ACCE News

Annual ACCE Symposium
The Future of Clinical Engineering

American College of Clinical Engineering

ACCE will be sponsoring an exciting Symposium on Saturday, June 14, 2003 during the 23rd annual AAMI conference on the future of clinical engineering and how clinical engineers can help enable new technology to improve patient care. Many experts agree that with dramatic changes in healthcare technology, clinical engineering is at a critical crossroads.

The Symposium will provide insight into the critical issues every clinical engineer will face over the next decade including major cost reduction pressure, changing patient demographics, staffing shortages throughout the healthcare industry, increased patient-mandated demands, integration of computers into all facets of medical care, patient safety, increasing use of technology and many more. These changes will likely redefine the clinical engineering profession. No one who intends to pursue clinical engineering or healthcare technology management over the next 10 years can afford to miss this year's Symposium on the *Future of Clinical Engineering*: *Technology that Enables Improved Patient Care*.

The Symposium will feature a full day of presentations starting off with perspectives from clinical engineering's primary customers: the physician, the nurse and the patient. This will be followed by a series of presentations on some of the new healthcare technologies or technology-related issues hospitals are currently planning for or struggling to control. The presentations will focus on how clinical engineering departments can adapt to help their institutions safely and effectively deal with these technologies and technology-related issues. The Symposium will conclude with presentations on how the technological, economic, regulatory and demographic forces that are shaping the future of healthcare will affect the role of clinical engineering over the next decade and how clinical engineers need to change their model in order to insure that the profession remains viable and healthy for the long term. See the back cover of this newsletter for the complete program listing.

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President's Message
Building the Profession

Raymond Zambuto, rzambuto@techmed.com

To Infinity... and beyond!!

We've all enjoyed the hyperbole of Buzz Light Year's battle cry. And yet, as we pass the mid-point of the year, I am amazed at the giant leaps and bounds we are making at ACCE.

You have spoken clearly on the latest bylaw revision, overwhelmingly endorsing a broadening of the eligibility for membership to include those who practice in industry and academia and, most importantly, a strengthening of the value of life learning and experience as qualifying factors for membership. Individuals have stepped up when the call went out. Tony Easty as international chair, Dave Francoeur in membership, and Jennifer Barbee in teleconferences are examples of members who have taken on leadership roles this year.

The membership survey, reported on page 9 by ACCE President Elect Izabella Gieras, shows broad interest in ACCE activities, positive reviews for the improvements to _ACCE News_ and the website, and a directive to maintain and expand our relationships with other societies. Over 75% of respondents said _"I am interested in becoming certified!"_

Our relations with other societies continue to grow. Our continuing work with AAMI will result in another landmark Symposium, "The Future of Clinical Engineering," on June 14, 2003. Additionally, we have become an educational partner of the American Society for Healthcare Engineering (ASHE) for 2003. ACCE will work with ASHE on the technology education sessions of its annual meeting in San Antonio in July and on joint audio teleconferences.

During the AAMI meeting, ACCE has invited leaders of the regional biomedical societies to meet to discuss issues of common concern in areas like education, training, and recruitment, with the hope of establishing an agenda for joint action. We have formed a task force, reported on page 3 by ACCE Vice President Ted Cohen, which has joined the Integrating the Healthcare Enterprise (IHE) initiative of the Radiological Society of North America (RSNA) and the Healthcare Information Management Systems Society (HIMSS). The task force represents the clinical engineering component.

This and other ACCE activity is an indicator, not only of the robust health of ACCE and of clinical engineering in general, but of the transforming of the profession, a transformation that will alter the practice of clinical engineers and BMETs over the next decade.

At the HIMSS meeting in January, and in our hospitals everywhere, the digital revolution is picking up steam. Repair, like preventive maintenance, is slowly becoming a legacy function that, although it will never disappear, will gradually become a smaller part of the body of work for the clinical engineering field.

As diagnostic medical equipment evolves from stand alone units to systems, we will see more and more clinical systems based on a "front end" client that acquires and digitizes patient information, middle level hardware using standard open systems architecture for signal processing and decision support, and a store-and-forward level somewhere in the IT server farm. For some time, clinical engineering has been working toward partnerships with the Information Systems professionals in healthcare, and this will continue, but the IT revolution also must raise our consciousness regarding patient safety and the new technology.

Questions need to be asked. The emerging systems are based on thousands of lines of software. We have all experienced those subtle hidden errors that can arise days, weeks, or months after new software is deployed. We have seen unintended consequences of poor system design played out in our patient care areas. We have witnessed the effects of automating systems that don't work, e.g., you get an automated system that still doesn't work. Furthermore, we know what happens when you overload an individual, whether with work load or information load. Something gets dropped.

Marilyn Sue Bogner's excellent article in the

January issue of BIT looks at the human factors side of technology from a slightly different perspective. The upcoming ACCE Symposium will present an opportunity to see how errors will impact your future body of work. With the Institute of Medicine and the Leapfrog Group pushing healthcare headlong toward an IT infrastructure, we may well find that medical errors becomes an issue, pushing clinical engineering further than we thought possible – to infinity, and beyond.

Ray

The ACCE Board

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PEOPLE ON THE MOVE AND IN THE NEWS

Lúcio Flávio Brito continues to make outstanding contributions to the health care system in Brazil. He recently published two articles in the field of clinical engineering and infection control. His chapter co-authored with his brother Tales, entitled *Clinical Engineering Maintenance* appeared in Infection in Hospitals and Its Impact on Health. This book won the Jaboti Award for Excellence in 2002. He also wrote *Tuberculose nosocomial – medidas de controle de Engenharia (Nosocomial tuberculosis – Engineering control methods),* which was published in the Boletim de Pneumologia Sanitárium 9(2):33-50, 2001. **Lúcio**, a long-time member of ACCE, was among those who attended the first Advanced Clinical Engineering Workshop in Washington, DC.

Joseph F. Dyro will be a faculty member during the April 10, 2003 FDA audio-teleconference on Patient Alarms. This program will be presented for the participants in the FDA Medical Product Surveillance Network (MedSun) program. Dyro will present ideas about clinical engineering's role in meeting the JCAHO Patient Safety Goal #6: Patient Alarms.

George Johnston recently returned from Shanghai, China where he gave a lecture on clinical engineering technology and maintenance management at the Shanghai Second Medical University. George was last in Shanghai as a Project HOPE consultant in 1991.

ACCE Joins IHE

Ted Cohen, ted.cohen@ucdmc.ucdavis.edu

Recently, at the Healthcare Information Management Systems Society (HIMSS) Conference in San Diego, the ACCE joined the HIMSS IHE initiative. The Integrating the Healthcare Enterprise (IHE) initiative is sponsored by HIMSS and the Radiological Society of North America (RSNA) and promotes the coordinated use of established technical communications standards such as DICOM and HL-7 to address specific medical systems integration needs. Most of its work to date has been related to interfacing imaging equipment to PACS and developing standards-based work lists and other technology-related tools to assist medical imaging departments.

IHE is initiating projects to expand beyond medical imaging into cardiology, pharmacy, clinical laboratory and other areas.

The ACCE has formed an IHE Task Force whose initial role will be the following:

1. Provide education to the hospital and technology management community on what IHE is all about;

2. Assist IHE in defining future integration problems on which to work;

3. Promote technical input from clinical engineers on IHE related issues, *i.e.,* use ACCE members as a knowledge source on the clinical environment and its equipment; and

4. Assist with identifying and communicating with vendors of medical products on IHE issues and the importance of IHE.

One of IHE's next projects will focus on cardiology and the ability to integrate cardiac information and interfaces to cardiology devices.

There were many other examples in the huge HIMSS vendor exhibit hall of companies integrating a variety of medical products to computer systems. In one case, one of the large infusion pump vendors was displaying a system that interfaced infusion pumps with a computer system that stores medication orders and then compares the prescriptions in the order entry system to the pumps' settings and displays a warning on a PDA if an order and a pump program do not match. Currently, these types of systems work only with proprietary and, typically, single vendor products. As more and more products become integrated it becomes more and more unlikely, and more costly, that hospitals will purchase single vendor solutions. In the future, the IHE is the type of collaborative, standards-based, initiative that will be able to allow vendors to offer this type of application as a cost-effective, multi-vendor solution.

The ACCE welcomes this opportunity to collaborate on the IHE initiative. An IHE presentation will be part of the ACCE/AAMI Symposium on June 14, 2003 and ACCE will be initiating a variety of IHE-related educational and collaboration opportunities in the next several months.

If you would like to contribute to the ACCE IHE endeavor and wish to join the ACCE IHE Task Force, please contact ACCE VP Ted Cohen.

Perspectives from ECRI
Scary but True – Surgical Fires
James Keller, jkeller@ecri.org

ECRI estimates that between 50 and 100 surgical fires are reported in the United States each year. In a way, they are like plane crashes—they don't happen very frequently, but when they do, the results are often devastating. Patients can be injured or killed. Surgical staff can be traumatized. Costs to the hospital can run into millions of dollars. And headlines like these can appear:

Patient blows up on operating table

15-year-old boy dies in fire on operating table

LASER FIRES CAUSE PATIENTS' DEATHS

Despite the low number of incidents, the consequences can, as the headlines above illustrate, be serious enough that clinical engineering and surgical personnel need to be aware of the potential for, and causes of, surgical fires. They should also have a plan in place for how to prevent them. The January 2003 issue of ECRI's *Health Devices* journal features a guidance article titled "A Clinician's Guide to Surgical Fires" that helps hospitals do this. It provides comprehensive information on how to effectively and safely deal with this scary issue and reviews the ways in which these fires can occur, how they can be prevented, and how the surgical team should respond when a fire starts.

The article discusses the three sides of the classic fire triangle—ignition sources, oxidizers, and fuels—as they exist in the OR. It also describes how different members of the surgical team are largely responsible for different sides of the triangle: surgeons for ignition sources, anesthesia providers for oxidizers, and nurses for fuels. (These areas often overlap, though, and the entire surgical team needs to understand *all* the fire risks in the OR.)

In addition, the article presents a number of case studies about surgical fires, many of which are drawn from ECRI's investigative and consulting work. These case studies depict a wide variety of surgical fires and describe their causes. Several of these fires proved fatal for the patients.

The article also includes detailed recommendations for preventing surgical fires, many of which are tailored to specific surgical procedures. Ways to minimize ignition risks during electrosurgery and laser surgery are listed—for example, an electrosurgical pencil or a laser should be activated only when its tip can be directly viewed by the surgeon. Also covered are the ways of minimizing oxidizer risks during oropharyngeal surgery and minimizing fuel risks during prep.

How does one respond if a fire does start? Surprisingly, reaching for a fire extinguisher *isn't* the first thing staff members should do or even the second or the third. Surgical fires tend to spread swiftly, and the patient will probably be harmed before an extinguisher can be found and used. The article specifies what steps we at ECRI think staff members should take, and in what order.

Feel free to contact me (jkeller@ecri.org or (610) 825-6000, ext. 5279) if you would like information on how to access ECRI's article on surgical fires or would like help with investigating a surgical fire incident. Members of ECRI's Health Devices and SELECTplus programs can view the surgical fire guidance article online at www.ecri.org.

Jim Keller is Director of ECRI's Health Devices Group, ECRI, and a Member-at-Large for ACCE's Board.

HIPAA Update

Stephen L. Grimes, slgrimes@nycap.rr.com

Implications of HIPAA's Final Security Rule

After its release had been postponed several times over the last two years, HHS published the final Security Rule in the Federal Register on February 20, 2003. Covered entities, including virtually all healthcare providers, have until April 21, 2005 to meet the standards spelled out in this rule.

There are some significant differences between this final rule and the proposed version published in August 1998.

- The Final Rule covers electronic Protected Health Information (ePHI) … or electronic data that could be used to identify a patient. The proposed rule covered a broader range of health information (health information related to a patient that was maintained or transmitted electronically). HHS does warn "that standards for the security of <u>all</u> *health information* <u>or</u> protected health information in non-electronic form may be proposed at a later date."

- The Final Rule establishes standards that define a model security management program … leaving more of the implementation specifics to the covered entity.

- The Final Rule places greater emphasis on risk analysis and risk management in the security management process.

- The Final Rule explicitly provides covered entities with greater *flexibility* in achieving compliance … now permitting covered entities to take into consideration:
  - Size, complexity, and capabilities of the covered entity;
  - Covered entity's technical infrastructure, hardware, and software security capabilities;
  - Costs of security measures; and
  - *Probability* as well as *Criticality* of potential risks to EPHI.

- Chain of trust elements must now to be included in the Business Associate Agreements required by the Privacy Rule.

Task Force Project

On March 13, ACCE's HIPAA Task Force met and resumed its work on *HIPAA Security Implications for Biomedical Technology: A Compliance Guide for Healthcare Providers* by incorporating changes from the final Security Rule. Stay tuned for an update on its projected publication date!

Keep up with latest HIPAA developments

- May 21, 2003 - Attend ECRI's Audio Conference on *HIPAA's Final Security Rule!*

- June 17, 2003 - Attend AAMI's session, *Counting Down Towards Compliance: What is the Final Security Rule's Impact on Clinical Engineering?*, at the annual AAMI Conference and Exhibition in Long Beach!
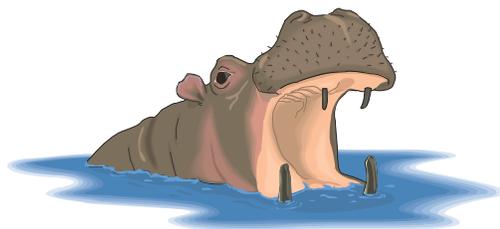
Certification Update

Clinical Engineering Certification: Validity and Value

Caroline Campbell, Caroline.A.Campbell@MedStar.net

Time spent reading about certification on the Internet reveals that the value of certification is debated in many diverse fields including martial arts, human resources, and information technology. Within healthcare, the debate about the value of clinical engineering certification is several years old. In all industries, the debate needs to be separated into two issues: the validity of a certification program and the value of certification to others, i.e., the public, the employer and the individual. Certification can have value only if it is valid. If a certification is valid, market forces drive the value of the certification.

In the absence of an active, viable program, clinical engineering certification has been devalued. To restore the potential for value, an active, valid clinical engineering certification program must be restored. The validity of the certification program depends on the ability of the program to authenticate that an individual can perform a specific set of tasks at an established level. That validity is largely dependent on the program's ability to define the specific skill set of interest and to use an assessment instrument that truly assesses that skill set in a consistent and non-discriminatory manner. Following standards such as those established by the National Organization for Competency Assurance helps ensure the validity of a certification program.

Once a valid certification program is established, the market will determine the value of clinical engineering certification. Because of technology convergence, perhaps a glimpse at the value of certification in information technology is pertinent to the clinical engineering certification discussion. The Computing Industry Technology Association has provided the results of its 2001 Global Training and Certification Study at www.comptia.org/cla.

The results of that study demonstrate that 83% of IT professionals found certification to be helpful in acquiring a new position while 66% of certified IT professionals reported that their salaries increased after becoming certified. Against the background of a maligned healthcare industry and a declining economy, these results suggest that employers will increasingly value certification thereby causing one's professional viability and marketability to be strengthened through

certification. This value is only possible if a valid program exists.

The United States Board of Examiners for Clinical Engineering Certification (USBECEC) continues its efforts to develop a valid certification program. While this development process is laborious and time consuming, the program will add value by promoting healthcare delivery improvement in the United States through the certification and continuing assessment of competency of professionals who support and advance patient care by applying engineering and management skills to healthcare technology. In turn, the patience of the clinical engineering audience will be rewarded with increased value to clinical engineering certification.

Preemptive Strikes Can Prevent Patient Injuries

Marvin Shepherd, devteq@mail.value.net

Preemptive Strikes - There has been a rather important and serious discussion recently regarding a preemptive strike upon Iraq. The argument against the strike seems to be that it has never been the nature of our country to attack another country unless it struck us (or one of our allies) first. In support of a strike is the argument that times have changed significantly. Our country has historically been protected from international provocateurs by their modest armaments and our geography. Now, with a global society, even a few determined persons with weapons of mass destruction can enter our country and do unimaginable harm to our citizens and property. Today's intense discussion is tied to our American culture and we need to change this culture if preemptive military strikes are to be accepted by the citizenry.

There is a strong, but not-to-apparent, analogy between these arguments and arguments that we should attack medical incidents at the near miss level before a repeat of the similar incident can evolve into a patient injury or death. A discussion of preemptive actions and near miss events might prove useful.

Preemptive Strikes Are Normal - Preemptive strikes against conditions that we consider "bad" are not unusual. In general they are referred to as "preventive measures." As a society, to prevent tooth decay we fluoridate our drinking waters. To minimize heart attacks we take cholesterol-reducing pills. To reduce car-related injuries we require seat belts. All of these have been scientifically proven to be beneficial to both individual and society.

As it relates to past military activities, preemptive actions are also not unusual. For instance, in the 1950's, the United States constructed the radar Distant Early Warning (DEW) line across Canada to warn of airplanes approaching from over the North Pole. The intent was to preemptively destroy the bombers before they could deliver a damaging blow to U.S. citizens.

Preemptive Strikes That Can Prevent Patient Injuries - For decades, patient death or injuries have been normal risk management triggers to investigate systems and processes for latent defects. These trigger levels have been accepted by hospitals for so long that they have become embedded in hospital culture, *i.e.,* every staff member is aware of these trigger levels. Unfortunately, before these levels are reached the patient has already been discomforted, seriously injured, or killed and the hospital's liability has increased. This approach is certainly reactive rather than proactive in reducing patient injuries.

So, how do we introduce a cultural change that focuses on the near miss rather than the injuries? With cigarettes, education played an important role in convincing smokers that significant health risks were associated with their habit. A regulatory role was also played in requiring an educational note on each package of cigarettes and making the sale of cigarettes to minors a criminal offense. Today, these and other efforts have reduced cigarette smoking to about one quarter of the adult population in the U.S.

As it relates to near misses, the JCAHO already provides a semi-regulatory role, as do several states, by mandating that accredited hospitals report the more serious near misses to JCAHO under their Sentinel Event policy. [1] However, as with cigarettes, there will only be a meager compliance with these mandates unless those individuals required to do the reporting are convinced that doing so will reduce the frequency or seriousness of patient injuries. If education can do the convincing, what are some of the facts and arguments that can be used?

Let the Education Begin! After studying non-medical, incident-reporting systems, Barach and Small reported, *"…near misses occur 3-300 times more often than adverse events…"*[2] Gathering such events enables "quantitative analysis." They argued that there were fewer barriers to collecting near miss events; since there were no injuries, there were no threats of lawsuits or increased liability; there is less embarrassment to those making the human errors and this can maximize available facts; and sharing such events with colleagues in other hospitals is more acceptable and a variety of inputs can be solicited.

Near miss events are most frequently noted by the device operator, the clinical professional involved in the everyday responsibility for making the systems and processes work. With the intuitiveness born of education, training, experience and some imagination, they recognize that when an incident occurs, a small change in the system's performance might well have resulted in an adverse event. It is true that this potential for injury is not always recognized. For instance, there was an incident in 2001 where an oxygen tank struck a young boy lying in an MRI unit. Some time prior to the 2001 adverse event, in that same hospital and that same MRI unit, an oxygen tank was pulled into the MRI at a time when no patient was present. Apparently, that first incident did not provide adequate notice that an adverse event would occur in the future.

Clinical engineers and BMETs have an opportunity to identify near miss incidents by studying no problems found (NPF). In essence, the device operator complains that a device is defective and is not providing its intended clinical benefit. The device is examined by the clinical engineer but no problem is found. Since some component of the system is malfunctioning, the clinical engineer now has the opportunity to either (1) improve the device-related system by determining why the operator thought that the device was defective and assisting the operator in their efforts to improve its performance or (2) determine that the NPF is really a near miss and the system needs to be modified. Either task requires a basic understanding of systems and processes as well as the fundamentals of human error. As with near misses, NPFs can lead to system and process changes that can prevent adverse events. Either incident type can be collected and analyzed over time to detect similarities and differences that will provide clues to system weaknesses.

Some Conclusions - If near miss incidents and no problems found are carefully gathered, it is possible for us to analyze and detect latent defects in systems and processes and modify them prior to the occurrence of an adverse event. Databases will become filled with near miss events and depleted of injuries. If near miss events are aggressively pursued and analyzed and systems and processes appropriately modified, a preemptive strike against patient injuries will have been made.

References

1. Accreditation Manual for Hospitals, Joint Commission on Accreditation of Healthcare Organizations, Oakbrook Terrace, IL, 2001.

2. Barach, P Small D. Reporting and preventing medical mishaps: lessons from non-medical near miss reporting systems, *BMJ* 320:759-63, 2000.

THE VIEW FROM THE PENALTY BOX

David Harrington, dave@sbttech.com

As I settle into the penalty box again, I grumble *"the 10 minute misconduct for verbally abusing a politician was a cheap call."* I only questioned his honesty and commitment to fixing the problems with healthcare funding.

Here in Massachusetts we are having a major budget problem, anywhere from a 2 to 4 billion dollar shortfall. This may be small potatoes compared to our brethren on the left coast but it is big. Many hospitals are saying that they will have to cut back services, lay off people and put new purchases on hold. Most of these people have been saying the same thing for years and their salaries have gone up into the mid-high 6 figures as they cry poverty. Even those in small hospitals get salaries close to or above what we pay the president of the USA. While I might not agree with his actions, I must admit that his job is a little more difficult than that of a hospital administrator.

The particular politician with whom I have been sparing has set himself up as an expert in healthcare. Before he ran for office his previous jobs were used car salesman, "court officer", and director of a government park department. So you can plainly see his credentials are outstanding in healthcare. But giving the devil his due, he has a talking point that might lead him to a higher office in politics or as a special assistant to a hospital administrator or health insurance company.

Most of us can go through any hospital and identify savings that could be made if policies and procedures could be changed. Most of these savings can be found in non-patient care areas such as billing, scheduling, useless lobbies, endless conference rooms and "assistants to assistants to deputies". One ICU charge nurse that I have known for many years recently told me that she spends close to 50% of her time in meetings that have nothing to do with patient care. Because of the time spent in meetings the hospital created additional "assistant nurse leaders" to handle the work that the charge nurse couldn't do because of meetings. Many of us don't believe that there is a shortage of nurses just a shortage of nurses that actually touch a patient. But meetings are more important than the patients in too many hospitals.

One engineer I know will only stay in a meeting for 15 minutes, he presents what he has to then leaves telling the committee if they have questions to page him. He said he is rarely paged with questions on his presentation but often to "flesh out" presentations by others.

Another hospital administrator had all the chairs in every conference room removed; the meetings became shorter and more focused very quickly. He is now thinking about removing all guest chairs from offices. His manta is get the staff focused on the patients.

Going the opposite direction, another hospital has set up a HIPAA committee of some 17 members charged with coming up with a "consensus" standard for the hospital to handle HIPAA. At last count they were up to 50 pages and still climbing. This hospital announced a loss of some 25 million dollars last year. It has a little over 300 active beds and close to 5,000 FTE's. Wondering why they are losing money, they blame decreased reimbursements from all the payers and the increasing cost of technology and drugs. In a recent purchase of ICU equipment, they insisted on three invasive pressure channels for each bed for a total of 36 pressure channels. Over the past six months they have averaged four invasive pressures per day, with a high of twelve and many days with none. The problem is not the cost of technology but the misapplication of technology.

Before my penalty is up I would like to mention that one of our more senior members, Grant Lafleur has just returned to work after both a knee replacement and triple bypass surgery. He is doing well now, but it was a long siege for him.

If you are going to be purchasing any non-ICU monitors in the future have a look at www.zoemedical.com. This is a new company with some very good products that we can both install and fix.

Back to the game as my time is up.

Member Survey - Fall 2002

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The results of the fall 2002 ACCE Membership Survey provide a valuable feedback to the ACCE Board on the existing needs and expectations of the membership. A total of 66 members responded.

ACCE Activities - All activities were highly scored by the members, with an overwhelming response showing member awareness of all the ACCE involvement. The highest scores on a 0-5 scale were for the following activities: Continuing Education (4.2), Newsletter (4.1), Networking (4.1), ACEWs (3.9), CE Certification (3.8) and the Medical Errors & Patient Safety (3.8). The lowest scores were for the ACCE Healthcare Technology Foundation (AHTF) (3.3), HIPAA (3.3), and Job Market (3.4). The lower score for the AHTF can be attributed to the fact that it was in the state of formation when the survey was taken.
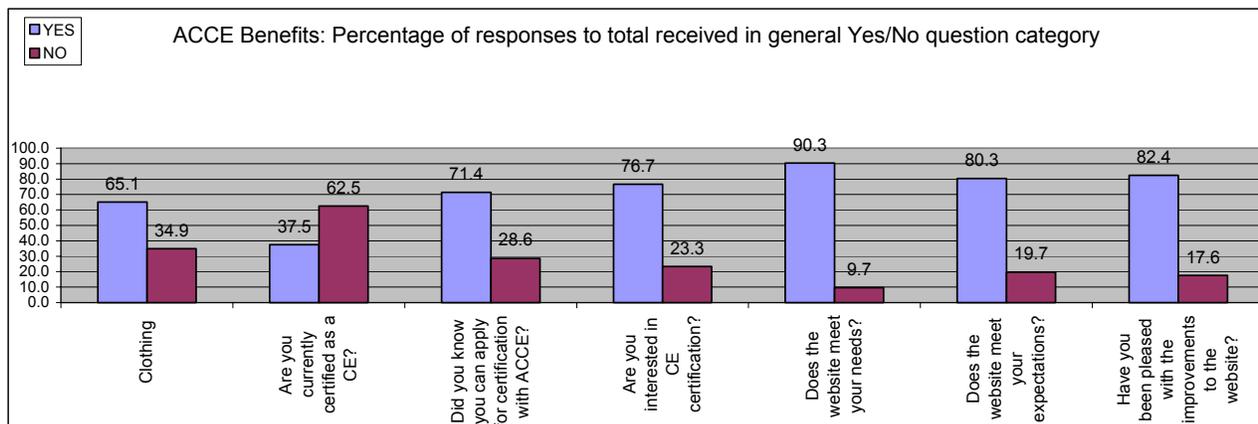
ACCE Benefits – Members rated CE certification benefits highly. 71% of members are aware of ACCE certification and 77% were interested in certification. Certification is seen as *"a stepping stone in professional development"* and an *"opportunity to grow"* and *"demonstrate commitment to a defined level of proficiency"* in the clinical engineering profession. The website rated high but comments strongly suggested room for enhancement to provide *"better organization"* with *"regular updates"* and *"some graphics"*. Members rated all proposed website features in the survey as relatively important, highlighting the on-line member directory and the link to patient safety information. The responses to the Benefits question are shown below.

Collaborations - On a scale of 0-5, collaboration with AAMI (4.1) and HIMSS (3.9) was judged most important. Close behind were ACHE, AHA/ASHE, and Regional BMET Societies (3.8). Collaboration with IEEE/EMBS (3.3) and NFPA (3.2) were rated less important.

Comments - ACCE members provided a wide range of valuable comments from website enhancements to teleconference topics. Respondents emphasized the critical importance of advocacy activities and promotion of the clinical engineering profession to young people, with the implementation of mentoring and outreach/networking opportunities with new members and within the existing membership. Members want to see more education to healthcare administrators on the *"value of CE programs in their hospitals."*

Members provided helpful comments on how ACCE can enhance the website. Comments included *"more professional appearance"* with *"white paper on technology management"* and *"certification information including sample questions, exam schedules"*. Other comments proposed affiliations with several key professional and industry groups, *e.g.,* RSNA and IHE, in order to *"leverage these relationships to both advocate CE involvement and expand ACCE members understanding of developing technology issues."*

The remainder of comments centered on CCE Certification, Patient Safety & Medical Error issues and HIPAA as well as relations with BMET societies. ACCE acknowledges the importance of its involvement in all these activities. Member support and interest to pursue these and other activities enables ACCE to support the desired visibility within the clinical engineering profession.

ACCE Benefits: Percentage of responses to total received in general Yes/No question category

Question	YES	NO
Clothing	65.1	34.9
Are you currently certified as a CE?	37.5	62.5
Did you know you can apply for certification with ACCE?	71.4	28.6
Are you interested in CE certification?	76.7	23.3
Does the website meet your needs?	90.3	9.7
Does the website meet your expectations?	80.3	19.7
Have you been pleased with the improvements to the website?	82.4	17.6

ACCE News

AIMBE 12th Annual Event

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The 12th AIMBE Annual Event was held in Washington DC in the period of Feb 20-24, 2003 at the National Academy of Sciences and the Westin Grand Hotel. The Event included two symposia, three forums, and a series of specific meetings of the Academic, Industry, and Societies Councils and a combined general membership and College of Fellows meeting.

The symposia were on *Federal Programs for Medical and Biological Engineering* and *BioEngineering Education in the 21st Century*. Of the 300 participants, most hailed from academia while several industry members made presentations and participated in the meetings.

The American Institute for Medical and Biological Engineering (AIMBE) was established in 1991 with the following purposes:

- To establish a clear and comprehensive identity for the field of medical and biological engineering
- To promote public awareness of medical and biological engineering
- To establish liaisons with government agencies and other professional groups
- To improve intersociety relations and cooperation within the field of medical and biological engineering
- To serve and promote the national interest in science, engineering, and education
- To recognize individual and group achievements and contributions to the field of medical and biological engineering

AIMBE's principal activities include participation in the formulation of public policy, the dissemination of information both to the public and scientific community through publications and forums, and education. Among the well-known pioneers of biomedical engineering elected as fellows are Michael DeBakey, Leslie Geddes, Wilson Greatbatch, Richard Johns, Robert Nerem, Otto Schmitt, Alvin Wald, John Webster, and Herman Weed. Among AIMBE's accomplishments, the following are the most noteworthy:

- Advocating and developing ideas that led to the passage of the Biomaterials Access Assurance Act of 1998;
- Playing an active role in establishing the National Institute of Biomedical Imaging and Bioengineering (NIBIB) at NIH; and
- Co-sponsoring with NIH the BECON Symposium on Reparative Medicine.

One of the new features at this year's Event was the formation and meeting of action teams to discuss issues that members believe are critical for the advancement of medical and biological engineering. The "hot" issues included medical device liability, healthcare industry economics, patient empowerment, animal versus in-vitro testing, supporting the development of NIBIB, bioterrorism R&D, the public's perception of risks and threats, and AIMBE's interaction with the research and educational communities. These action teams will proceed with their discussions during the year and present their findings and recommendations to the Board in the fall. If approved and adopted by the Board, the recommendations may be introduced to the Capitol Hill and other federal agencies. It was through AIMBE's efforts that Congress passed the Biomaterials Access Assurance Act in 1998 and created the National Institute of Biomedical Imaging and Bioengineering (NIBIB) at NIH.

ACCE is a member of the AIMBE's Council of Societies. The following ACCE members have been elected to AIMBE's College of Fellows: Thomas Bauld, Michael Bernstein, Joseph Bronzino, Yadin David, Joseph Dyro, Bill Hyman, and Binseng Wang.

Calendar of Events

- IEEE EMC 2003 International Conference, Istanbul, Turkey, May 11-16, 2003, www.ortra.com/emc2003 .
- 6th ACCE Symposium, Long Beach, CA, June 14, 2003, www.accenet.org.
- AAMI 2003 Conference & Expo, Long Beach, CA, June 14-17, 2003, www.aami.org .
- World Congress on Medical Physics and Biomedical Engineering, Sydney, Australia, August 24-29, 2003, www.wc2003.org.
- 40th Annual ASHE Conference and Technical Exhibition, San Antonio, TX, July 14-16, 2003.
- 25th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Cancun, Mexico, September 17-21, 2003, http://itzamma.uam.mx/cancun.

Attention Certified Clinical Engineers!!

The Clinical Engineering Certification Program administered by the United States Board of Examiners for Clinical Engineering will recognize the certification of clinical engineers who were previously certified under the program suspended by AAMI and who have remained in professional practice.

Applications are now available to apply for listing with the new program.

Practicing Clinical Engineers who are currently renewed under the suspended ICC / AAMI program, or whose AAMI renewal previously lapsed are eligible to apply for recognition under the new program until July 1, 2003.

To obtain an application for recognition under the new program, or to obtain more information contact ACCE at:
certification@accenet.org or (610) 825-6067.

ACCE News

Annual ACCE Symposium - The Future of Clinical Engineering: Technology That Enables Improved Patient Care

Physician Perspective - *Managing Clinical Information for the Next Decision*

      Thomas Tinstman, MD, UC Davis Health System

Nurse Perspective - *Technology That Enables Improved Patient Care*

      JoEllen Koerner, RN, Simulus

Healthcare via the internet - *Impact of Online Patient-Physician Consultation*

      Marcos Athanasoulis – Relay Health

Patient Safety – *Managing Medical Errors: Clinical Engineers are uniquely positioned to address the "what" and how" of Patient Safety*

      Bryanne Patail, Veterans Health Administration

Integrating the Healthcare Enterprise (IHE) 2003 – *Moving Beyond Standards for System Integration to Interoperability across the Healthcare Enterprise*

      Joyce Sensmeier, RN, Healthcare Information and Management Systems Society (HIMSS)

The Smart Hospital – *Patient Monitoring Meets Information Technology*

      Greg Farah, Siemens Medical Systems, Inc.

Surgical Robotics and OR Automation - *Impact on surgical precision, efficiency of the operating room, and communication between surgical staff*

      Darrell Uecker, Computer Motion, Inc.

Using Simulation Methods to Improve System Design

      Mark Winter, Simulus

Technology Management Education – *Required Education Skill Set Development for Future Technology Managers*

      Elliot Sloane, Villanova University

      Frank Painter, Technology Management Solutions

Future Repair Paradigms - *Remote Diagnosis and Repair*

      Dick Roessler, Beckman Corporation

Planned Maintenance - What *is the Prudent Minimum for Clinical Engineering's New Paradigm?*

      Malcolm Ridgeway, Masterplan, Inc

The Future of Clinical Engineering: *Can Clinical Engineers Adapt?*

      Stephen Grimes, GENTECH

      Eric Rosow, Hartford Hospital

A C C E   T e l e c o n f e r e n c e   S e r i e s

ACCE starts a new educational teleconferences series, the third Thursday of each month at noon Eastern time, on May 15 : *Working with your IT Department* by Alan Lipschultz and Vinnie DeFrancesco. Over the next 12 months this series will include presentations on *Clinical Engineering's Role in Disaster Planning*, *Integrating the Healthcare Enterprise*, *Optimizing Scheduled Maintenance*, *JCAHO Update*, *HIPAA*, *Six Sigma* and more. A complete schedule will be published in the next edition of *ACCE News* and in April on the ACCE web site (accenet.org).