



ACCE News

Newsletter of the American College of Clinical Engineering

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Membership Renewal

It's that time of the year again! If you have not already done so, please renew your ACCE membership on-line at www.accenet.org by clicking on the yellow highlighted link at the top of the homepage and logging in. You may alternatively renew by mailing a check or money order to :

ACCE
5200 Butler Pike
Plymouth Meeting, PA 19462
Al Levenson, Secretariat
Secretariat@accenet.org

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President's Message: CE & the iPhone



OK – who hasn't heard the news? iPhones will soon be NIBP monitors. I guess the new touch screen interface wasn't enough for consumers last year.

So, does this mean that I can correlate my elevated blood pressure levels with events like getting a call asking if I want to save money by switching cable service providers? Probably. Can I use that data to prove to the government that there exists true physical health risks in telemarketing? I still have no idea. I'm not sure because I still don't understand how these devices will be regulated and from what I gather, neither does anyone else. In this oft-cited article (<http://mobihealthnews.com/474/fda-may-regulate-iphone-health-apps/>), Don Witters from the FDA's Center for Devices and Radiological Health, when asked to

differentiate between medical devices and consumer devices that may measure, collect, or communicate medical data (like my downloaded-able NIBP app from the iTunes store), is quoted as saying "Well, I think the real answer is 'We don't know.'"

If I'm going to use my iPhone-recorded NIBP data to take the offending cable provider to task, then don't I need to somehow demonstrate that the data is accurate? That the machine was recently calibrated? That the proper technique was used to wrap that cuff around my arm? If I later discover that the data wasn't good enough to use in a lawsuit, then why was it good enough for my doctor?

Even if most clinical engineers don't extend their reach into home healthcare, I use this example because these consumer-driven medical technologies are very similar to those that are migrating into our workspace now and many of us are wrestling with how to approach these home-health, integration, and wireless issues.

Many ACCE-sponsored or supported groups, like IHE PCD and CE-IT Collaboration, are actively addressing these issues. ACCE, since last year, is officially a member of TC 215 and will be able to participate in shaping some of the standards that frame these technologies. So, as an organization, we continue to represent clinical engineering. If you are interested in getting more involved at the standards level, even if it is just to learn more about these standards for yourself, please contact me.

For those of you getting ready to head out to HIMSS 2009 in Chicago, (see pages 2 thru 5) and I'll see you there!

Cheers,

P.S. We've known for a while that Microsoft is also anxious to get its HealthVault apps out on the market. Using my experience as a consumer, I'm going to stick with Apple and the iPhone.



Schedule of ACCE-Sponsored Events
HIMSS 2009 Annual Conference
April 4-8, 2009
CHICAGO, IL

Event	Date/Time	Location	Notes
Clinical Engineering and IT Leadership Symposium	Sat, 4/4 8:30 AM – 4:15 PM	Convention Ctr Room S401 c	Ticket Required
ACCE Annual Member Meeting and Awards Ceremony	Mon, 4/6 7 PM – 11 PM	Hyatt Regency McCormick Place Room CC10C	Free for Members and Friends
Breakfast Meeting	Tue, 4/7 7 AM – 8 AM	Convention Ctr. Room S505ab	Free for Members and Friends
Educational Session:	Wed, 4/8 9:45 AM – 10:45 AM	Convention Ctr Room S404 a-d	HIMSS registration required

ACCE will have a booth at the conference: Booth # CS2 – near the Recharge Cafe.

Plus! HIMSS created a Clinical Engineering track with over 100 sessions that are relative to our field. Go to: Clinical Engineering Education Track at HIMSS 2009 for more information.

Awards to be Presented at HIMSS, Chicago

If you will be attending HIMSS, please join the ACCE leadership, colleagues and friends in honoring our awardees for 2009, at the ACCE annual meeting and awards ceremony on April 6 at 7:00PM. Awards and awardees are:

ACCE 2009 Challenge Award

The Award winner is **L. Michael Fraai**, M.S., CCE, Director, Biomedical Engineering, Brigham And Women's Hospital (BWH) in Boston. Michael, a native of Curaçao, began his journey with an undergraduate degree in Biomedical Engineering from Tulane University in New Orleans, LA. Next, Michael went on to pursue his Masters from the Hartford Graduate Center/RPI in Hartford, CT, while serving as an intern at St. Francis Hospital, and the University of Connecticut Medical Center.

Michael then joined the BWH in 1994 as a Clinical Engineer. In 1996, he went to Curaçao to work for St. Elizabeth's Hospital to develop a Biomedical Engineering Department. He later returned to BWH, in 1997 was promoted to Assistant Director, and then to Director in 2002. At BWH, Michael has been responsible for implementing a 430 bed hospital-wide telemetry system, a patient care network of over 1000 devices, and an inventory of over 22,000 medical devices.

Most recently, Michael led a team implementing a state of the art Cardiovascular Center at BWH. The design includes an innovative technical troubleshooting area for Biomedics for both the telemetry and patient care network. He has also initiated a medical device RFID program to help with inventory shrinkage and quality of work life of caregivers so they do not have to search for medical devices. He created a simulation program to help train nurses on the use of patient care technology before going into the care environment. This center will also help train BMETs and CEs on how to handle

technical calls in a collaborative way with Nursing before they are in a patient care environment. The center will assess not only proposed technology but also clinical effectiveness / applicability to current clinical workflows and human factors in the future.

Tom O'Dea Advocacy Award

Guruprasad Madhavan, M.S., M.B.A., is the ACCE 2009 Tom O'Dea Advocacy award economic policy fellow at the Nationalwinner for his efforts in both service to and as an ambassador for our profession. In 2008, Guru was a science, technology, and Academy of Sciences in Washington, DC. He is also senior editor of *Career Development in Bioengineering and Biotechnology* (Springer, 2008), a groundbreaking book – already highly acclaimed and endorsed by IFMBE - designed to help introduce students, professionals, and the general audience to the varied career and sustainable development opportunities within bioengineering, biotechnology, and related fields.

Guru is currently a Ph.D. candidate in Biomedical Engineering at SUNY Binghamton. His research is focused toward developing non-invasive, non-pharmacologic, neuromuscular stimulation approaches for enhancing circulation. Guru received his B.E. in instrumentation and control engineering from the University of Madras, India in 2001, and M.S. in biomedical engineering from SUNY Stonybrook in 2002. Following his medical device industry experience as a research scientist at AFx, Inc. and Guidant Corporation in California, Guru completed an M.B.A. in leadership and healthcare management from SUNY Binghamton in 2007. Guru has been a member of ACCE since 2002 and served on the ACCE membership committee since 2004.

Guru has been recognized by an array of national and international honors, includ-

ing the *SUNY Chancellor's Promising Inventor Award* (2003), Technology Alliance of Central New York's *Young Technologist of the Year Award* (2007), the Institution of Engineering and Technology's inaugural *Mike Sargeant Career Achievement Award for Outstanding Career Progress* (2007) in London, the New York State Southern Tier Opportunity Coalition's inaugural "20 in their Twenties" Award (2008), and the EE Time's *Student of the Year Award* (2008). He was also selected as an outstanding young scientist to represent the InterAcademy Panel on International Issues at the World Economic Forum Annual Meeting of the New Champions, and was recognized as one of the *New Faces of Engineering* by the Engineers Week Foundation in *USA Today*. Guru has won several other awards (e.g. IEEE, Rotary) for his professional and humanitarian work.

Lifetime Achievement Award

William A. Hyman, Sc.D., P.E. is recognized as the 2009 winner of the Lifetime Achievement award for his long standing and wide ranging contributions to clinical engineering.

William has a B.S. degree in mechanical engineering from The Cooper Union (New York City-1965), and an M.S. (1966) and Sc.D. (1970) in engineering mechanics from Columbia University. He was a research associate at MIT from 1969 to 1972, when he joined the Bioengineering Program at Texas A&M University as an assistant professor. William is currently a professor of biomedical engineering in the department of biomedical engineering where he has also served as program chair and interim department head.

William has been active in clinical engineering including his current service as a member of the executive board and secretary of the ACCE Healthcare Technology Foundation and director of the

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Awardees: Hyman Lifetime Achievement

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Foundation's PSO. He recently completed six years of service on the US Board for Certification in Clinical Engineering, and has been helping China with its clinical engineering training and certification program. He is a member of ACCE, AAMI, and the FDA/Industry Coalition (Dallas). William is also an editor of, and frequent contributor to, the Journal of Clinical Engineering, and he is on the editorial advisory board of Biomedical Safety & Standards.

He has written numerous journal, magazine, and newsletter articles related to clinical engineering issues with a focus on medical device safety and human factors. William has also contributed to several books including Dyro's Clinical Engineering Handbook and Atles's A Practicum for Biomedical Engineering & Technology Management Issues. In addition he has been a frequent presenter at professional meetings and short courses, and is an active consultant on medical device safety and patient issues.

AHTF Shepherd Patient Safety

W. David Paperman wins the Shepherd Patient Safety award for his foundational work in Radio Frequency (RF) electromagnetic interference (EMI) effects on medical devices.

David, a native of New York City, "emigrated" to Texas and completed his formal schooling in Houston in 1954. He then entered the wireless communications field receiving specialized training from a number of manufacturers in related fields. He holds several patents in radio and radar specialties.

In 1990, he joined the Biomedical Engineering Department of Texas Children's Hospital (TCH) as a Clinical Engineer. His responsibilities at TCH included technical support for Telemedicine de-

velopment and wireless systems. It was during that period that his expertise in the field of RF EMI was recognized by his Director, Dr. Yadin David. Subsequently a program was developed that led to research and investigation for the testing and control of EMI for medical devices reducing risks to patient safety. Mr. Paperman has been principal author of a number of peer reviewed publications on EMI, and has presented at various forums and seminars.

David was a member of the American Hospital Association team that obtained protected spectrum for Wireless Medical Telemetry. He received a Commissioner's Special Citation from the CDRH of the FDA and AAMI. He has also been the recipient of special service awards from the Governor of the State of Texas and the American Red Cross for his involvement in Emergency communications and public service.

Retiring from TCH in 2003, David is active in RF system design and interference control as a consultant to the Land Mobile industry and medical facilities. He is an active member of the Communications Society of the I.E.E.E., the Houston ECHO Society, a Life Member of the American Radio Relay League, and various other professional and Amateur Radio organizations involved in Emergency Communications.

Professional Achievement in Technology Award/Professional Development Award

The Award winner is **Julian M. Goldman, MD**, as founder of the Medical Device "Plug-n-Play" Interoperability Program (MD PnP) in the US, and for his ongoing, robust support of clinical engineering. Dr. Goldman has applied his diverse experiences in private practice, academic medical centers, and corporate environments to improve clinical technology for over eighteen years.

Dr. Goldman is the Medical Director of Partners HealthCare System Biomedical Engineering, Founding Director of the MD PnP Program at CIMIT (Center for Integration of Medicine and Innovative Technology), and a practicing anesthesiologist in the Massachusetts General Hospital "Operating Room of the Future".

MD PnP was founded in 2004 as an interdisciplinary, multi-institutional program committed to advancing medical device interoperability to improve patient safety. In 2007, the MD PnP program team received the CIMIT Edward M Kennedy award for Healthcare Innovation. By establishing a consensus-building approach, Dr. Goldman has enlisted the participation of more than 700 individuals from 85 device manufacturers, healthcare organizations, universities, federal agencies, and non-profit organizations. For medical device interoperability, the program has made extensive progress toward clarifying clinical requirements, established a vendor neutral laboratory, obtained [endorsements](#) from six clinical societies, and has collaborated with three leading hospital systems to produce publicly shared medical device [purchasing requirements](#).

Dr. Goldman received his MD from S.U.N.Y. Downstate Medical Center in New York in 1985, and performed anesthesiology residency and research fellowship training at the University of Colorado. His research fellowship concentrated on artificial intelligence applications for medical monitoring and simulation. Dr. Goldman served as an officer in the FDA Medical Device Fellowship Program, chairs the Use Case Working Group of the Continua Health Alliance, leads several ASTM, ISO, and IEC medical device standardization activities, and served as VP of Medical Affairs of a medical monitoring company.

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Awardees: Issakov Wins International Award

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ACCE 2009 Professional Achievement in Management Award/Managerial Excellence Award

The Award winner is **Marc Bateman, CCE**, for his years of managerial leadership on the US Board of Examiners for Clinical Engineering Certification, most recently serving as the Secretary of the Board.

Marc graduated from the University of Utah with a BS degree in Electrical Engineering in 1991. He completed the Biomedical Engineering Trainee program with the Department of Veteran Affairs in 1992. He worked for the Department of Veteran Affairs (VA) as a Supervisory Biomedical Engineer and participated in a workgroup to refine the VA's internal benchmarking tools.

Marc has worked for The Methodist Hospital (TMH) since 1998. In 2008 he was promoted to manage Biomedical Engineering at the hospital's three community campuses, an outpatient imaging center, and a freestanding Women's Breast imaging center. He is currently working on the planning of a 112-bed hospital scheduled to open in 2010. Marc has been involved in several other key projects at TMH - hospital-wide telemetry, key new technology evaluations, and as an internal mock Joint Commission surveyor.

Marc was part of the TMH group named as a finalist for the 2008 ECRI Institute Health Devices Achievement Award. He has also served as a co-chair for the General Electric Medical Telemetry Users Group for 5 years. The group puts on an annual meeting with both vendor and user presentations for users of GE's telemetry systems, particularly large installations using central command.

International CE Award

The International Award winner is **Andrei Issakov, M.D., M.P.H., Ph.D.**, recognized for his twenty-five years of strongly supporting international clinical engineering and health technology management (HTM) and his efforts to improve healthcare delivery in developing countries. Dr. Issakov is currently Coordinator, Health Technology (HT) and Facilities Planning, Department of Health System Governance and Service Delivery, Health Systems and Services Cluster, at the World Health Organization (WHO) in Geneva, Switzerland.

Dr. Issakov has worked in clinical practice and public health for over 30 years. He received his MD degree from the Russian Medical University in Moscow, and then specialized in surgery, medical education, and public health in Russia and the UK. He holds a Ph.D. in Pediatric Surgery, and Master's Degree in Public Health. Before joining WHO in 1985, Dr. Issakov occupied a number of clinical, academic and administrative positions at the Russian Medical University and at one of the major Children's Teaching Hospitals in Moscow.

Over his years of working with WHO, Dr. Issakov has provided significant contributions to a number of key WHO program activities such as strengthening health systems, health sector reform, health policy and systems research, organization and management of health service delivery, quality of care, patient safety, HTM, and health facilities planning, successfully working with all three levels of WHO - global, regional and country, and with various categories of stakeholders globally - governments, U.N. agencies, other intergovernmental and non-governmental organizations, academic and research institutions, donors, professional associations, and civil society.

Dr. Issakov's specific accomplishments

related to HTM include: Building a sound global knowledge base; Strengthening developing countries' capacity for HT & facilities planning, HT assessment (HTA) and HTM; Establishing a worldwide network of institutions and individuals working in HTM; Providing HT policy/strategy options, guidance on best practices, methodological and training materials, guidelines and other decision-making and management tools that are widely used in all WHO Regions.

Dr. Issakov also established national professional societies for healthcare engineering, HTA, and HTM in many developing countries of Africa, Asia, and Latin America and the Caribbean. He is a member and supporter of ACCE, ASHE, ISQua, and Health Technology Assessment International (HTAi).

Dr. Issakov is also a WHO global focal point for collaboration with the HTAi, IFHE, IFMBE, International Hospital Federation (IHF), and the Public Health Group of the International Union of Architects (IUA-PHG). He has collaborated with the US clinical engineering community since the late 1980s, and that collaboration expanded with the establishment of ACCE in 1991 developing into a strong multifaceted cooperation between the two organizations, and making ACCE one of WHO's key global partners in the areas of clinical engineering and HTM.

Examples of the WHO/ACCE partnership and Dr. Issakov's leadership are: The co-organizing of a large number of international activities including capacity building and supporting institutionalization of HTM in developing countries; Producing and disseminating important information (e.g. equipment donation guidelines) to help WHO Member States in improving HTM; Supporting the Advanced Clinical Engineering/HTM Workshops, a joint cooperative program between ACCE, PAHO and WHO, that

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Commentary: Providing Excellent Service

In the last issue I reviewed some pointers I had learned on the elements of good service. There I addressed the elements of good service and some of the individual personal attributes of the service provider—that means you. Here I will expand on those attributes, borrowing liberally from other meetings and lectures I recently attended.

Technical Skills

Technical skills are a prerequisite. Such skills are the basis for being useful to those who call on you for services. This does not mean that you have to be all-knowing instantaneously. It does mean that you know how to find the information needed, and that you are willing to look for it. It also means that you have to stay more-or-less current, if not forward looking, so that your technical skills remain relevant. Is now the time to learn computer networking, even if there is no immediate demand for that knowledge? The need for new and/or refreshed knowledge is the basis for continuing education and why it is required for various certification and licensing programs. Technical skill also means that if you lack adequate information you delay a response until you have acquired the information you need.

Personal Management

In many organizations the list of tasks grows to exceed the resources available to do those tasks. The wrong thing to do in this regard is to agree to do everything, and then to not accomplish some (or all) of your tasks because your management system is out of control. Everything you agree to do should be based on having or being able to get the resources to do it, and your earnest intent to accomplish the task within the expected time frame. When you agree under these terms you must then be able to manage your time and other resources to accomplish what you said you

would accomplish close to the time in which you said you would accomplish it. By not agreeing to do that which you can't get done, you will limit the things that you have not accomplished as expected. If having rationally agreed to provide a service you discover that you will not be able to do so in the time or scope expected, you must then communicate this to those expecting you to do what you said you would do. This communication is not simply an apology or list of excuses. For the most part no one really cares why you didn't accomplish what you said you would, baring perhaps personal tragedy. The admission must instead include when you will actually get the task done, or the fact that you will never get it done and must therefore withdraw your agreement to do it. These principles are a simplified version of the prescription that was the basis for an interesting lecture on Integrity and Performance recently presented at Texas A&M by Michael C. Jensen. The slides from that presentation are available at http://www.tamu.edu/provost/tamudls/lectures/2008_Jensen_Keynote.pdf.

Thinking Skills

We might expect that thinking skills automatically go with being smart, and with being technically skilled, but in fact strong thinking skills are a broader and separate attribute. In clinical engineering appropriate thinking skills include being able to integrate ideas and information from various sources, putting information and issues in context, discerning broader implications, and prioritizing appropriately and effectively. This may need to be done both immediately when an issue is presented, and subsequently if the information needs to be pondered and additional information acquired. Thinking skills include recognizing when a problem is not fully stated or the answer not readily available. This helps avoid the quick but ultimately wrong

answer, or an ill advised promise to find a solution. People seeking your assistance will prefer the answer that you have to think about and that you will get back to them at a certain time over a quick but not well thought out response.

Effective Communication

Despite bad old stereotypes about the communication skills of engineers, it is widely recognized that engineering in general, including clinical engineering, is a communication rich domain. There are very few corners of the profession where one is able to simply be proficient at what they do, but not be required to communicate what they do, what they have done, and what resources they need to do more. If there is such a corner, it would be hard to ever leave because there would not be any basis to think that the corner dweller can function in another setting. Good communication skills include face-to-face exchanges, long and short written material, formal and informal presentations, and appropriate control of length and time.

Being a good receiver of communications is also important. With respect to written communications it must be remembered that all written material has the potential to be archived, and more importantly rediscovered later, perhaps under adversarial conditions. Thus careful thought is required about what really needs to be said, whether it should be said in writing, and in choosing language carefully from the perspective of immediate understanding and future understanding and misunderstanding. One example of what NOT to do is the drug company email recently released to the press in which an employee is congratulated for the “smoke and mirrors” used to suppress adverse data.

Excessive communication is a growing problem as we move beyond email to

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Providing Excellent Service

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mobile email, texting, list-serving, chatting, twittering, and other 24 hour instant access. In this regard I read an interesting discussion about how down time at the airport, for example, now generates a slew of “new ideas” by some managers that are then instantly sent to others to implement. In box overload is a real problem, without even including the six foreign lotteries I won today. Don’t contribute to the problem with unnecessary communications.

Like most skills, communication can benefit from training, practice and observation. The latter involves paying attention to other people’s communications from the skill perspective. Were they effective? Why, or why not? Was their writing clear in addition to well edited? Were they appropriately succinct yet not incomplete? What did you like/not like about their communication? In presentations were their slides well designed to enhance communication, or were they too small, too busy, or too filled with PowerPoint tricks that distract more than they enhance?

Interpersonal

Within our professional spheres we all know people we enjoy interacting with, and those we do not enjoy interacting with. The question here is which are you? Good interpersonal skills include being friendly rather than standoffish, rude or unnecessarily confrontational. Being able to put others at ease while retaining appropriate professionalism is important as is being a listener that both pays attention, and appears to pay attention. It is also good to be open-minded and to avoid letting personal biases interfere with professional relationships. Yet this does not mean that you shouldn’t be forthright in expressing your professional opinions. On-the-job interpersonal skill also requires that personal friendships be separated from work re-

lated interactions. It should not be necessary to be one’s friend to get desired responsiveness, and a clear lack of friendship (un-friendship?) should not be allowed to interfere with professional work. In this regard there should not be designated outsiders to any group, and the bold person will make it their personal goal to bridge such divisions.

Team Oriented

Almost all of us function in a team environment, with varying degrees of active and passive participation. Being a good team member or team leader requires openness to other’s ideas, and as a leader publicly recognizing the contributions of others. It also requires a consistent effort to make your own contributions valuable and timely, and not to be unproductive just because you don’t have primary responsibility for the task. Another aspect of teamwork is that everyone on the team should be included. The meeting-after-the-meeting, or otherwise interacting away from the team, should be avoided unless the subgroup is a defined sub-team. No one on the team should be made to feel that they are being excluded, or that their contributions are unwelcome.

Professionalism

When recently discussing interview skills with students I pointed out that what might be superficial could in theory be dismissed. However in practice the reality is that the superficial often does matter. Thus proper dress to the recognized local standard is in fact important, regardless of any argument that how one is dressed shouldn’t matter. Maybe it shouldn’t, but it does. Personal demeanor is also part of being professional, as is retaining an appropriate relationship with everyone you interact with. The appearance, let alone the fact, of favoritism can be destructive to common goals and personal achievement. Obviously personal integrity is also important, and here also perception must be considered along with actual deviations from ethical

or legal norms. An appropriate commitment to the job and the organization, and a personal commitment to provide value, are also part of professionalism. For better or worse this may no longer mean unswerving loyalty, especially as employees discover that they may have been more loyal to the organization than the organization ends up being to them. None-the-less, here is another opportunity to set your own standards rather than simply being responsive to the environment.

All of these skills, and others, can be the subject of personal improvement goals, and they should be part of your continuing agenda. The relevant steps are to recognize the importance of the skill, to assess your own current skill level, to plan improvement strategies, and to be observant with respect to your own and others performance.

William Hyman, ScD, PE

w-hyman@tamu.edu

Awards continued

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since 1991 has run over 40 workshops in 57 countries in all WHO Regions and was attended by an estimated 4,000 participants including many health leaders; Assisting the development and use of INFRATECH, a global Health Infrastructure and Technology Listserv, sponsored by WHO and PAHO, linking HTM professionals around the world to address ongoing HTM issues.

Dr. Issakov has over 50 publications and papers presented at various international forums on a wide range of public health issues including various aspects of health systems development, health service provision, HTA, and HTM.

ACCE Advocacy Committee

International Report: ACEW Accra Ghana

On March 2 – 6, 2009, a Workshop on Health Technology Management (HTM) was presented at Valley View University in Accra, Ghana. The workshop was made possible by the joint sponsorship of International Aid, The Ghana Health Service (GHS), The Ghana Ministry of Health (MOH), ACCE and the World Health Organization (WHO). The workshop was also made possible by the generosity of a donor to International Aid, Dr. William Bolthouse. The funding included funds for three follow-up workshops.

The following ACCE faculty participated in the workshop: Bill Gentles of BT Medical Technology Consulting in Toronto, Mario Ramirez of Hospital for Sick Children in Toronto, and Evelyn Fan of Brigham and Women's Hospital in Boston. Additional faculty who participated were Dan Hardy and Billy Teninty from International Aid, and Shauna Mullally, a Biomedical Engineer from the UK Medical Research Council in The Gambia.

A second stream of the workshop was run by Peter Heimann and Paul Maree of WHO. On March 3 and 4, they presented a tutorial on the software tool iHTP. This is a planning tool for health systems that was developed by a South African company (Wamsys) under the sponsorship of WHO. This tutorial was presented in parallel with the HTM workshop. In addition, on the morning of March 5, they presented a tutorial on the features of the TEMP database software package for equipment management in hospitals.

HTM in Ghana is in the very early stages of development, and there is a growing understanding of its importance, as evidenced by the attendance levels. There are few regulations governing the use of medical devices in Ghana. The HTM function is carried out by "technical units" which are found in the MOH, GHS Headquarters, Regional Health Directorates, Teaching Hospitals, Regional Hospitals and selected District Hospitals, as well as

in hospitals funded by religious groups such as the Christian Health Association of Ghana (CHAG). Two universities in Ghana are now offering Biomedical Engineering programs. The material for the HTM workshop was based on the WHO "How to Manage" series for Healthcare Technology. At 135 people on Day 1 and 127 on the closing day, the attendance at the event exceeded all expectations.

The first day of the workshop was directed at Health System Planners, Hospital Administrators as well as Biomedical Engineering supervisors and managers. A series of brief talks were presented on Day 1 to present the case as to why HTM is important, and the role that Government must play to ensure the safe use of medical technology in health care. On subsequent days, talks covered the broad theme of "How to Organize a System of Health Technology Management".

On Day 2, the participants identified the issues related to HTM that they thought were most pressing in Ghana. As follows: Inadequate funding; Lack of HTM policy and lack of standardization; Lack of skilled personnel; Lack of spare parts; and Problems with donated equipment. Based on the identified issues, a series of four case studies were prepared by the faculty, for group discussion at the end of Day 3 as follows: Funding; Creating a preventive maintenance plan; Creating a donation policy; and Spare parts issues.

At the end of day 5, the participants voted on which case study had the most relevance to Ghana. Case study 4, "Creating a Preventive Maintenance Plan" received the most votes. The first step in this plan was to complete a country-wide inventory of medical devices in Ghana. This first step was agreed to as the homework assignment for the participants. They would use the TEMP software to develop this database. Other case studies would be taken up as projects once this first project is well under way.

A homework assignment for the Faculty was to set up a Yahoo Group to facilitate communication among people working in HTM in Ghana. In addition, the faculty are developing a template to facilitate the inventory project. In addition, the workshop inaugurated the first Biomedical Society in Ghana. Faculty members met with the Society executive to brainstorm ideas and answer questions.

We were most grateful for the kind hospitality of Nicholas Adjabu, of the Ghana Health service. We also thank Valley View University for the facilities to hold the workshop. Finally, we would like to thank Billy Teninty and Dan Hardy of International Aid, who made sure that everything ran smoothly.

Bill Gentles



Ghana faculty, from L to R Evelyn Fan, Billy Teninty (International Aid), Shauna Mullally (The Gambia), Nicholas Adjabu (Ghana Health Service), Bill Gentles, and Mario Ramirez.

Perspectives from ECRI Institute

Documenting Discontinued Medical Devices

Over the years, ECRI Institute has received numerous requests from the clinical engineering community for a current list of discontinued medical devices. For new purchases, the concern is to be sure that parts and service will be available for the expected life of the equipment. If the purchaser knows that the equipment is discontinued, they may decide to select another device. For equipment already in a hospital's inventory, it is important to know about the changes in status of parts and service that occur after the device is discontinued so that the department can procure a replacement device in a timely fashion.

A discontinued medical device is a model that is no longer sold by its manufacturer. Although not required by law, manufacturers will often continue to service equipment and to provide spare parts for a specific period of time after devices are discontinued. In other cases, manufacturers may stop providing parts and service altogether.

There is also no law that requires manufacturers to notify their customers when they discontinue a device, nor are they required to supply parts for discontinued items. Simply put, you can't depend on being informed about the availability of the device, parts or service, you must find out.

Since the FDA maintains a listing of medical devices, you might expect that it would also maintain a list of discontinued devices. It doesn't. There are three reasons why it doesn't have what you need. The first is that manufacturers are not required to submit the model numbers of their devices when they are listed with the FDA. The second reason is that the FDA's definition of "discontinued" does not require the manufacturers to change their listing if only one model in a family of devices is discontinued—they only need

to update their listing when "[All models or variations of a listed device is removed from commercial distribution](#)". Lastly, FDA regulations do not require manufacturers to report the status of parts or service for discontinued models.

ECRI Institute has developed a "manufacturer and model database" containing information on over 15,000 models of medical devices (over 900 of the devices listed there have been discontinued over the past few years). The manufacturer and model specific information are listed and each device is classified using our Universal Medical Device Nomenclature System™. Recently, we expanded the database to include information about the availability of parts and service for discontinued devices. This model-specific discontinued device information was recently added to the resources and tools in BiomedicalBenchmark™ (our new web-based product with benchmarking information, maintenance procedures and other tools to help clinical engineering departments to assess and improve their efficiency).

We survey medical device manufacturers, asking them to update the listing of technical characteristics that ECRI Institute maintains for their devices. When they state that a device is discontinued, we also ask them if they continue to provide parts and service for that device. The results of that survey are included in the manufacturer and model database (and into other databases that we maintain at ECRI Institute). We also receive notices about discontinued devices directly from manufacturers, from our members and occasionally from the FDA enforcement report. We distribute that information directly to our members through our Health Devices Alerts database.

We would like ACCE members to help make our databases even better. Please

send us letters or other communication that you receive from manufacturers about their devices (as long as sending it to us does not violate any confidentiality agreement that you have with them). ECRI Institute will not reveal your name your institution's name in any of our publications or in the database record. The address is alertssubmission@ecri.org. We appreciate your help!

If you would like to know more about the discontinued device database or about BiomedicalBenchmark™ please contact me at: 610 825 6000 X5368, or at the e-mail address below.

Jonathan A. Gaev

jgaev@ecri.org.

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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Managing Editor

Jim Keller
jkeller@ecri.org
(610)825-6000

Co-Editors

Ted Cohen
tedcohen@pacbell.net
Ismael Cordero
ismael.cordero@orbis.org

Circulation & Address Corrections

Alan Levenson, ACCE Secretariat
Secretariat@accenet.org

Advertising

Dave Smith
advertising@accenet.org

Healthcare Technology Foundation News

New Board Members to be Announced

The call to the ACCE membership to recommend new board members or to volunteer to be board member achieved a strong response and the Foundation thanks everyone who responded for their ongoing interest. In addition to members from the clinical engineering community, we anticipate having new board members this year from the FDA, insurance and medical device industries. These new board members will be announced after their formal election at the annual meeting of the Board of the Foundation which will take place in Chicago preceding the HIMMS meeting and ACCE Symposium.

Additional Volunteer Opportunities

Besides serving as a board member, the Foundation always needs additional interested and dedicated people to work on its programs. In Foundation parlance, these people have become known as the “doers” and they are essential. We continue to work on the issue of improving clinical alarm processes, and on the next patient safety brochures. We also have initiatives in other areas of broad interest to clinical engineering and healthcare delivery, and other initiatives are open for consideration. We are always interested in hearing from people who want to join our efforts.

Donations to the Foundation

Tax season is a good time to think about donations. Do you need more deductions? Remember the Foundation! Do you donate regardless of the federal subsidy? Remember the Foundation! Also remember that “in honor/ recognition of...” donations are always welcome and they will be recognized with a suitable communication to the honoree. Such donations are ecologically sound and keep our resources working for us.

Certification

Certification in Clinical Engineering continues to be a program of the Foundation, although the intellectual work of certification is handled by the Healthcare Technology Certification Commission and the US Board of Examiners for Clinical Engineering Certification. All of the personnel associated with the Commission and the US Board are volunteers. Thank them for their service when you get the chance. <http://www.acce-htf.org/certification.asp>.

William Hyman, ScD, PE

Secretary, AHTF

w-hyman@tamu.edu

Wayne Morse MSBME CCE

President, AHTF

wayne@morsemedical.com

ACCE Clinical Engineering Certification Study Guide

The American College of Clinical Engineering has prepared a Study Guide for the Clinical Engineering Certification examination offered by the Healthcare Technology Certification Commission established under the ACCE Healthcare Technology Foundation. The Study Guide is available through ACCE for \$30. To order a copy of the Guide, please make out a check payable to ACCE and send to:

Alan Levenson, ACCE Secretariat
5200 Butler Pike
Plymouth Meeting, PA 19462

Or e-mail Secretariat@ACCEnet.org and include credit card information (name on card, type of card, card number, and expiration date). Applications are now being accepted for the **November 2009** exam. Applications and the applicant handbook can be found at www.ACCEnet.org/certification

The ACCE Study Guide was written by an independent group of clinical engineers not associated with the exam process

Certification in Clinical Engineering
(CCE) Exam



Exam Date **November 7, 2009**

US Application Deadline **August 14, 2009**
For those taking the exam within the US & Canada

International Application
Deadline **July 17, 2009**
For those taking the exam outside the US & Canada

Visit www.acce-htf.org/certification/ for
handbook, application and more information.

Email secretariat@acce-htf.org if you have any questions.

ACCE

Healthcare
Technology
Foundation

ACCE Healthcare Technology Foundation
(AHTF)
5200 Butler Pike
Plymouth Meeting PA 19462
(610) 825-6067
<http://www.accefoundation.org>
AHTF is an independent, not-for-profit
foundation

International Report: Stronger HTM in E Africa

Joe Geary of DITEC recently returned from a voluntary training assignment to Nairobi, Kenya and beyond. He joined a team that was continually reminded that “This is Africa ... with all of its beauty, its wonder, and ... its challenges.”

Background

As emphasized by numerous reports including the World Health Organization (WHO) Regional Policy on Healthcare Technology adopted in 1999, African countries are facing many serious healthcare technology management (HTM) challenges that have a significant negative impact on the delivery of healthcare services to their populations. WHO in collaboration with others has provided important support to its African Member States in addressing these challenges and strengthening HTM capacity in their health systems.

In 2006, WHO with the American College of Clinical Engineering (ACCE) and others, conducted Advanced HTM workshops in Ethiopia and Kenya attended by participants from public and private health facilities from East Africa. The Association of Medical Engineering of Kenya (AMEK) participated in co-organizing this and related events in Kenya along with National Ministry of Health. Key challenges identified in both workshops was lack of knowledge by decision makers on best healthcare HTM practices as well as skills in service and maintenance of several technologies, including medical imaging, clinical laboratory, operating theatre and intensive care.

February 2009 Training

To address these challenges, training was developed collaboratively by WHO, Global Assistance for Medical Equipment (GAME, a US-based voluntary coalition of HTM experts – www.global-medical-equipment.org), and AMEK.

The primary goal was to strengthen HTM in East Africa. The first week, selected Ministry of Health (MoH) medical engineering experts from Kenya, Tanzania, and Uganda received maintenance training for priority MoH clinical lab, medical imaging and intensive care/ surgery equipment in a Train the Trainer format. The second week, engineering managers and senior MoH decision-makers received HTM management and policy implementation training. During both weeks, these groups were joined by private health system technical staff and managers, to encourage public-private HTM partnerships whenever possible. The secondary goal of the project was to identify the resources necessary for ongoing and sustainable HTM with the MoH in these target countries, to augment various in-country training and policy implementation initiatives, and to determine how to best organize ongoing assistance from various NGO's to assist the countries in providing needed resources.

WHO funded key MoH participants and most faculty costs, GAME provided the faculty and curricula, and AMEK organized all logistics. Other key contributing sponsors were Orbis International (www.orbis.org) and MedShare International (www.medshare.org).

Results and Next Steps

Track 1 at Amana Regional Hospital in Dar es Salaam Tanzania, provided instruction on a variety of chemistry and hematology analyzers including equipment used for HIV testing. GAME faculty were Jim Wear, PhD, CCE, retired from US Veterans Health, Little Rock, Arkansas; Ruthann Johnston, Lab Engineer, Ortho Diagnostics, Vancouver, Canada; & Krista Hostetler, Medical Technologist, Emory Medical Center, Atlanta, Georgia. Nine students participated representing Kenya, Uganda, and Tanzania.

Track 2, held at Nyanza Provincial Hospital and nearby district hospitals in Kisumu (western Kenya on Lake Victoria) focused on medical imaging. Faculty included Joe Geary, CRES, DITEC Training Supervisor, Ohio; & Garry Zatarain, Kaiser Permanente (KP) Senior Imaging Engineer, California. DITEC & KP donated imaging test equipment for the training, and left it with the Kenyan Minister of Health. Twenty participants, using DITEC x-ray training materials, learned about the Philips Medio x-ray system (highly prevalent in East Africa) and also performed troubleshooting & repair at the training site and nearby MoH hospitals. For the future, DITEC is asking donors to provide needed imaging test equipment for more MoH sites.

Track 3 on ICU/Surgery included 20 participants and the following faculty: George Johnston, CCE, retired OHSU, Portland; Boyd Campbell, CBET, CRES, Southeastern Biomedical, Raleigh NC. For the future, this group is joining the Biomed-Talk Listserv and requested additional donated test equipment.

Track 4 on HTM Best Practices and HT Policy Implementation included 34 participants and the following faculty: Dr. James Wear; George Johnston; Tom Judd, CCE, KP Clinical Technology, Atlanta (GAME Leader); Doug Grey, MD, and Craig Lubbock MD, KP California. For the future,, pilot HTM projects are to be proposed in each country involving district, regional, & national hospitals. Also discussed was implementing the use of WHO ‘TEMP’ HTM management software tool for medical device and facility equipment management, as used in several developing countries.

Tom Judd

judd.tom@gmail.com

The View from the Penalty Box: Medicare

Spring is coming to New England but this year, when we talk about sap running, we mean the maple sap not the politicians who are getting ready to run in 2012. Give me a break and let the guy we just elected become a success or failure.

This is the first time in close to 20 years that healthcare is a priority in the federal budget, maybe even the dimwits inside the beltway are finding out the healthcare costs are out of control. Unfortunately many of the insurance companies and hospital administrators feel that it is someone else's problem.

I just went on Medicare and I think that I still have some mental skills left but it was one of the more confusing things I have ever had to do. You get Medicare part A, at no charge and that covers about nothing other than long term care. You need part B, at \$96.40 per month to cover physicians, short term hospital stays but no drugs; they are covered in a supplemental policy that you get from a commercial insurance company. But if you get the supplemental that company also covers the short term costs and in my case that is \$123.37 per month. One thing to check carefully when signing up for the supplemental insurance is does your physician and hospital of choice accept that insurance? It is almost impossible to get a straight answer from the insurance company, physician or hospital on that question so beware. As with most drug plans there are co-pays involved and this is even better. My co-pay from the insurance company is \$10 for a 30 day supply and \$20 for a 90 day supply. But you can go to many retail outlets, including food markets, discount stores and even pharmacy chains and get many of your drugs for \$4 for 30 days and \$10 for 90 days. It is clear that someone is making a huge amount of money from drugs, at every level and maybe they are a major contributor to

medical costs, more so than technology. You do have to be careful in checking which drugs are on the low cost list and which are not. Remember that you do not have to be on Medicare to get the lower prices.

On to another subject. I have been following the FDA Recall notices for many years, mostly to be sure that I didn't miss any recalls that were for equipment that I was responsible for. Many of you may have encountered problems with department heads that get recall notices and not passing them along to the Clinical Engineering department. What is surprising is that how few of these recalls are on devices that we have primary responsibility for? Many are for devices in the hospital on reagent rental programs, or leases or in departments, such as imaging, where vendors try their best to keep the CE's out of the service loop. What this means is that we are doing a very good job managing technology but to paraphrase an old cartoon of Charlie Brown talking to Snoopy, saying, "Doing a good job here is like wetting your pants when you have on a dark suit, it gives you a warn feeling but nobody notices". We have got to be more noticed for all the value added items that we bring to healthcare. You can help with getting the word out by passing this newsletter on to others, in the hospital, service organization, suppliers, the financial people and anyone else that you can think of who may be able to help Clinical Engineers get recognized even if we are wearing a dark suit.

I strongly urge all Clinical Engineers to submit items to hospital newsletters on what your group is doing, if you have done a humanitarian trip, made presentations at a school on Clinical Engineering as a career or any other positive item. We need both the publicity and new people coming into the field as we

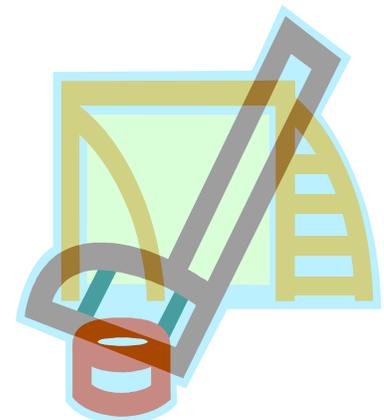
are all getting older and need new blood to be sure the equipment is running correctly when we get wheeled into the ER.

In closing the oldest grandson's hockey team just won the state championship in his age group. I am not sure how they were able to keep their legs under them as they played 5 games, including one overtime one, in a little over 48 hours.

Health, peace and happiness to all.

Dave Harrington

dave@sbttech.com



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

Student Paper Competition

At HIMSS 2009 in Chicago, the ACCE student paper award will be given to Danielle McGeary et al, for the paper "Engineering an HL7 Interface and Wireless Infrastructure to Improve the Efficiency of ECG Analysis at Hartford Hospital", University of Connecticut.

Student paper Runner-up is Kenneth M Alfano, for "A Red Blood Cell Fragility Meter for Facilitating Blood Triage",

Wayne State University, Michigan.

More information on these papers and their authors will be in the next edition of ACCE News.

ACCE Advocacy Committee

judd.tom@gmail.com



CCE Certification: New Applicants and Renewals

1. The next CCE exam will be given on November 7, 2009 in 28 cities around the US. The deadline for applications is September 12, 2009. Please see the website: <http://www.acce-htf.org/certification> to view the handbook and application for this exam.

2. In 2007, ACCE released the results of the new "Body of Knowledge Survey". The US Board of Examiners for Clinical Engineering, chaired by Patrick Lynch, made adjustments in the mix of questions based on that survey. The changes are included in the 2007 CCE Handbook which is available on the ACCE-HTF website.

3. Renewal: CCE renewal is required once every three years. The CCE Renewal Handbook and Renewal Application Form can be downloaded from the CE certification website:

<http://www.acce-htf.org/certification>. The renewal fee can be paid by check or by credit card on the ACCE HTF website.

4. Any questions can be directed to Cheryl Shaw, the certification program's secretariat, at certification@acce-htf.org.

Clinical Engineering and CCE Review Course

Dates: June 4 & 5, 2009 in Baltimore , MD

Registration deadline: April 15, 2009

ACCE is holding a two-day "Clinical Engineering & CCE Review Course" to help clinical engineers who are interested in taking the November 7, 2009 CCE examination offered by the Healthcare Technology Certification Commission.

This course is designed and presented by a group of experienced clinical engineers. This course will provide an overview of the main clinical engineering and CCE examination topics. It will include a mock written and oral CCE exam. For more details please visit the ACCE website: <http://acce.org>.

Quotes from past participants in this course:

"I would definitely recommend the CCE Review course organized by American College of Clinical Engineering (ACCE). As a long time clinical engineer who recently got off the fence and made the commitment to become a Certified Clinical Engineer, I used the CCE Review course as an opportunity to identify material that I needed to review and to discuss the preparation process with the attendees. I've had broad experience in many aspects of the field, but some of them were a few years ago. The instructors did a fine job and provided in the course handouts a large number of resources, references and study aids. The course helped provide a structure and a study plan that had a definite impact on my confidence." , Thomas J. Bauld, III, PhD , Biomedical Engineer, Department of Veterans Affairs, National Center for Patient Safety, Ann Arbor, MI.

"The CCE Review Course material was very informative and useful, the facilitators and guest speakers were right to the point with important and practical guidelines. The mock written and oral exams administered at the end of the course helped me the most since they enabled me to focus on the areas that I felt needed to be enhanced." AbdulSalam Jaber, BSEE, P.Eng., Supervisor of Biomedical Engineering, Humber River Regional Hospital, Ontario, Canada.

ACCE

AMERICAN COLLEGE OF CLINICAL ENGINEERING

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

We are on the Web:

www.acenet.org

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Calendar of Events

April 4-9, 2009

HIMSS '09
 (discount registration for current
 ACCE members)
 Chicago, IL

April 4, 2009

2009 ACCE Clinical Engineering and IT
 Symposium in conjunction with HIMSS
 (separate registration required)
 Chicago, IL

April 4-9

ACCE Annual membership meeting
 and awards ceremony (in conjunction
 with HIMSS 2009)
 Chicago, IL

June 6-8, 2009

AAMI Conference
 Baltimore, MD.

June 4-5, 2009

CCE Prep Review Course
 Baltimore, MD.

September 7-12, 2009

Medical Physics and Biomedical
 Engineering
 World Congress 2009
 Munich, Germany

November 7, 2009

CCE Exam
 28 cities in US

