welcome four new members: Marcia Wylie from Scripps Health, Ted Cohen from UC Davis Health System, Jennifer Jackson from Cedars-Sinai Medical Center, and Donald Tucker from CHRISTUS Health. All are learning about current and historical HTF activities and will be supporting projects moving forward.

Our Annual Meeting kicked off with a brief review of our strategic plan. It is our hope to move from a group of 'doers' to a true foundation platform where we can guide others to support our mission and improve healthcare delivery outcomes. Since we are still a relatively young organization with coffers that do not rival those of major foundations, we have some growing pains to endure. This strategy of oversight vs. production will be critical to our success.

One of our main agenda items every year

beneficial.

There has been progress with the 'Tools for Managing Integrated Technology Risk in Healthcare Delivery Organizations' project. Yadin David is working diligently on required paperwork to continue to develop the project plan and RFP. An advisory group is engaged with the review.

The fast track project of 2011 is an update of the previous clinical alarm survey originally completed in 2006. Most of you should be aware of the survey announcement and hopefully were instrumental in completing the survey yourself and encouraging your frontline clinical team to complete it as well. We were very fortunate with contacts with other national clinical professional organizations such as the AACN (American Association of Critical-Care Nurses) and AARC

IFMBE- Clinical Engineering Division Chairman Report

The past year was significant for the Clinical Engineering Division (CED) of IFBME (International Federation for Medical and Biological Engineering) in many ways, but perhaps overshadowing it all, was the global recognition for the power of electronic communications as an instrument facilitating expression of people power. Healthcare and information technology were of no exception. Global evolution of healthcare knowledge and its dependence on technology for the safe and effective delivery of services reached an all time high this past year. The record global investments in healthcare infrastructure (hospitals, clinics, and mobility tools) announced by many countries and the growth in volume of medical technology being deployed create demand for technical support that is growing. Medical devices and sensors are now containing more embedded intelligence and are being interconnected through medical networks like never before.

New issues of data integrity and system risks require expertise and competencies, creating a growing demand for competent clinical engineers. However, multinational collaboration between, and identification of, clinical engineering education programs present a challenge for our field; mostly due to a lack of knowledge about these programs. Healthcare technology life cycle management (HTM) has become more complex and demands knowledge that is not readily accessible around the world. Therefore, CED work has been focused on building collaboration, technical cooperation, professional networking and guidelines for professional development.

Through active participation with the World Health Organization (WHO), Department of Essential Health Technologies, CED members, together with Prof. Marc Nyssen (IFMBE – WHO Liaison), worked on the development of concept, on lecturers' recruitment and participation in the Global Initiative on Health Technologies (GIHT). This initiative supports the international community in establishing a framework for the development of national health technology programs. It encourages the business and scientific communities to identify and adapt "innovative" technolo-

gies that can have a significant impact on public health in developing countries and on the related WHO First Global Forum on Medical Devices that took place in Bangkok, Thailand, 9-11 September 2010.

As part of the overall strategy to improve access to safe, effective and appropriate medical devices, WHO convened global experts, including some CED members, to develop and publish policies about health technologies (see: www.who.int/medical_devices/policies/en/). These policies, strategies, and action plans for health technologies, specifically for medical devices, are required in any national health plan. Within the context of a robust health system they ensure access to safe, effective, and high quality medical devices that prevent, diagnose, and treat disease and injury, and assist patients in their rehabilitation.

To help meet WHO objectives, WHO has contracted with IFMBE/Clinical Engineering Division to compile a glossary of medical device terms that are specifically used in HTM by clinical engineers. The use of common terminology and their global harmonization will bring clinical engineering closer. The project was completed under Dr. Yadin David's leadership and successfully submitted to WHO in March 2011. For the first time, a contract for professional services was awarded to IFMBE; IFMBE was awarded \$5,400 US for this work. The outcome of this work will promote global relationships and reflect well on the expertise that CED offers and about the commitment its members make to help colleagues reach better and safer health services. CED members also worked on the series of policies and procedures published by WHO in June 2011 under the Development of Medical Devices Policies website (www.who.int/medical_devices/policies/en/)

In addition to the collaboration with WHO, CED also **worked with national societies** in the US American College of Clinical Engineering (ACCE), in Italy Associazione Italiana Ingegneri Clinici (AIIC), Brazil, Columbia, China and India to name a few of them. Finally, CED has started to **work with the Inter-American Devel-**

opment Bank, Office of Outreach and Partnership on a medical equipment project for Women's City model center that is sponsored by the El Salvador government.

CED, through a generous donation from Kaiser Permanente health system, maintains an active **website** at: <http://health.groups.yahoo.com/group/CEDGlobal/>. The website archives material relevant to the global clinical engineering community and provide opportunities for information exchange between clinical engineers around the world in a format not available until this site went live in September 2009. Over 200 postings were documented in 2010 and for the period January-July, close to 50 postings were recorded for 2011. The website requires registration and has over 120 members. CED is the first and only international biomedical engineering group that holds quarterly e-Meetings and an annual e-Meeting allowing members around the world to virtually participate in the meeting in real-time.

Perhaps one of the most significant achievements this past year was the re-writing of the **CED Charter** and securing the Administrative Council approval for its adoption. The new Charter, the result of Professor Jorge Calil's work, allows for the invitation of global experts to collaborate with CED on its various projects and to receive recognition for their affiliation. This will expand the CED ability to work on projects simultaneously.

The ability to find colleagues to begin professional exchange mandates the need for access to Biomedical engineering teaching units and clinical engineering practitioners. Through the work of Professor Jorge Calil, the **Directories of Teaching Units and of Individuals practitioners** were updated and posted at the CED website as well as on WHO website.

Another successful accomplishment was reached last month when six healthcare technology management books in the series published by **Ziken were translated into Spanish**. It is going through external

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HTM Publications Developed for WHO

The Global Initiative on Health Technologies (GIHT) was initiated in March 2008 and implemented by the Diagnostic Imaging and Medical Devices unit of the Department of Essential Health Technologies at the World Health Organization (WHO) under the leadership of ACCE member Adriana Velazquez, in an effort to improve access to appropriate health technologies. The specific objectives of the GIHT were: To support the international community on establishing a framework for the development of national health technology programs that will have an impact on the burden of disease and ensure effective use of resources; and to encourage the business and scientific communities to identify and adapt "innovative" technologies that can have a significant impact on public health in developing countries.

The grant awarded to reach these objectives concluded in March 2011. The final products will be compiled on a CD that will be provided to Member States, funding agencies, medical technology industry, and the academic and scientific community resources to assist Member States in establishing and implementing health technology programs as well as information on core and innovative technologies.

To meet the objectives of the GIHT, WHO and its partners have devised an agenda, action plan, tools and guidelines to increase access to appropriate medical devices. A series of reference documents have been developed for use at the country level. The series was developed with active input from several ACCE members and includes the following subject areas: **Policy framework for health technology**, medical device regulations, **health technology assessment**, health technology management, **needs assessment of medical devices**, **medical device procurement**, **medical equipment donations**, **medical equipment inventory management**, and **medical equipment maintenance**. **Also computerized maintenance management systems**, medical device data, medical device nomenclature, medical devices by health-care setting, medical devices by clinical procedures, medical device innovation and research and development.

Eight documents in the series (bolded above) have been published to date and can be downloaded at: <http://info.humaninfo.ro/gsd/whoghp/en/cl/CL2.3.pr/clmd,50.html>

Accompanying each document is a power point presentation meant for use at workshops or other training activities. The documents are intended for use by biomedical engineers, health managers, donors, non-governmental organizations and academic institutions involved in health technology at the district, national, regional or global levels.

WHO thanks the members of the Technical Advisory Group on Health Technology for their input, advice, and collaboration throughout the development of these reference documents.

Email: medicaldevices@who.int

Web: http://www.who.int/medical_devices/appropriate_use/en/

Ismael Cordero

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IFBME– CED continued

(Continued from page 7)

review and will be posted free-of-charge at the CED, WHO and national societies' websites throughout South and Central America. The approved CED 2010 budget facilitated this achievement. CED, on behalf of the world community is thanking IFBME for approving the project that has been delivered on time and within budget.

Guidelines for professional development and the role of **clinical engineering certification** were studied by Professor Mario Medvedec. This important project is work-in process and CED intends to carry it into 2011.

Part of professional networking is communication about programs' update and related science news. The CED delivers a **Clinical Engineering column** for every issue of the new IFBME initiative the **e-Newsletter**. The column has been received well judged by the comments sent to the CED chairman.

CED board member was involved in the delivery of **training on Medical Equipment Management** in Kuala Lumpur, Malaysia in January 2011 for 11 Iraqis from their MOH (Engineering).

Finally, the need for a global center for information on how health technology management can be better prepared to face disaster was identified during the

Haiti earthquake devastation and the CED chairman has proposed to collaborate (for example with Professor Luis Kun from the National Defense University and with WHO) on the **development and establishment of an international center for training health technology managers on disaster preparedness plans**. CED participated in organizing support to the Haiti community and Japan's community recovery efforts following the devastating disaster that these communities suffered. The events further emphasize the need for immediate development of such collaborative center where a variety of agencies and experts will interact to develop best practice for preparing health technology managers to optimally operate before, during and after disaster hits.

Increased involvement of clinical engineers from around the world with the CED Working Groups and with its website provides solid reasons to strongly support CED within the IFBME. We, therefore, appreciate the IFBME President's effort to include the Clinical Engineering theme in the World Congress in Beijing, China next year.

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Humanitarian Engineering:

A personal recap of the 2011 Australian Biomedical Engineering Conference

Engineers Australia (EA), an Australian national organization for the advocacy of the engineering profession, has dedicated 2011 to recognizing the role of engineering in improving quality of life and disaster recovery. As co-hosts of the 2011 Engineering and Physical Sciences in Medicine and Australian Biomedical Engineering Conference (EPSM-ABEC), EA had an opportunity to showcase their diverse initiatives already in progress as well as future objectives.

In August, I had the privilege of following in the footsteps of past ACCE members by participating in the ABEC conference. I was provided the opportunity to speak about the humanitarian engineering efforts of ACCE and the Global Assistance for Medical Equipment (GAME), as well as the future of Clinical Engineering (CE) in the United States. During my visit, I also had the opportunity to visit CE colleagues in Perth. This is a brief overview of my adventure and my new friends.

First off, Australia is an amazing country. It's the physical size of the United States, but with only 10% of our population. I highly recommend reading the book *In a Sunburned Country* by Bill Bryson. It will help to bring you up to speed and teach you the basics of tourist survival.

While visiting, I became very familiar with the EA Biomedical College, their equivalent to ACCE, plus more. This country-wide organization combines hospital-based CE, academia-based BME from more than ten universities, and health-care-based rehabilitation engineering with over 300 member hospitals. These partnerships are used to enhance professional practice in several creative projects and programs. The organization takes part in the annual EPSM-ABEC conference, providing an opportunity to engage with engineers of related professions.

The Biomedical College conducts an annual 'Young CE' face-to-face student paper competition and mentoring program before the EPSM-ABEC Conference. The organization also provides members with opportunities to serve in humanitarian

CE projects, most notably in nearby Indonesia and New Guinea.

This year, the EPSM-ABEC conference took place in Darwin. Located in the Northern Territory of Australia, Darwin is a strategic venue as it is closer to Southeast Asia than it is to other major cities in its own country. The conference organizers took advantage of the city's location on the harbor, hosting the opening reception and ABEC conference dinner on the waterfront.

During my visit, I met several board members of the EA Biomedical College including: Adrian Richards, Bruce Morrison, Ed Scull, Graeme Maculay, Mike Flood, Izmir Congo and Dr. Karen Reynolds. I learned about several initiatives from the group that were of particular interest.

In mid-August, the Biomedical College released a discussion paper to the national media in Canberra, their country's capital. The paper was on issues relating to the implications on Australia's health system due to current Health Technology Management (HTM) practices. This perpetuates a national dialogue, focused on technology management and clinical engineering.

I believe there is great potential for ACCE and its International Committee to partner with the EA Biomedical College to address critical HTM needs around the world. These global needs were identified by WHO in 2010 and a global HTM study conducted by several ACCE members in 2011. The EA Biomedical College is already assisting Southeast Asia and the Pacific Islands with several initiatives.

During the conference, I presented on four topics: CE-IT integration, Humanitarian Engineering (HE) and HTM from a global perspective, a HE-HTM case study in Kosovo (2002-2011), and ACCE advanced CE workshops. Assistance for these workshops was provided by Antonio Hernandez and Frank Painter. I also presented similar CE-IT material during my visit in Perth to a regional organiza-



Trevor Hezaki presents at EPSM-ABEC.



Meeting the crocs in Litchfield National Park.

tion. Aside from my participation in the meeting, I took the opportunity to attend several memorable presentations. Dr. Joe Smith presented on his organization, the West Wireless Health Institute of San Diego, CA. Their institute is an independently-funded, nonprofit medical research organization focused on lowering health care costs through technology and innovation.

A variety of HTM topics were covered as well as wireless technologies and monitoring device network connectivity. Luciano Moccia presented on the Breath of Life program, discussing neonatal appropriate technologies. John Kis and Michael O'Brien presented and were honored for creating technologies for developing worlds. Presentations will be available on the EPSM-ABEC website.

During my stay at the conference, I also managed to take a couple of days to visit with my Aussie colleagues and explore the outback in Litchfield National Park south of Darwin. I met the crocs, and swam below the waterfalls. Overall, this was a great trip and a wonderful experience. I was very thankful to see what these peers of ours are doing. I'm hopeful that we will find ways to partner with them in the future.

Tom Judd

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The View from the Penalty Box

Engineering better healthcare

It is my hope that all of you have had a great summer, with some time away from work doing something productive that you liked, and that gave you a chance to think about our collective futures.

I keep hearing bits and pieces on new requirements that will tie the quality of healthcare and compliance with requirements to the level of payment from the government and possibly insurers to the hospitals and providers. Some say the new requirements will be in-place in 2013 others 2014 and still others never, as our “leaders in Washington” will revise or revoke the requirements before they come into full use.

If you really want confusion look at the “Explanation of Benefits” document that some insurance companies send out after a hospital or clinic visit. In my case, I am on Medicare, a visit to the dermatologist was billed at \$507.20, and Medicare allowed \$204.90. Medicare paid \$163.92 and my co-insurance paid \$40.98 and my responsibility was \$0.00 which is great for me. But when you look at this as an engineer it makes no sense. What was the true cost of that visit and having some skin tags frozen off? When you add up the office space, computers, labor costs, equipment, insurance and outdated magazines in the waiting room, the true cost of the visit was probably well under the \$204.90. I am sure no one has ever priced out such a visit. One of the biggest problems in healthcare is that we do not know what our true costs are, only what some “bean counters” have set as a cost and what other “bean counters” will allow for payment. The scariest part of this is that the person setting the price and the person approving the price have probably never had patient contact or know what the procedure entailed. We need the facts to make good decisions.

In a recent article in a local paper a politician noted that when he was in Congress there were only seven engineers

in the House of Representatives, (7 out of 435). He moved to the Senate where he was the second engineer, now he and the other engineer have both retired so we are 0 for 100 in the Senate. Just take a moment or two and think about the lack of engineers in policy making organizations.

Engineers are taught and learn to find solutions to problems that do not create other problems. Engineers are taught to identify problems, find ways to work around them or solve them. As a profession we have had some great accomplishments and some spectacular failures. (On one end space travel and on the other end Google “Tacoma Narrows”, which shows one of our classic failures). By training, engineers always look for the best possible solutions to problems. The solutions also have to be affordable, safe and sustainable. We need to bring the engineering thought process to the cost of medical procedures and services. We would be surprised that the actual costs of some of the simple older procedures are far more expensive than procedures with modern equipment. To confirm that costs with modern equipment are less, just look at the clinical labs. In the past 15 years the reduction in devices and people in labs has been large but the number of tests performed has grown at a high rate. If the old technology was used for these same tests, lab sizes would have had to increase 10 fold and the number of technicians required to run all the equipment would be tremendous.

As engineers in healthcare we have some unique opportunities to further impact healthcare. One way is by pushing obsolete technology out of the hospitals as it is too costly to run and maintain. We have 20 and 30 year old devices in our inventories because some physician likes to use that device once or twice a year. Tell them you will maintain the device only if they are driving a Plymouth or Rambler and have no cell phone or pager. Use good technology



and better patient care will result. By getting rid of some of this old technology you can also get rid of some old policies and procedures that are no longer needed. As much as I hate to admit it, I am a bit of a pack rat. I have documents dating back many years that are of little or no value now and possibly not too valuable when they were created.

My last point is to get involved with companies, organizations or even the government in pushing good engineering practices for designing, maintaining and removal of devices so patient care is always moving in the better, quicker, cheaper direction. Healthcare will only progress as long as we are involved. If the lawyers ever get control, healthcare will revert back to the leeches, blood letting and chewing bark, all while looking for someone else to blame.

Please be sure to go to your local conventions and talk with others in our field to learn more about what they are doing. Teach them about what you are doing, because working together, we can win this battle of healthcare costs.

Dave Harrington

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ACCE

AMERICAN COLLEGE OF CLINICAL ENGINEERING

The ACCE Board and Committee Chairs

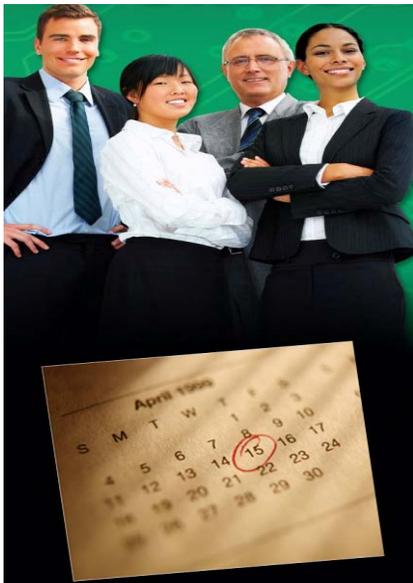
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ACCE Mission

1. To establish a standard of competence and to promote excellence in Clinical Engineering Practice
2. To promote safe and effective application of Science and Technology to patient care
3. To define the body of knowledge on which the profession is based
4. To represent the professional interests of Clinical Engineers

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



Calendar

October 4, 5
Medical Device Alarm Summit
Herndon, VA

October 16-18
AMA-IEEE Medical technology/Health
IT Conference
Boston, MA

Feb 20-24, 2012
HIMSS 2012
Las Vegas, NV

June 2-4, 2012
AAMI Annual Conference and Expo
Charlotte, NC

We are on the Web:

www.acenet.org

ACCE

Teleconferences:

See <http://acenet.org/> for information about two teleconference series: CCE Study course (August 2011 through October) and the monthly educational series starting in September.