We greeted 2011 with the commitment to strengthen our foundations as an organization and as a profession. I am happy to report that we are swiftly moving in this direction as the result of the dedicated work of the Committees and Task Forces and the decisive actions of our Board of Directors. These are the highlights:

1. The International Committee under the leadership of Tony Easty has initiated the process for ACCE to become a World Health Organization (WHO) Global Collaborating Center. To support this project Tom Judd, will facilitate the application process, and Ismael Cordero will be the single point of contact for WHO and is poised to become the Collaborating Center Director. Additionally, the renewal sponsorship for INFRATECH, the international communication blog managed by ACCE, is in process. There are planned enhancements for INFRATECH that include changing the name to HEALTHTECH. Further project requests received by the Committee encompass the planning and implementation of ACCE workshops and support projects in Mexico, El Salvador, and Peru.

2. Jim Wear has taken the reins of the Membership Committee. As the new Chair, Jim is focusing on enhancing the membership acceptance and retention processes to minimize the time it takes for applicants to receive confirmation of their membership status and assist our registered members stay current. We are expecting an increase in membership numbers as outcomes of the excellent outreach efforts of the Marketing Committee, under the direction of Jon Blasingame, take effect.

3. The Advocacy Committee, led by Tom Judd, has nominated and received Board confirmation for the winners of the ACCE 2011 Awards. Seven outstanding professionals, three students, and an international organization will be recognized by the clinical engineering international community for their contributions to the field, thereby enhancing the health of our communities.

4. Colleen Ward led the efforts for the Body of Knowledge to be updated and to publish a report with information essential to the Certification Commission, and our Strategic Committee.

A main event for us in February is the HIMSS Conference in Orlando, FL. Our ACCE website is a great resource to see the ACCE-related activities at this conference. On February 21, ACCE led a Clinical Engineering Symposium, “Counting Down to Meaningful Use of Device-based Data.” Our reception, following our membership meeting, had the theme of “Around the World with Medical Devices.” This activity provided our guests the opportunity to visit several tables arranged by area of medical device interest (network, security, etc). The breakfast activity took place on the morning of February 23 and was designed to share with our guests from IT, nursing, hospital administration and other professions, the role that clinical engineers play in delivering the mission of their organizations.

We mention with great pride that our own Steve Grimes was the recipient of the 2010 ACCE-HIMSS Excellence in Clinical Engineering and Information Technology Synergy Award. Steve was

(Continued on page 2)
Advocacy in Action – A Week in the Life of ACCE Member Pat Lynch

Ok, most of us already know Pat. But what is this Advocacy Award winner and CE Icon(oclast) doing now? And how can many CEs and managers get involved in things that Pat cares about? First, background on Pat.

Patrick Lynch MBA CCE, CBET, won the 2010 ACCE Advocacy Award for many things:

His presentations and articles, e.g., his Slashing Medical Maintenance Costs series.

Other public and humanitarian CE advocacy efforts such as:

National – Leader in FMESA (www.fmesa.org), the Federation of Medical Equipment Support Associations


Pat is the Biomedical Support Specialist for Global Medical Imaging (GMI), in Charlotte, North Carolina, whose mission is to lower the cost of high quality healthcare by being a customer-focused OEM alternative in diagnostic ultrasound.

Pat’s job is to perform altruistic activities to benefit the BME/CE community, GMI’s partner in the hospital space by:

Publishing helpful articles and delivering educational presentations, and

Assisting in the governance and creation of local biomedical associations.

A frequent attendee at annual meetings and a common host at monthly presentations, Pat is on the road visiting hospitals and supporting biomedics at least 100 days per year. Pat’s goal is that biomedics ten years from now will create more value than ever for their employers and that they will not be fighting the same battles he fought when he started as a clinical engineer over thirty-five years ago as the Director of Clinical Engineering at institutions such as SunHealth/Premier (Charlotte), Northside Hospital (Atlanta), and TriMedx/Ascension Health (Indianapolis). Pat is on the Board of Directors or Advisory Council of 19 Biomedical Associations and is a member of 30 more. He also administers the BMET Wiki (see below).

For example, on a recent day, Pat participated in the following:

Conference calls with the Ohio and the Intermountain (Utah) associations

Transcribed minutes for the North Carolina Biomedical Association Board of Director’s Retreat, and

Oriented a new Membership secretary to the website operation for FMESA.

Later the same week, he was busy …

Writing one of his two monthly articles for biomedical trade magazines (BI&T and TechNation), and

Posting to two listservs (TechNation and BiomedTalk).

He is in the process of helping start four new biomedical associations in Tennessee, South Carolina, Mississippi and Louisiana. He is able to do this because he has no day-to-day operational responsibilities at his place of business. His employer pays him to endeavor to benefit the general biomedical community.

How can you help him?

• Information is Pat’s stock and trade. He collects it voraciously and then shares it with anybody and everybody who has an interest or a need to know. Contact him at plynch@globalmedimage.com.

• Add him to your newsletters or to your association as a member.

• Allow him to be the information collector and conduit for the biomedical community.

• One way is to collect information: through the BMET Wiki: http://bmet.wikia.com

• Ask him to come speak to your association on any one of a dozen topics.

• Send him ideas for things that need developing for us – the biomedical community.

• Write articles that can be shared in quarterly Biomedical Association newsletters.

In coming ACCE News, we will continue to focus on ACCE advocacy activities in which you can choose to become involved. If you may have suggestions, comments, or questions, please contact: Chair, Advocacy Committee, advocacy-chair@accenet.org

Tom Judd
judd.tom@gmail.com

President’s Message (Continued from page 1)

honored at a special ceremony on February 22.

Looking forward, we are preparing the ACCE Symposium for the AAMI conference in San Antonio this coming June, and continuing to build our infrastructure. Furthermore, we are in conversations with AAMI, IEEE, and IFMBE to explore areas where we can leverage our resources for mutual benefit. I will report our progress in our coming editions.

Happy Lunar New Year,

Mario
Education Committee Report

Teleconference Series

2011 got off to a great start with two very strong teleconference sessions. Steve Grimes kicked off the year on January 6th with a presentation, New job opportunities in IT for Clinical Engineers. His talk touched upon how new, emerging technologies, including complex instrumentation and integrated medical systems are creating a surge in clinical engineering and CE-related job opportunities. New job descriptions, new skill sets, and new governance structures were also covered. On January 20, Frank Painter gave a very informative talk on standards and how they influence clinical engineering practice. Examples of standards used in medical device manufacturing and healthcare delivery were provided.

Steve Grimes once again served as speaker on February 6 when he gave a talk on Advancements in Medical Device Risk Management, including an overview of ISO 80001-1: Application of risk management for IT-networks incorporating medical devices.

The 2010-2011 teleconference series will continue with sessions up until July. For more information on how to subscribe to a session or how to purchase a previously broadcast session, please visit our website at http://www.accenet.org/default.asp?page=news&section=teleconference

AAMI 2011

The Education Committee is planning currently our ½ day symposium for AAMI 2011. If you would like more information on how to participate with organizing this symposium, please email the committee chairperson at education-chair@accenet.org.

Jennifer Jackson
jenniferleighjackson@gmail.com

Membership News

Consistent with ACCE’s mission and in an effort to become a valuable resource accessible to all professionals interested in Clinical Engineering throughout the world, ACCE is in the process of implementing a new membership fee structure based on purchasing power parity rates developed by the World Bank.

The ACCE Board of Directors is aware that formulaic determinations of how much people from a wide range of multinational socio-economic environments can afford to pay for membership in a professional organization will never be easy or perfect; but the Board is also committed to the principle that everyone should pay in proportion to some relative measure of their ability to do it. With that goal in mind, the Board sought a methodology that could be perceived as impartial, based on widely accepted data, easy to understand, practical to implement, and last but not least, easy to keep updated and manage.

The World Bank’s classification of economies based on their gross national income (GNI) per capita met those requirements and the Board adopted new membership fees based on the following four categories: low income, lower-middle income, upper-middle income, and high income.

Implementing the necessary changes in the application forms and posting the detailed information on the ACCE website will take some time. The goal is to have everything ready to start accepting applications under the new fee structure by March 1st. But if you are in a country classified as high income (see World Bank’s data), please don’t delay the renewal of your membership because there is no fee change for that group. If you are not in a country classified as high income and have already renewed your 2011 membership, please contact the ACCE Secretariat (secretariat@accenet.org) after March 1st and the difference between what you paid and the new fee will be credited towards the 2012 membership.

We are still working out some of the implementation details and appreciate your patience and understanding during the process.

Julio Huerta
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ACCE News

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International Report

International Committee

The ACCE International Committee under the leadership of its chair, Tony Easty, is currently in the process of setting a global mission, vision and goals for the international work of ACCE, which will focus on strong collaborations with organizations such as the WHO and will further position ACCE as a global leader in promoting and advancing the field of clinical engineering. More on this effort will be coming in the next issue. In the meantime if you have any ideas to contribute to this effort please contact Tony Easty at tony.easty@uhn.on.ca

Returning from Syria

ACCE member Robyn Frick has just returned from a week in Syria where he participated as volunteer faculty for a biomedical engineering training program held in conjunction with the ORBIS Flying Eye Hospital program in the city of Deir Ezzor, near the border with Iraq.

Robyn provided vital instruction to seven biomedical engineers on anesthesia equipment checks and front line troubleshooting, sterilizer maintenance and general operating room equipment and safety.

This was Robyn’s first time in Syria but definitely not his first time volunteering for a humanitarian assignment overseas. Robyn travels every year as a volunteer to countries like India and Nicaragua to provide his expertise and help hospitals in need of technology support.

Many ACCE members volunteer for international endeavors. We would like to hear from those of you who do so that we can profile you in our newsletter.

Ismael Cordero
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Message from Your Co-Editor– The Dog Ate It...

“The dog ate my homework” is an expression that kids in my school days used in jest, and sometimes in all seriousness, when they had no excuse for not turning in an assignment. In these days of electronic documents, this excuse would be a lot less palatable, unless the dog happened to be a computer virus that destroyed all of your files. This is exactly what happened to me at the beginning of this year, a virus got a hold of my computer and erased my files and archived emails. It even got a hold of most of my files on my backup drive!

That set me back a few weeks in assembling this edition of ACCE News. As if that was not enough, I had to travel to provide clinical engineering training for a few weeks in the Middle East.

All of this lead me to think “why am I taking on the extra free work of co-editing this bimonthly newsletter?” Well, I can only say that I truly enjoy volunteering for ACCE doing this small task, compared to what many other members do for ACCE. I especially enjoy collaborating with the editorial team and the usual suspects who contribute on a regular basis. I only wish that we could see some different names in the mix of authors. (check out this issue’s article on page 4 on project management as an example of a new voice.)

I offer my sincerest apologies to all my member colleagues for this issue coming out so late, and I offer special apologies to our new president, Mario Castaneda, and our other authors whose articles contain date sensitive information which will be old news by the time you read it.

Finally, I would like to take this opportunity to remember two distinguished ACCE members who passed away in the recent years:

Dennis D. Autio, Portland, Oregon-passed away on September 2009

Saul Miodownik, Memorial Sloan Kettering Cancer Center, NY- passed away on September 2010

Ismael Cordero
ismael.cordero@orbis.org
Project Management

Everyone seems to be discussing Project Management. There are many books, articles and a lot of information available about project management. In fact, Kerzner (2009) tells us that “project management now resides in every profession, including information systems, health care, consulting…”. Some people may think project management is just the newest gimmick to manage with. We learned about Quality Management from Deming in the 1940s and Theory Z from William Ouchi in the 1980s. The point is that a project management approach to getting your projects completed on time and within budget encompasses quite a bit of what we have learned in the past and uses a systematic continuous planning and improvement approach to getting your projects completed.

When I studied quality management I learned that all work was a process and that we wanted to do the right thing right. When I studied project management I learned that project management was about doing the right thing right, in the right order.

Much of the work that clinical engineering performs is operational and not project related. Involvement in or managing projects does occur and understanding what a project is and the approach to managing a project is extremely useful. A project is defined by the Project Management Institute [PMI], (2008) as “…a temporary endeavor undertaken to create a unique product, service, or result.” (p. 5). Project management as defined by the PMI (2008) is “the application of knowledge, skills, tools, and techniques to project activities to meet project requirements.” (p. 6). Project management is not just a Gantt chart or a schedule, it’s much more.

Clinical engineering will be involved in projects more and more. While you may not be responsible for managing the project, the project manager, architecture, engineering, or construction firms will be using project management to manage the project. When the hospital is adding that new building, renovating the Critical Care Unit or adding that Hybrid OR, understanding project management is an asset. Some clinical engineering departments are adding a project manager to their departments to manage these functions. The project manager will be concentrating on the critical path or paths. A critical path is the longest path through a network diagram. A network diagram is basically a sequenced diagram of the work packages (activities) that need to be performed in order to meet the projects objectives.

Project management can help clinical engineering departments stay focused on their project involvement by understanding the process groups and knowledge areas included in project management. PMI (2008) tells us that the five process groups are “Initiating, Planning, Executing, Monitoring and Controlling, and Closing”. If you think about these basic process groups or steps, they make sense. PMI (2008) lists the nine Knowledge Areas as follows: “Integration Management, Scope Management, Time Management, Cost Management, Quality Management, Human Resource Management, Communications Management, Risk Management, Procurement Management”. These knowledge areas just seem to make sense. Who would not want to manage Scope, Time, Cost, Quality, Human Resources, Communications and Risk?

Procurement is also a great area to manage, if you are going to be purchasing goods or services for your project. Integration Management is really putting it all together and integrating everything. PMI (2008) states that “Project Integration Management includes all the processes and activities needed to identify, define, combine, unify, and coordinate various processes and project management activities…” (p.71).

The management of projects is different from operations management, but many areas overlap. The PMI (2008) tells us that “the project manager is the person assigned by the performing organization to achieve the project objectives. The role of a project manager is distinct from a func-
Project Management (Continued from page 5)

Are you interested in practicing your writing skills? Do you have a desire to see your name and perspective in print? Do you have some “editorial comments” that you wish to “get off your chest”? Do you have some commentary, good or bad, about Clinical Engineering working with IT?

The ACCE News is looking for some good quality articles of interest to Clinical Engineers. Articles can be on any subject pertinent to the Clinical Engineering profession. Length should be from approximately 500 to 1000 words. Editorial and topic assistance is available from the editors. If interested, contact co-editors Ted Cohen or Ismael Cordero at Theodore.cohen@ucdmc.ucdavis.edu or ismael.cordero@orbis.org

Abbreviated Biography

Ken Schwarz has over 30 years experience in the clinical engineering field and is the Senior Manager for Clinical Engineering Services with Siemens Medical Solutions, Integrated Service Management. Ken is a certified Project Management Professional.

References


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The View from the Penalty Box

Well 2011 has not been too kind to those of us here in New England, between the bitter cold, snow, throw in the one warm day when it rained then froze, the Patriots losing to the Jets plus the Bruins and Celtics having some consistency problems. Maybe the Red Sox will be a cure to our woes, soon.

Over the course of a week I get some 50 plus journals and newsletters on the medical field, covering about all the various technologies that are involved with healthcare plus a little on the financial side of healthcare. All groups seem to be point at others groups as the source of the problems in healthcare, but to again paraphrase Pogo “we are our own worst enemy”. Technology is neither all good, nor all bad, nor all too expensive or nor all too complicated but what we make of the technology, how we apply and support that technology which is a component of healthcare costs.

It is the application of the technology where we as clinical engineers have fallen flat on our collective backsides, at center ice, before the game gets started. Part of the application of medical devices is the training of the users of those devices on how to use them correctly and safely. We spend so much time in testing what doesn’t need testing, and preparing reports that no one ever reads. Do we just give user training lip service, or simply think that it is some other department’s problem? If a user is not properly trained on a device it is our problem, as our costs go up, we spend time chasing the ever rewarding “cannot duplicate” or the “no problem found” codes on our work orders. We don’t seem to care what the impact is on patient care when these problems keep occurring. It is only when the other department heads start to complain that CE is not taking care of their equipment problems that we seem to even look at what was going on in that department or with that technology. I have seen far too many times when techs fail to write up repeat trouble calls on the same device because they dislike putting down NPF.

This leads me to ECRI Institute’s Top Ten Technology Hazards for 2011 (published in Health Devices, November 2010. The list is available for a free download from ECRI Institute at https://www.ecri.org/Forms/Pages/2011_Top_Ten_Technology_Hazards.aspx)

When you read these “technology” hazards they seem to turn into education and training problems. It is how you apply that technology that makes it safe or not, in the vast majority of cases. Yes over the years I have seem some dangerous technology but very little since 1976 when the FDA was empowered to look at technology entering the market and what was already on the market, but I have seen more than my share of dangerous people in healthcare. So to the staff at ECRI please look at the training on devices and help us standardize training practices and procedures so that some of these “Technology Hazards” can disappear. Here are some of my suggestions on the ECRI Top Ten list:

1. Radiation overdose in cancer therapy- check the cones and targeting standard practices in many institutions
2. Alarm overload- turn off all but the most critical alarm. My suggestion would be that the pulse oximeter alarm is the only one to be used, feedback on this one please.
3. Contaminated endoscopes- follow the cleaning and sanitizing procedures
4. CT radiation dose– This is a problem in that most of the manufacturer’s set a one dose fits all standard. Put in a dose adjustment. What is the cost of a switch?
5. Data loss needs to be looked at, but we were talking about this in 1989- great progress. Is this a technology or user problem?
6. Leur misconnections– In the 1960’s a lot of time and effort was put into the problem of not being able to make connections quickly when a patient problem demanded quick action. We came up with the standard Leur fittings. How many times have you seen fittings taped together? No answer on how to fix this one, feedback please.
7. PCA pumps- Do you remember the theme song of the TV show M.A.S.H? (if you do not remember it was “Suicide is painless”) 
8. Needlesticks- That has been a problem since at least 1853 when the hypodermic syringe was introduced
9. Surgical fires- How do you get across to surgeons that sparks from electrosurgical devices will ignite oxygen or nitrous if the concentrations are high? Again a very long term problem. Electrosurgery was introduced in 1927.
10. Defibrillator failures- follow directions- both the staff and clinical engineering

Collectively we have to stop complaining about technology problems and work to solve them, forget the IT guys as they will get all new computers at least twice before the ICU monitors will be replaced, they will be of no help to us. They will have new technology that will not work but they can still say, it is new and we are still working out the bugs”. In the meantime we will be struggling with old technology that we keep running so patients can get healthcare and not just data collected.

One last question. Is any of the data collected ever used to improve healthcare or reduce cost? Feedback requested.

Now it is out to shovel another 8 inches of partly cloudy, only the weather forecasters have more excuses than the IT department.

Dave Harrington
dave@sbttech.com
Most Clinical Engineering (CE) departments spend almost half of their labor on Inspection and Preventive Maintenance (IPM). When IPM activities prevent problems, they increase safety and decrease the cost of ownership of medical equipment. When they don’t, they can be a waste of time, can increase cost, and can decrease safety by diverting resources from more important and useful activities.

The two main aspects to IPM are the maintenance procedures and inspection intervals. ECRI Institute tracks IPM intervals and device failures through our benchmarking product (BiomedicalBenchmark™). In fact, our benchmarking database has shown us that longer IPM interval isn’t necessarily associated with a significant increase in the number of failures. The data in the chart below represent the variation we found for a single model of device from multiple hospitals (the models are identified in BiomedicalBenchmark™, we chose not to present the model names in this chart).

This data is consistent with our experience in reviewing many hospitals IPM-related equipment data over the years. Selection of IPM intervals is not evidence-based. So what does ECRI Institute recommend? To determine an appropriate IPM interval, start with the manufacturer’s recommendations. Then, identify the characteristics and frequency of the failures of the equipment in your environment. The most important questions are:

- Have any failures created a dangerous condition for clinicians or the patients? Many devices “fail safe” and don’t create harm.
- Were any failures not obvious to clinicians using the equipment? Alarms or other indicators (such as an unresponsive control or blank screen) typically alert clinicians to equipment malfunctions.
- Are there any actions that could have prevented failure? If not, more maintenance won’t help.

The Joint Commission allows CE departments to extend IPM intervals when that decision is supported by current experience (Comprehensive Accreditation Manual for Hospitals: The Official Handbook (CAMH) 2010, section EC.02.04.01 Element of Practice 4). Hospitals are encouraged to use comparative performance data in making these decisions (CAMH 2010 section IM.01.01.01 EP 1) and hospital leaders are encouraged to use data and information for decision making that supports service delivery (CAMH 2010 LD.03.02.01 EP 5).

ECRI Institute encourages the use of objective information to safely lengthen inspection intervals since lengthening the interval substantially decreases the overall time spent on IPM and frees up time for other important activities. Since 2008, we have formally collected maintenance interval and repair information from the members of our BiomedicalBenchmark™ program so that they can use this information to objectively and safely determine maintenance intervals for their medical equipment.

Please send comments to jgaev@ecri.org.
**ACCE News**

**Volume 21 Issue 1: January / February 2011**

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**ACCE Teleconferences:**

- **March 17, 2011**
  - Budgeting and Financing in Healthcare Technology

- **April 14, 2011**
  - Technology for Home Health

**Events:**

- **June 25-27, 2011**
  - AAMI 2011 Conference
  - San Antonio, Texas

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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

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