

# ACCE News

Vol. 7, No. 1 - January 1997

## ACCE Workshops In 1997

Two Advanced Clinical Engineering Workshops will be held this year, the first in San Diego, May 9-11, and the second in Washington, DC, June 7-11. Both are aimed at providing the tools necessary for practicing clinical engineers to survive in the changing healthcare marketplace. Nationally recognized faculty will present the 2 1/2 day workshops suitable for hospital and ISO-based clinical engineers, CE managers, and medical imaging service managers. Topics will include:

- ◇ Managed Care's Impact on Clinical Engineering
- ◇ Technology Assessment and Management
- ◇ Hazard Reduction and Quality Improvement
- ◇ EMC Issues
- ◇ Best Clinical Engineering Business Practices

 See back page for details

## CGMP Worries CE

Marvin Shepherd

The US Food and Drug Administration's Current Good Manufacturing Practices Final Rule (CGMP) was published in October 1996. Preliminary drafts of the Rule identified in-house CE Departments and 3rd party servicers as *manufacturers*. The Final Rule removed requirements relating to servicers. Later this year, it is expected that the FDA will again address the issue of rules affecting *servicers*. Public hearings will be aimed at attempting to define the terms *servicer* and *refurbisher*.

If clinical engineering departments had been listed as *manufacturers*, they would have been open to FDA review of their maintenance and calibration records. CE departments would also have been required to file a copy of every maintenance record with the original manufacturer. But beware! In-house departments have not dodged the bullet yet!

*Continued on page 2.*

## National Engineers Week

Thomas J. Bauld

National Engineering and Clinical Engineering Week, February 16-22, 1997, is fast approaching. By now, all ACCE members should be hard at work

planning celebrations and promotional activities that build recognition and customer awareness. It is a great opportunity to highlight the many accomplishments and achievements of your department's staff. National Engineers Week celebrates the positive contributions engineers make to all aspects of our lives. The theme for this year is *Engineers Make a World of Difference*.

*Continued on page 3.*

## Perspectives from a Clinical Engineer in Managed Care: Where is Our Role in Healthcare Headed?

Thomas M. Judd, MS, PE, CCE

### The Present Reality: Underscoring the Need for System Thinking

" ... Our nation's health system is a collection of health care providers, provider organizations, and insurers working together primarily through contractual relationships... little control over the total amount of resources used because ... little coordination and little perceived interdependence between parts; ...no common goal ... little concern for efficiency. As a result, the health system fails to achieve social goals such as access to services for all who need it, improvement in health status for those with the most potential for improvement, and the overall allocation of resources in concordance with societal values."<sup>\*</sup>

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American College of Clinical Engineering

# ACCE News

## 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.

## ACCE News Deadlines

Send news items by February 15 for inclusion in the March 1997 issue of the *ACCE News*. All copy must be received 15 days before the first of the following months: January, March, May, July, September, November. E-mail is best at [jfdyro@aol.com](mailto:jfdyro@aol.com) or fax to 516-751-7802 or call at 516-751-7244.

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## Dodging the CGMP Bullet

*Continued from page 1.*

Included, in the final rule is the provision that *installers* be considered as *manufacturers*. If an in-house CE department installs, for example, an x-ray system or a sterilizer or if it moves and re-

installs a cardiac monitoring system, it becomes an *installer* under CGMP. The *installer* must install according to only manufacturer instructions, document the work, and make installation records available for FDA inspection.

The draft CGMP final rule, dated July 1995, would have included hospital in-house clinical engineering departments as well as 3rd party service companies in the definition of *manufacturer*. The inclusion would have required hospitals to comply with pertinent sections of 21 CFR, Parts 808, 812, and 820. In addition, it would have required these repair groups to supply copies of all their service documentation to the original manufacturer. Theoretically, CE departments and 3rd party repair groups would have been subject to FDA inspection and penalties now applicable to any *manufacturer*.

For the time being the service aspect is mostly out of CGMP, but the FDA states it will write a specific regulation for it. So watch out!

After a perusal of the AAMI Newsletter review and 60 pages of the final rule in the *Federal Register* and through discussions held at the recent ASHE/MTM Conference, three areas of concern emerge. Healthcare facilities may be subject to the regulations in the present CGMP Final Rule in the following ways:

### **1. Installers of medical devices or systems are considered manufacturers**

The term *installer* will require some interpretation, but this author believes that it would certainly include installations such as an MRI, CT scanner, or a room of x-ray equipment. It probably includes sterilizer installations and moving a cardiac monitoring system from one location to another. At the other end, it probably is not intended to include installation of a replacement battery or a circuit board. If a health care facility decides to become an installer it is required to perform the installation according to manufacturer's specifications, document accordingly, and open these records to the FDA.

### **2. Reprocessors or remanufacturers of single-use medical devices are subject to the CGMP**

With healthcare facilities under increasing economic pressures, many are either reprocessing their single-use devices such as dialyzers, catheters, and syringes or are utilizing outsource reprocessor companies. The FDA has made it clear that the companies providing these reprocessing efforts come under the CGMP. It is not yet clear that healthcare facilities performing this service will also be subject to the CGMP.

### **3. Modifications of devices and systems that significantly change their intended function or safety levels are subject to the CGMP**

Since the enactment of the Medical Device Amendments of 1976, it has been unclear whether a clinical engineering department of a healthcare facility that modifies a medical device or system and significantly increases its risk of patient injury or intended function would fall under the CGMP. At the moment it is still unclear. However, as the Final Rule is widely implemented, increased Federal regulation of clinical engineering departments may occur.

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Until about 1990 the FDA focused attention on the device manufacturer. With the passage of the SMDA and the MSQA (mammography regulations), some of the activities and interests of clinical engineering managers came under the scrutiny of the FDA. With passage of the CGMP Final Rule more of these activities appear to be affected. ACCE comment is crucial during public hearings on the definition of *servicer* to assure that in-house clinical engineering departments are not included within the definition.

The CGMP Final Rule, now termed the *Quality System Regulations*, can be found on the internet at <http://www.fda.gov>. The full text, and a pdf version of the CGMP is available at <http://www.fda.gov/cdrh/fedregin>.

Marvin Shepherd, PE, DEVTEQ,

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## Clinical Engineer Week Celebrations

*Continued from page 1.*

Here in Michigan, the Michigan Society for Clinical Engineering is planning several major activities. We will be holding open houses at several local hospitals and we are having ACCE member Joseph McClain as our featured speaker on the topic of Clinical Engineering, the Past, Present and Future, as Part of the Healthcare Team. He will also be our guest at the Gold Awards Banquet held by the Engineering Society of Detroit. Our activities also include a new outreach emphasis by visiting local high schools with small teams of technicians, college engineering students, and clinical engineers. We are fortunate to have a chapter of the National Society of Black Engineers (NSBE) at the University of Michigan which is part of our planning and school visitation team. The NSBE is the lead professional organization for National Engineers Week this year.

Obtain more information from the National Engineering Week Committee by calling (412) 741-1393 or by calling the NSBE at (703) 549-2207 x 208, by e-mail to [LKUCollins@aol.com](mailto:LKUCollins@aol.com), or by checking out their web page at <http://www.eweek.org>. The homepage contains activities for children, feature releases, and an on-line forum.

As your ACCE representative to the American Institute for Medical & Biological Engineering, (AIMBE) Council of Societies, I have sent a letter and an e-mail to the leaders of all the AIMBE societies to encourage their members to take part in the celebration.

Some suggested activities include the following:

- ⇒ Provide a display of biomedical equipment along with your simulators in high traffic areas.
- ⇒ Test hospital employees' home health care equipment at a calibration station.
- ⇒ Distribute press releases in hospital publications and use cafeteria table flyers.
- ⇒ Provide large colorful graphs of cost savings ideas developed by our staff.
- ⇒ Show the impact of clinical engineering on equipment purchases. Have a big poster with costs and special terms negotiated with

vendors. List all the evaluations in which you have been involved over the last several years.

- ⇒ List all the service schools your staff have attended to provide them with the skills to service clinical equipment effectively.
- ⇒ Invite your CEO, CFO, CIO, and other senior administrators, state and local legislators and other prominent dignitaries to your events.
- ⇒ Collect professional service examples from each and every one of your staff members. They can include special projects, particularly cost-effective repairs, employee suggestions, services in areas in which you are not typically involved, device evaluations, and installations. Compile them into a brochure for distribution during the week.
- ⇒ Provide a collage of device modifications or enhancements that have been implemented by your staff.
- ⇒ Show device failures your staff has found that have been submitted to manufacturers, ECRI or the FDA that affect the entire medical community.
- ⇒ List all the staff members involved in advancing their education and all those who are certified.
- ⇒ List the professional organizations of which your staff are members.
- ⇒ List the hospital committees on which your staff serve.
- ⇒ Do a demonstration of electromagnetic interference with a walkie-talkie radio and a ventilator or other life support device. Display Warning Signs and your EMI Policy.
- ⇒ Display the proclamation for Clinical Engineering Week done by your Governor or Mayor.
- ⇒ Invite the faculty of your local college / community college to your events.
- ⇒ Display some of the technical literature you use on a regular basis such as ECRI's Health Devices, Hazard Alerts, manufacturer's service manuals, and video tapes.

ACCE Advocacy Committee Chairman George Johnston has distributed an information packet by way of the ACCE Grass Roots network. If you have not received this material contact your Grass Roots Team Leader. You may also call George at (503) 245-5603. The packet contains the following:

- \* Sample letters to solicit National Engineering Week proclamations from city mayors and state governors.
- \* Copies of two articles that underscore the value of clinical engineering.
- \* Celebration and promotion ideas.

**ACCE News on the Web**

**<http://info.lu.farmingdale.edu/~acce/>**

# ACCE News

## ACCE Board

President	Frank R. Painter
First Vice-President	Ira Tackel
Second Vice-President	Mo Kasti
Secretary	Jennifer C. Ott
Treasurer	Bryanne Patail
Member-at-Large	Greg Davis
Member-at-Large	Ethan Hertz
Member-at-Large	Thomas Judd
Member-at-Large	Binseng Wang
Past President	Thomas J. Bauld

## Committee Chairmen

Advocacy	George I. Johnston
Membership	Robert Morris
Government Relations	Ethan Hertz
Vision 2000	Mo Kasti
Nominations	Thomas J. Bauld
Education	James O. Wear
International	Alan Levenson
Inter-Society	Yadin David

## Letters to the Editor

Congratulations on the ACCE Web page. I have been visiting the page since its beginning and also recommending it to the clinical engineers in Latin America and Caribbean countries. A link to the ACCE page will be included in the PAHO/WHO home page (<http://www.paho.org>)

Antonio Hernandez  
Regional Advisor  
Health Services Engineering and Maintenance  
Pan American Health Organization/  
World Health Organization  
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I am a masters degree student at Purdue University, and would like to reference two articles published in the January, 1996 edition of *ACCE News* for a term paper. The information that was presented is invaluable, but in order to use the following articles, I need to know what the volume and issue number is for the January 1996 edition as well as the page numbers for "The new FDA Regulations" and "GMP Regulation Letter #1 -- ACCE responds."

If it is not to much trouble, could you please provide me with this basic information. I really enjoyed the information presented by ACCE and think it is an invaluable tool for those in the industry.

Keep up the good work. Thanks for your help.

Michele Pfund

Editor's note: A volume and number is now assigned to issues of *ACCE News*. This move was made in part to enable referencing articles appearing in the *News*.

Dear Editor,

The November issue of the *ACCE News* is great. I just received it and found myself enjoying reading it. The format and the content are excellent. I know now more about my colleagues, about the clinical engineering profession, and what's going on globally. All that in the short time it took me to read the issue. Keep up the good work!

A busy clinical engineer  
Yadin David

## Managed Care & Clinical Engineering

*Continued from page 1.*

### Defining Key Terms

*Technology* -- The particular combination of devices, drugs, and medical procedures used in health care delivery to treat a given condition.

*Managed Care* -- Processes that direct patients to the most appropriate site (level) and type of care to meet their particular needs; typically uses specialty care and (high) technology only when it is clearly demonstrated to benefit a patient (to bring added value).

*Managed Care Organizations (MCOs)* -- Health Maintenance Organizations (HMOs), Preferred Provider Organizations (PPOs), Independent Practice Associations (IPAs), Networks.

*Levels of Care* -- Acute, Subacute, Outpatient Surgical, Ambulatory Medical, Other (Home, Rehab, Skilled Nursing Facilities (SNFs)).

Example of Subacute: Level of care intended to fill the gap between acute and home care - Candidates will likely never recover completely, but have the potential for independent living; Typically patients with ventilator dependency, catastrophic injuries (spinal cord or brain injury), disease-related orthopedic problems, stroke, severe wounds, or HIV/AIDS.

*Utilization* -- Major managed care process that directs patients to most appropriate level of management of care that can achieve best outcomes; usually involves data collection and review/authorization, especially for services such as specialist referrals, emergency room use, and hospitalization.

*Key goal for MCOs* -- Reduce inpatient days/1000 members to 150 (non-Medicare) or less; many MCOs now have 250+ days/1000; accomplished using acute care preadmission guidelines such as Milliman & Robertson and through *avoidable hospital days* strategies.

*Outcomes Finding* -- Using technology assessment, the appropriate technology to deliver best care (best clinical & business outcomes) at the optimum level of care.

*Payment Systems Capitation* -- Managed care plans pay providers a fixed amount to care for a patient over a given period. Providers are not reimbursed for services that exceed the allotted amount. The rate may be fixed for all members or it can be adjusted for the age and



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gender of the member (of the health plan) based on actuarial projections of medical utilization.

*Fee-for-service (FFS)* -- Traditional method whereby patients pay doctors, hospitals, and other providers for services rendered and then bill private insurers or the government.

*Quality/Competition* -- The potential for new forms of contractual relationships with capitated and bundled payments that encourage health systems to measure outcomes of care as a basis for quality-based competition; these systems use quality improvement initiatives to improve outcomes and to drive down their cost structures.

## What steps can healthcare delivery systems take in light of present business and clinical realities?

An appropriately sized healthcare system paid primarily by capitation has the incentives to make all necessary services (levels of care) available in the right amounts to manage costs and quality as a basis for competition. The health system *makes money* when people stay well; replacing *the sick care* system of today.

## How should clinical engineers view this reality?

The health care delivery systems in which we work are drastically changing, e.g. hospital mergers and downsizing. These systems need clinical engineers' capacity for system thinking at every level for improvement of process and content of care. Clinical engineers have traditionally assisted in the use of technology to achieve higher quality care at the lowest possible cost; this is still a key issue as the country moves to increasing ratios of managed care. Clinical engineers need to turn their skills and their focus to a broader view of technology and a broader view of health care systems.

## How might healthcare systems achieve their mission utilizing system thinking?

[See Performance Indicators, below]

*"To enable a given population to maximize its present and future health and provide tangible benefit to the community, the health system will provide the highest quality service to prevent episodes of illness and provide coordinated episodes of care in a way that satisfies and delights both clients and system staff, with efficient use of resources, appropriate facilities and labor capacity, and the financial performance to maintain and improve the above activities, while continuing to support research and education."\**

## How can clinical engineers survive and thrive in the new environment?

The initial challenge for clinical engineers was to create a safe environment and safe equipment for use in healthcare. That is now completed. What's next for CE's? The changes brought by managed care for BMET's have been documented and predicted by others, i.e., perhaps similar roles, but in more varied settings. Clinical engineers will need to make their skills *portable and transferable* as they move into different roles. CE's have been seen to be *too smart to lose*, so many organizations put them in charge of additional areas. Recognize the new reality that 20-70% of all existing jobs by Year 2000 will have job titles that currently do not exist.

Some possible new roles in integrated health systems and managed care include: Assets Planning; Technology Assessment;

Quality Assessment / Improvement; roles in Specialty Hospitals (Centers of Excellence); involvement in Clinical Information Systems development and Telemedicine.

Quality improvement roles may include CE's assisting in eliminating inappropriate variation in health delivery through development and use of clinical pathways (inpatient) and clinical practice guidelines (ambulatory care). CE's need to join physicians and nurses in examining the process and content of care, placing *CE process improvement* thinking alongside the scientific approach/content expertise of physicians and the pattern recognition/content expertise of nurses.

CE's need to get more involved in preventive medicine strategies, such as developing new technologies and processes for prevention and treatment of Coronary Artery Disease (CAD).

*CAD Primary Prevention Strategies - Preventing Illness*  
Diet, Exercise, Obesity, Tobacco, Hypertension, Dyslipidemia, Diabetes Mellitus, Antiplatelet, Estrogen Replacement, ETOH

*CAD Secondary Prevention Strategies - Slow Disease Progression*

Beta-Blockers, ACE inhibitors, Ca<sup>++</sup> Blockers, Rehab, All Primary Prevention Strategies, Anticoagulants

*CAD Tertiary Prevention Strategies - Preventing Disease Complications*

Long Term Chronic Disease Management,  
Congestive Heart Failure Management,  
Critical Pathways Post-MI Management,  
ER Intervention (Aspirin, Thrombolytics),  
Cardiac Rehab,  
Procedure Utilization,  
Acute MI Treatment..

## Measurement Tools -- Health Care System Performance Indicators

### Population Health

General health index: (SF-36)  
Mental health index: (DSI)  
Prevention index  
Disease-specific disease incidence/prevalence rates  
Disease-specific outcomes of care

### Community Benefit

Charity care: % of expenses devoted to charity care  
Employment of "high need" workers  
Training  
% budget controlled by community-based programs

### Quality of Care

Compliance with standard care patterns/department/diagnosis  
Incidence of sentinel events (unplanned revisits; low birth weight; nosocomial infections; hospital readmits)  
Peer review results  
Disease/cause-specific episode mortality (surgical; deaths due to cervical cancer; infant mortality)  
Frequency of preventable acute episodes for chronic conditions  
Patient & provider agreement on outcome of care

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Prescription drug interactions  
Inappropriate multiple-drug prescribing  
Number or percentage of QI Teams with >1 entity  
Average number of entities per QI Team

## *Episode Prevention*

Hospital admissions per member per year  
Illness-based medical care episodes/member/year  
Prevention visits per member per year  
% of charts in compliance with U.S. Preventive Services Task Force guidelines, locally adjusted  
Trends in marker conditions (Low birth weight rate; % incidence new "advanced" cervical cancer cases; % incidence new "advanced" breast cancer cases; incidence of acute myocardial infarction)

## *Episode Characteristics*

Amount of Services  
◇ Number of services per episode, by diagnosis  
◇ Number of problems per visit  
◇ Average LOS/episode diagnosis group  
◇ Hospital days per 1,000 members  
◇ Surgical procedures per 1,000 members  
Types of services  
◇ Redundancy of services provided in episodes  
◇ Types of contacts per episode  
Location of services (average travel and number of sites/episode)  
Timeliness of services (test results to practitioner; test results to patient; wait time for referral; delays in treatment of marker diseases; discharge delay days)  
Provider appropriateness (referring physician expectations met; % of diagnoses or procedures by class of providers consistent with system-defined scope of practice)  
Continuity of care  
◇ Usual Provider Continuity  
◇ Site Continuity (usual site; no. of sites)  
◇ Medical Record Continuity  
◇ Failure to keep scheduled/recommended appointments  
◇ Resolution of appointment non-compliance  
◇ Administrative discharge delay-days

## *Satisfaction*

Community satisfaction  
◇ Unfilled positions  
◇ Market share  
◇ Brand identification and association with quality  
◇ Purchaser market share  
Patient satisfaction  
◇ Member survey results  
◇ Complaints / problem inquiries  
◇ Voluntary disenrollment  
Employee / staff satisfaction  
◇ Survey of morale  
◇ Employee behaviors

Purchaser contract renewals

## *Efficiency*

Cost per episode, total by type  
% of expenses for system administration  
Fixed assets per member  
Pt-care/non pt-care salary expense to net patient revenue  
Medical records costs per episode, member  
Contribution margin by product line  
Input prices, to benchmark  
Intermediate product costs, to benchmark  
Rate of increase of costs  
Revenue to asset consumption

## *Capacity*

% units non-compliant with capacity guidelines  
Delay-days due to inadequate capacity  
Outsourcing by type

## *Financial Performance*

Profitability  
◇ Average total net income per member  
◇ Average operating income per member  
◇ Average annual contribution per member  
◇ Return on assets  
◇ Average markup  
Liquidity ratios  
Leverage ratios  
◇ Debt ratio  
◇ Times interest earned

## *Research*

Annual R&D budget  
Externally funded research  
Peer-reviewed publications

## *Education*

Concurrence with strategic plan  
Program statistics

\* *Nerenz, DR, Zajac, BM, Assessing Performance of Integrated Delivery Systems: Analyzing Indicators and Reporting Results, Volume 5, Faulkner & Gray, 1996*

editors note: The above article is based upon a featured presentation in the ACCE 1996 audio teleconference series. Tom Judd, ACCE Member-at-Large and Director of Quality Assessment, Improvement, and Reporting, Kaiser Permanente, Atlanta, Georgia, describes from his personal experience the new healthcare terrain and the best ways for the clinical engineer to travel over it.

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## EMC Issues Checklist

*Thomas J. Bauld*

- ✓ Determine location and power of paging systems
- ✓ Identify walkie-talkies by frequency, power, departments, number, location
- ✓ Document all problems and sources
- ✓ Prepare educational material for staff
- ✓ Inventory all in-house transmitters
- ✓ Use videos demonstrating EMI effects on devices
- ✓ Propagation in free space and health care buildings
- ✓ Field strength measurement equipment and methods
- ✓ Test equipment features and reviews
- ✓ Data collection forms; floor plan EMI measurements
- ✓ Determine contribution of operator error
- ✓ ACCE EMC guideline document
- ✓ Policies for health care institutions
- ✓ Checklist for EMC investigations
- ✓ List of consultants and EMC courses
- ✓ Never use cell phones on aircraft

**Learn more about EMC at upcoming  
ACCE Advanced CE Workshops  
See back page for details**

## ACCE Board Highlights

**October 24, 1996**

*Jennifer C. Ott*

President Painter called the meeting to order. The minutes of the September 5, 1996, Board meeting were approved.

### **President's Report**

Painter announced with regret the resignation of Denver Lodge as Member-at-Large. Painter remarked on Denver's significant contributions to ACCE and his continued strong support of its goals. The Board approved the appointment of Tom Judd to fill the position. Painter informed the Board that Bob Morris accepted his invitation to Chair the Membership Committee.

### **Past President's Report**

Tom Bauld spoke in support of collaborative meetings such as the November 1996 ACCE/ASHE Management of

Technology Meeting (see MTM report on page 9). Anyone interested in working with Tom on planning joint meetings should contact him.

### **First Vice President Report**

Ira Tackel presented the recommendations of the Education Task Force to hold ACCE Advanced Clinical Engineering Workshops in San Diego in May and in Washington, DC, in June, 1997. See feature story on page 1 and details on back page.

### **Second Vice President Report**

Mo Kastl, discussing the work of the Advocacy and Marketing Section, announced that George Johnston will lead National CE Week efforts; Kelly Galanopoulos, membership increase; Dave Dickey, target organizations for ACCE promotion; and John Hughes, ACCE resources and CE success stories. Progress on the ACCE brochure and video was related.

### **Secretary's Report**

Jennifer Ott completed the reorganization of the membership database. Actions that will facilitate communication with the secretariat were presented. Access to the ACCE membership database must be arranged at the vice-president level. The 1997 membership directory will be completed in March.

### **Treasurer's Report**

Bryanne Patail reported an expected healthy balance for the year. Financial software recently installed will permit closer budget tracking. Patail will develop a Fund-raiser Committee.

### **Membership Committee**

Chairman Binseng Wang presented to the Board and the Board approved the Committee's recommendation that Ernest C. Manzano and J. Sam Miller be admitted as members.

### **Education Committee**

Jim Wear reported the successful 1996 teleconference program broke even financially. Audiotapes are available from Morse Medical.

### **Advocacy Committee**

George Johnston prepared and distributed a 27-page information packet on National Clinical Engineering Week. The Grass Roots network will disseminate this information to the general membership. A draft of the ACCE brochure was prepared with a first of the year publication expected. Johnston is exploring the feasibility of an ACCE video. Deadline for the receipt of 1996 Advocacy Award nominations is March 1, 1997. No nominations have been received to date.

### **Webmaster Report**

Bruce Morgan announced plans for a message section under the ACCE Home Page on the Web. Membership information will be placed onto protected pages. The extent and type of member information maintained will be determined by the Board.

### **Newsletter**

Joe Dyro reported that *ACCE News* is received by all members bi-monthly. Morgan puts the *News* on the Web before

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members receive hard copy by mail. He requested that Board members submit newsletter items at least once every four months.

## ICC Liaison

Frank Painter disclosed AAMI's plans to outsource its administration of the certification program.

## IFMBE Liaison

Dyro announced the 1997 release of *Lectures in Clinical Engineering* a publication of the Clinical Engineering Division of the IFMBE. *Lectures* will be an invaluable adjunct to all future Advanced Clinical Engineering Workshops and to clinical engineering education in general.

## Other Board Actions

The Board rejected the motion to waive dues for unemployed members. Next Board meeting was scheduled for December 18, 1996.



## Meetings

### 16th Northeast Biomedical Symposium

*Joseph F. Dyro*

In October, Bill Buckley, President of the Medical Device Society (MDS), welcomed me in Waltham, Massachusetts to the 16th Annual Northeast Biomedical Symposium. This well-run symposium was of exceptional quality with informative and timely tracks, excellent speakers, and strong vendor support. It serves as a standard by which similar events should be measured. MDS organized and hosted the Symposium with co-sponsorship by three other groups: New England Society of Clinical Engineers, the Iroquois Biomedical Society and the Northern New England Society of Biomedical Technicians.

Keynote speaker, Ray Zambuto, President of Technology in Medicine, addressed *Current Healthcare Trends and their Impact on Clinical Engineering*. Tracks included clinical engineering management, clinical engineering technology, anesthesia technology, imaging, and CBET exam review. Marquette, Hewlette-Packard and SpaceLabs each presented three-day workshops. The exhibit hall, filled to capacity, featured 48 vendors. Symposium attendance numbered nearly 200.

ACCE President, Frank Painter representing NovaMed directed an interactive session on *JCAHO Inspections*. He lead off by asking the 40 attending the session to advise on what they did to pass, what they did to excel and they noticed inspectors sought. Many contributed to the lively discussion based upon actual experience. Frank stressed the following four actions: (1) have a management plan, (2) clean up the inventory, (3) assure user competency and (4) do what you say you do. Buckley advised that before an inspection

one should call five hospitals to ask their experience, prepare documents, and tell all nursing areas that inspection is imminent. Betts, asserting that the inspector is your friend, recommended tailoring your presentation to the inspector's interests. A visit to the hospital's canine patrol was particularly appreciated by an inspector who liked dogs. Sharp differences of opinion were aired on the issue of whether or not to place inspection tags on medical devices. General agreement was reached on the necessity to offer information, eliminate gray areas of coverage, clean the office, and examine the inspection tag paradigm.



### Clinical Engineers Pleased With Symposium

The 80 people attending the session on *Defending In-House Programs Against Outsourcing* heard presentations from Bill Betts, Dave Wilder, Buckley, Gary Evans and Painter. Betts successful staved off an assault by demonstrating his department's flexibility, objectivity, strong talent base, best value, total focus and soul dedication to the mission, vision, and values of the University of Arizona Medical Center. Dave Wilder in successfully defending against an outside proposal stressed the importance of good management, complete documentation and a solid ongoing program. Buckley urged all to have tight management control of all capital assets. Evans showed that close examination of a very thick proposal revealed many inaccuracies, confusing statements, and a front page with an attractive yet deceptive bottom line. He opined that the company focused on a convincing bottom line and obscured the details in the body of the text assuming that it would be read only cursorily if at all by hospital decision makers.

*Clinical Engineering Roundtable on Technology Management* featured Jeff Cooper, Jack Spiers, Painter, and Zambuto. Cooper, stating "*Service is where it's at,*" showed that clinical engineering is part of a hospital's core competency closely enveloping patient care issues. Spiers recommended continuous "*self evaluation*" so that one can benchmark against the competition. He added that one should learn to say no or else lose the competitive edge. Determine if administration knows what value added services you provide and if they want these services. Painter recommended examining brochures prepared by the competition and then telling administration that clinical engineering can do all the brochures say and then some. Zambuto's advice was "*Identify your cost; don't go to administration with soft information; and hard drives out soft.*"



# ACCE News

From the audience John Gavin asserted that the essence of clinical engineering is technology management and includes such responsibilities as training and device modification. Other issues addressed included performance indicators, the futility of benchmarking, peer review programs, customer satisfaction assessment, financial management, identification of key decision makers, time management, strategic planning, the internet, and marketing.

One came away convinced that the most cost-effective way of keeping current in this business is to attend regional meetings, especially when they are of the quality of the Northeast Symposium. At half the cost of a similar meeting held elsewhere run by a large national organization, this regional meeting featured a vendor-packed exhibit area, service seminars, big name speakers, timely topics, and lively intellectual exchange. The exceptional quality of this event speaks to the commendable efforts of the Medical Device Society. This was volunteerism at its best.

Clinical engineers and biomedical engineering technicians are serious professionals who work hard yet know how to enjoy life. Fortified, if not mentally alert, after a morsel of cheese and a few sips of wine, this attendee found himself seated alongside fellow contestants at the Bio-Bowl. What a sobering experience it was. Professor Dyro soon realized what he long suspected: he doesn't know everything and BMETs and CEs are smart. Congratulations to MDS, the winning team.

All clinical engineers, biomedical engineering technicians, and students in the Northeast would do well to avail themselves of the tremendous opportunity the annual symposium represents. Mark your calendars for next year's Symposium, November 3-5, 1997, in Sturbridge, Massachusetts.

## Medical Technology Management

*Thomas J. Bauld*

In early December, I attended the ASHE meeting on Medical Technology Management (MTM). Held in Chicago to coincide with the Radiological Society of North America meeting (RSNA), MTM faculty featured six ACCE members: Marv Shepherd, Manny Furst, Yadin David, Joe McClain, Tobey Clark, and Russell Bert. About 150 registrants put this meeting at the attendance level of other regional meetings: the Northeast Biomedical Symposium (see above report) and the AAMI mid-year meeting.

MTM placed a strong emphasis on the integration of architectural planning and clinical engineering for major projects, especially imaging. Other topics covered included Internet utilization, asset management for rural as well as integrated health systems, EMI management, outsourcing strategies, JCAHO and OSHA issues, risk management, networks and workstations support, and telemedicine.

Army Clinical Engineering personnel were well represented. Interacting with this group was particularly beneficial as the military sector faces most of the same issues, such as cost containment, downsizing, and vendor negotiations, that are faced by the civilian sector.

Unfortunately, ACCE members did not attend despite ACCE's co-sponsorship of the meeting and promotion through *ACCE News* and the ACCE Home Page. As the meeting brochure demonstrated, the

ASHE marketing staff did a fine job of clearly, prominently, and frequently mentioning the collaboration of ACCE in the event. Our members received the same discount as ASHE members. This was the second MTM meeting that ACCE promoted but, sadly, few members took advantage of the opportunity. When members don't participate in such events, the view of ACCE as an organization of significance is diminished.

I was encouraged, however, that the ASHE Clinical Engineering Committee and Education Director all see the value of the joint meeting. Plans are underway to link the next meeting to the American Heart Association Meeting, November 9-12, 1997 in Orlando, Florida, providing members with a technical, device-related meeting similar to the RSNA as well as a family-oriented vacation location. I would appreciate your comments and ideas concerning joint meetings where ACCE can collaborate with organizations.

## New York City Metropolitan Area Clinical Engineering Directors Group

*Ira Soller*

The New York City Metropolitan Area Clinical Engineering Directors Group, consisting of 38 Directors of Biomedical/Clinical Engineering Departments representing all of the major medical centers in the greater New York City area, met on 10/29/96, at St. Luke's - Roosevelt; Mike Mirsky, Director of Biomedical Engineering acted as host.

A presentation on "Infrared Technology Integrated Locator Systems" which are used to quickly locate personnel and equipment, was given by John Chaco and Ronald Fedoruk of Executone Information Systems. This was followed by discussions on consortium buying services, recommended parts vendors, proposed hospital mergers, new open-heart programs, and donation of used medical devices to third world countries. Participants included Jose Ruiz of St. Vincent's Medical Center of Richmond, Paul Frisch of Montefiore Medical Center, Nicholas Pinto of Interfaith Medical Center, Robert Killian of Brunswick Hospital Center, Victor Sarmiento of Cornell Medical Center, Alan Levenson of AMRF Foundation, Stan Goldman of New Rochelle Hospital Medical Center, Kelly Galanopoulos of Mount Sinai Medical Center, John Butler of New York Methodist Hospital, Juan Mercado of Elmhurst Hospital Center, Mike Bascombe of Kings County Hospital, Allan Young of NY VA Medical Center, Gaetano Scroco of New York Hospital, and Alex Altshuler of Staten Island University Hospital.

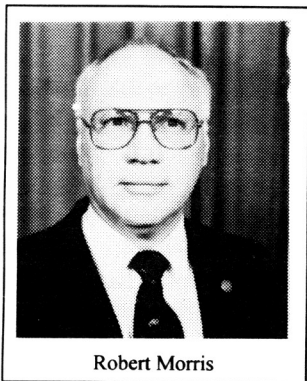
The next meeting is scheduled for Tuesday Dec. 3 at 6 PM at which time Hewlett Packard will present a lecture on "Emerging Point Of Care Solutions Including ISTAT Lab Systems". Manufacturers interested in making presentations, or for any further information contact Group Coordinator: Ira Soller Director of Biomedical Engineering, State University of New York Health Science Center at Brooklyn, 450 Clarkson Ave, SMIC Box 26, Brooklyn, NY 11203. Phone: 718-270-3192, Fax: 718-270-3194.



# ACCE News

## Morris New Membership Committee Chairman

Bob Morris, PE, CCE, Director of Clinical Engineering at Oregon Health Sciences University has been appointed Chairman of the ACCE Membership Committee. Bob is committed to maintaining the high standards set by retiring Chairman Binseng Wang. He hopes for more work for the Committee as **Vision 2000** succeeds in raising ACCE membership by 10% in 1997. Morris urges every member to give an application to a clinical engineer who is not yet an ACCE member. He welcomes all inquiries and information at the following coordinates:



Robert Morris

Clinical Engineering Department  
Oregon Health Sciences University  
Portland, Oregon 97201 USA  
503-494-8420; 503-494-5909 fax; morris@ohsu.edu

See pages 14 & 15 for  
ACCE membership information  
and application form

## Bauld Elected AIMBE Fellow

ACCE Past President, Thomas J. Bauld, Ph.D., was elected to the College of Fellows of the American Institute for Medical and Biological Engineering (AIMBE). The third ACCE member to be so distinguished, Bauld joins former ACCE presidents Drs. Yadin David and Joseph Dyro. Manager of the Department of Biomedical Engineering in the Facilities Services Division at the University of Michigan Health System, he joins Fellows and colleagues from the University, Drs. Robert Bartlett, Steven Goldstein, Charles A. Cain, Paul Carson, Donald B. Chafin, John A. Faulkner, Janice Jenkins, Matthew O'Donnell, Albert B. Schultz, and David Kuhl.

AIMBE is the biomedical engineering umbrella organization for the United



Thomas J. Bauld, III, Ph.D.

States. It consists of the College of Fellows, elected individuals who have made significant contributions; the Academic Council, comprised of representatives from colleges and universities with educational programs in the field; the Council of Societies (COS), composed of professional engineering organizations whose members have a strong interest in medical and biological engineering; and the Industry Council, representatives from industries active in the development and production of medical devices and biological processes. ACCE is a member of COS.

Bauld was recognized for his many contributions to the field of clinical engineering, the application of engineering principles and engineering management in the healthcare environment. In addition to professional work and publications, he has been a leader in professional societies at the local and national level for many years. Tom is a founding member of ACCE and recently completed two years service as President. He has been a member of AAMI since 1976, earning the Clinical Engineering Achievement Award in 1985. He served as Chair of the Education Committee, member of the Board of Directors, and Vice President for Healthcare Engineering. He was a founding member and first President of the Michigan Society of Clinical Engineers in 1978, an organization which continues to serve the interests of clinical engineers and biomedical technicians in the Southeastern Michigan area. He has been the chair or co-chair of twelve local, regional, and national meetings producing successful and highly acclaimed meetings.

Dr. Bauld has a strong interest in the continuing education of all members of the profession and has helped develop a new bachelor of science degree in Biomedical and Computer Engineering Technology at Eastern Michigan University. Most recently, he taught a portion of the Biomedical Engineering graduate course on Bioinstrumentation given at the University of Michigan. He was instrumental in acquiring substantial equipment donations to be used in the Biomedical Engineering laboratories for both education and research activities.

The brief summation of his achievements for the AIMBE College of Fellows membership publication describes his contributions:

*"For exceptional leadership in the field of clinical engineering and for dedicated service to his peers, colleagues, and students through local and national professional organizations and educational programs."*

He will be inducted into the College of Fellows at the Annual Meeting held at the National Academy of Sciences in Washington, DC in March, 1997.

## FDA's Kessler Resigns

FDA Commissioner David Kessler announced his resignation. Kessler said he will stay until a successor is named. His successor will need to be confirmed by the GOP-controlled U.S. Senate following hearings by the Senate Labor and Human Resources Committee, virtually assuring an additional forum for congressional scrutiny of FDA regulatory reform in early 1997.

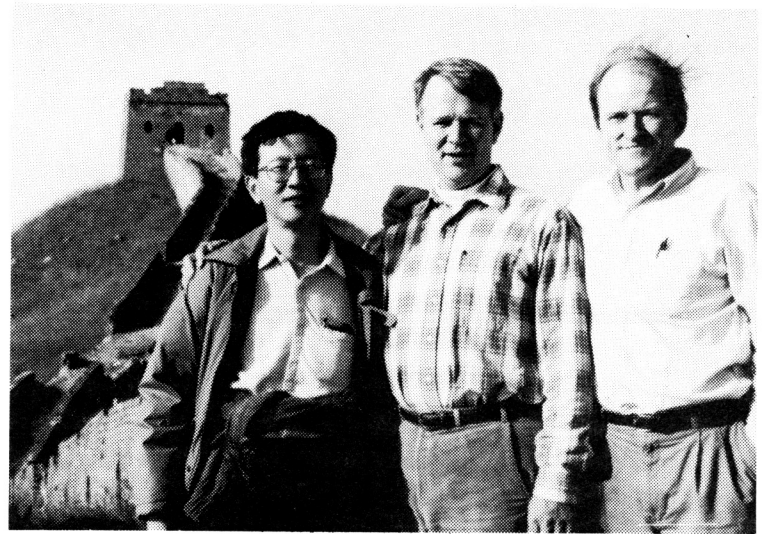
# ACCE News

## Clinical Engineering Profiles

### Binseng Wang

- Director, Biomedical Engineering and Quality Assurance for MEDIQ/PRN Life Support Services, Inc. MEDIQ/PRN is the largest biomedical equipment rental company in the US.
- Visiting scientist at the National Institutes of Health, from 1990 to 1992. Developed a method for integrating three-dimensional data obtained from EEG and MEG recordings and transcranial magnetic stimulation with MRI and PET images of the brain.
- Special Advisor on Equipment to the Secretary of Health of São Paulo State, Brazil, from 1987 to 1990. Established a comprehensive policy for technology planning, management, and service for a health system composed of about 550 hospitals (with 85,000 beds), 2100 health centers, and 10 research and manufacturing centers to serve a population of about 33 million. Managed a procurement budget of about US \$300 million. Supervised a multidisciplinary team of 65 persons and planned and equipped 5 new community hospitals and 60 new health centers. Created 15 new clinical engineering teams in the main hospitals and health regions.
- Founder and Director of the Center for Biomedical Engineering, State University of Campinas, Brazil, from 1982 to 1987. The Center was created as an interdisciplinary facility for research of biological phenomena and systems, development of medical instrumentation, management and maintenance of health equipment, and application of radiation physics to medicine. From an initial staff of 5 faculty members and 3 employees, the Center grew rapidly to 62 persons by 1987, and presently has a staff of approximately 85 persons. The Center has been designated a "collaborative center" of the World Health Organization (WHO) due to its contributions worldwide.
- Associate Professor at State University of Campinas, Brazil, from 1974 to 1994. Its Biomedical Engineering program is one of the largest and best funded in South America, with graduate studies at M.Sc. and doctoral levels.
- Consultant to the Pan-American Health Organization (PAHO/WHO), World Bank, and Inter-American Development Bank, and several Latin American and Caribbean countries on healthcare technology policy and management. Also provided consultation to manufacturers on design, manufacturing, regulatory compliance, and export opportunities.
- Sc.D., Massachusetts Institute of Technology; M.S.E.E., State University of Campinas; E.E. and B.Sc. Physics, University of São Paulo. First CCE from South America.
- Member and chair of ACCE's membership committee. Former president, Brazilian Society of Biomedical Engineering and Brazilian Hospital Engineering and Maintenance Association. Former member of IFMBE's developing countries committee.
- Member of Editorial Board, *Journal of Clinical Engineering*, and contributing editor, *Healthcare Technology Management*.
- Joined in organizing and teaching ACCE Advanced Clinical Engineering Workshops.

- Fluent in Portuguese, Spanish, Chinese, and English, but none well enough to be taken seriously. His handwriting can be interpreted only by licensed pharmacists.
- Gave up working on his MBA when he started to read Dilbert cartoons. He is now sure that he knows everything there is to be learned about management.
- Latest accomplishment: rescued two ACCE members lost while on a 5-mile forced march on the Great Wall.



**Wang (left) Rescues Trekkers on Wall**

- Hobbies: home improvement (not much better than Tim, the toolman), tennis (whipped Michael Chang 3-0; not that kid from California, but a 75 year-old guy with the same name in a wheelchair), fishing (the biggest one got away), computer hacking (the smoking remains are still in the basement), helping young clinical engineers grow (while annoying the famous ones), and overstating his own importance and abilities.



## 1996 Advocacy Awards

March 1, 1997, is the deadline for submission of nominations for 1996. An application form was inserted in the last newsletter. For forms and more information call Advocacy Committee Chairman George I. Johnston at 503-245-5603.



# ACCE News

## ACCE Teleconference Series

*James O. Wear*

The 1996 series of ACCE teleconferences went very well. The last in the 1996 Series, New Opportunities for Clinical Engineers, was presented by Ira Tackel, Director of Medial Instrumentation at Thomas Jefferson University Hospital. Handouts of slides complemented the oral presentation. Tackel provided real-life examples of four areas into which his department expanded: television service, sterilizer support, endoscope repair and MRI support. Ira emphasized the necessity of business analysis skills. Tapes of this and other teleconferences are available from Morse Medical (206) 236-0628.

So that readers can gain some appreciation of the content of a typical teleconference, the recent presentation made by Tom Judd has been condensed and included in this newsletter. See page 1.

## HELP WANTED

### AUDIO-TELECONFERENCE SPEAKERS

Speak for fun and profit. Those interested in presenting a one-hour lecture on a topic of interest to the membership should call Jim Wear at 501-370-6618 or [wear.james@forum.va.gov](mailto:wear.james@forum.va.gov). An honorarium is provided. Members may also help the program by suggesting to Jim topics of interest.

We are planning the 1997 teleconferences series and are interested in topics that the membership would like to have presented in this educational mode. The teleconferences are one-hour sessions each month with forty-five minutes of presentation and fifteen minutes of questions and answers. Almost any topic can be covered in this way. If you have any topics that you would like to have covered; and, especially, if there are speakers you would like to hear, fax this information to me at the above fax number. If you would like to discuss a program, please call me at the above number.

## Web Trappings

*B.J. Morgan*

Several links have been added to the ACCE home page recently: the Alberta Clinical Engineering Society (ACES); the Italian Association of Clinical Engineering (AIIC); and the *Journal of Clinical Engineering*. The *Journal* lists contents of issues and includes abstracts of papers. The Message Center is active and several job postings are at the Positions Open site.

Since there are no entries in the Positions Wanted site, one can only assume that all members are gainfully employed. Congratulations! About 1000 visits have been made to the home page since its creation this summer. Visit, read, and comment so that this useful tool can become even more valuable to all members.

## CE Certification in Brazil

*Binseng Wang*

Drafts of the Constitution and Bylaws of the Brazilian Board of Examiners for Clinical Engineering Certification have been submitted to the ICC for review. The Brazilian Board (CBC) was formed by eight Brazilian CCEs certified by the US Board of Examiners. The US Board facilitated CE examinations both in the United States and in Brazil. ACCE member, Michael Carver, is Chairman of the International Certification Commission for Clinical Engineering and Biomedical Technology.

## CE Advances in Mexico

*Adriana Velázquez*

Mexico, a country of contrasts, has 91 million inhabitants with more than 35 million in poverty. Both first and third world-country diseases are present. In 1995, with 868 hospitals of more than 50 beds only 35 had biomedical or clinical engineering departments. In the rest, some equipment is maintained by plant engineering and maintenance personnel or by external contractors. On the positive side about 40 engineers graduate from biomedical engineering bachelor programs each semester in three universities and about 20% of them are interested in clinical engineering. They are destined for hospital-based jobs or for higher paying jobs in product sales or service support.

The clinical engineering challenge is both to increase the number and quality of students and to help create more job openings for them with appropriate responsibilities and salaries.

The Clinical Engineering Chapter (CEC) of the Mexican Society of Biomedical Engineering (SOMIB) is striving with the different Health Sector Divisions to create a place for the clinical engineer in the current hospital structure of public hospitals, to dignify their work, and to lobby for good salaries and recognition of their role.

An agreement is being made with the Maintenance and Infrastructure Area of the Social Security Institute for State Employees (ISSSTE), which has hospitals in around the country, to sponsor internships, social service, and final projects. In this agreement SOMIB is requesting that ISSSTE hire in their institutions 20% of the students.

CEC through some of its representatives is helping in the Health Secretariat to develop a Medical Equipment Technology Assessment Program that will include a functional inventory of equipment. CEC is hopeful that clinical engineers who help to audit the hospitals will later be hired to manage the hospital's equipment program. On the academic side, to increase the number of engineers interested in clinical engineering, specific courses and conferences have been



offered in the three universities in Mexico which have biomedical engineering programs. A project is under way to prepare clinical engineering students to sit for the first part of the ICC Clinical Engineering Certification Examination upon graduation.

Mexico has been facing significant economic problems since December 1994; however, SOMIB wants to seize the opportunity and demonstrate how a clinical engineer can manage medical equipment technology in a more economical way to increase the quality of patient care in the Mexican health sector.

## CE Continuing Practice Due

Clinical engineers certified prior to January 1, 1993 were required to submit *Evidence of Continuing Practice* to the ICC by December 31, 1996. Proof of a minimum of fifteen points in approved activities accumulated during 1994-96 along with the renewal fee were due by the above date. If you missed the deadline and need the forms or have questions, please call Denny Lewis at (703) 525-4890 x.207.

## BEACON Shines Brightly

The Biomedical Engineering Alliance for Central Connecticut (BEACON) announced the transfer of the Hartford Graduate Center BME program with its renowned Clinical Engineering Internship program to the University of Connecticut. BEACON, a collaborative regional BME program, includes Trinity College, the University of Hartford, the University of Connecticut at Storrs and the University of Connecticut Health Center at Farmington. It provides educational and research opportunities for students interested in biomedical engineering in the region. For more information on BEACON contact:

Dr. John Enderle  
Chairman, Electrical and Systems Engineering  
University of Connecticut  
Storrs, CT 06269  
860-486-3410 tel; 860-486-2447 fax;  
j.enderle@ieee.org

## Clinical Engineering Internships

The Biomedical Engineering Program of the University of Connecticut is pleased to announce the availability of Clinical Engineering Internship opportunities. Two-year internships are available at Hartford, Bridgeport, Dempsey, and Yale/New Haven Hospitals and Baystate Medical Center. Activity at these institutions involves in-depth exposure to all clinical engineering activities. Students earn an M.S. in Biomedical Engineering. The internship includes a stipend of \$9000 and a tuition waiver for each academic year. For details contact:

Dr. Joseph D. Bronzino  
Director, Clinical Engineering Internship Program  
Trinity College  
Hartford, CT 06106  
860-297-2224 tel; 860-297-3531 fax;  
joseph.bronzino@trincoll.edu

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## Advertisements

The American College of Clinical Engineering (ACCE) invites you to take advantage of an exclusive, limited, and privileged opportunity to advertise in *ACCE News*. The *News* is mailed, first-class, directly to over 600 clinical engineers. These clinical engineers are ACCE members, certified clinical engineers, and heads of regional, national and international societies. The *News* reaches medical equipment decision-makers in 65 countries. The recipients of the *News* play a key role in technology management and purchasing decisions.

Prospective advertisers may contact the Editor directly.

Joseph F. Dyro, Ph.D., CCE

Editor, *ACCE News*

21 Bob's Lane

Setauket, NY 11733

516-751-7244 516-751-7802 fax jfdyro@aol.com

## Calendar of Events

- ◆ AIMBE 6th Annual Event, *Bioengineering, Innovation, and the Law*, March 1-4, 1997, Washington, DC. Info: kwoaimbedc@aol.com
- ◆ AFSM Meeting, May 9-10, San Diego, CA.
- ◆ ACCE Advanced Clinical Engineering Workshop, May 9-11, 1997, San Diego, CA. Info: David Motta at 401-434-1270, ext. 212.
- ◆ Health Tech '97, May 11-14, 1997, San Diego, CA. Contact: David Motta at 401-434-1270, exMotta at 401-434-1270.
- ◆ 23rd Canadian Medical and Biological Engineering Conference, May 28-30, 1997, Toronto, Ontario. Contact: CMBEC Secretariat, Bldg. M-55, Rm. 383, Ottawa Canada K1A 0R8. Tel: 613-993-1686, fax: 613-954-2216, e-mail: cmbes@nrc.ca.

# ACCE News

- ◆ ACCE Advanced Clinical Engineering Workshop, June 6-8, 1997, Washington, DC. Info: 610-625-6000 x168.
- ◆ AAMI 32nd Annual Meeting & Exposition, June 7-11, 1997, Washington, DC. Call 800-332-2264.
- ◆ Cigar Night, June 7, 1997, Washington, DC. Call 516-751-7244.
- ◆ ACCE Annual Meeting, June 10, 1997, Washington, DC. Info: JCottSLU@aol.com.
- ◆ RESNA 97, June 20-25, 1997, Pittsburgh, PA. Contact: RESNA, Suite 1540, 1700 North Moore St., Arlington, VA 22209-1903. Tel: 703-524-6686.
- ◆ World Congress on Medical Physics and Biomedical Engineering, September 14-19, 1997, Nice, France. Contact: NICE 97 SEE General Secretary, 48 rue de la Procession, F75724 Paris, CEDEX 15, France. Tel: 33-144-6060, fax: 33-144-4960, e-mail: nice97@univ-paris12.fr.
- ◆ American Society for Healthcare Engineering: 12th National Conference, Dec. 2-5, 1997, Chicago, IL. Contact: Patti Costello, One North Franklin, Chicago, IL 60606. Tel: 312-422-3807, fax: 312-422-4571.

## SPREAD THE NEWS !

1. COPY THIS NEWSLETTER
2. GIVE IT TO A CLINICAL ENGINEER
3. TALK ABOUT ACCE
4. HAND OUT MEMBERSHIP APPLICATION
5. INCREASE % MEMBERSHIP

## ACCE Membership Campaign

Robert Morris

The following membership information and application form is being provided for your convenience. It is hoped that you will discuss membership in ACCE with your colleagues and will copy and distribute the ACCE Membership Application form.

### Definition of Clinical Engineer

*A clinical engineer is a professional who supports and advances patient care by applying engineering and managerial skills to healthcare technology.*

### Membership

The three categories of ACCE membership are Individual, Fellow, and Candidate.

#### Individual

A person demonstrating evidence of professional practice of engineering in a clinical environment for at least three years and

meeting one or more of the following three conditions:

1. Possession of a baccalaureate degree in an engineering discipline or engineering technology from an accredited college or university; or
2. Certification as a clinical engineer (CCE), by the International Certification Commission; or
3. By recommendation of the Membership Committee in recognition of exceptional contributions, consistent with criteria established by the Board, to the profession of clinical engineering.

#### 2. Fellow

An individual member may be advanced to Fellow status in recognition of distinguished service to the profession or achievement in the field of clinical engineering.

#### Candidate

An individual interested in the purpose of the College and meeting one of the following two conditions:

1. Currently enrolled at least half-time in an accredited baccalaureate or graduate program in engineering, engineering technology, or related course of study; or
2. In the process of completing the three year clinical experience requirement for individual membership after having received a baccalaureate or graduate engineering degree.

### Membership Benefits

The ACCE is building a strong profession, a credible profession, a dynamic and a flexible profession. ACCE membership gives you advantages that will enhance your career now in this rapidly changing healthcare environment and for many years to come in the following ways:

- ◆ Access to a network of clinical engineering experts and peers
- ◆ Representation of your interests to legislators, regulatory agencies, and health care professionals
- ◆ Instant access to critical information on the **ACCE web page**
- ◆ Up-to-date information in *ACCE News*, the **only** clinical engineering newsletter
- ◆ Special events and programs such as Advanced Clinical Engineering Workshops and audio-teleconference series
- ◆ Opportunities to share your expertise with other professionals
- ◆ Discounts on publications and meeting registrations

# ACCE ADVANCED CLINICAL ENGINEERING WORKSHOP

## ATTENTION:

HOSPITAL AND ISO-BASED CLINICAL ENGINEERS, CE MANAGERS,  
MEDICAL IMAGING SERVICE MANAGERS, TECHNOLOGY MANAGERS

- Sharpen Your Skills!
- Develop Competencies Required for the Changing Healthcare Market Place!
- Obtain the Professional Development "Toolkit" That You Need!
- Register for the 1997 ACCE Advanced Clinical Engineering Workshop!

2 1/2 Days -- Choice of Location

### WEST COAST

### EAST COAST

When	☞ Friday, May 9- Sunday, May 11 Begins at 1 PM on May 9	Friday, June 6 - Sunday, June 8 Begins at 1 PM on June 6
Where	☞ Westin Hotel San Diego, California Info/Registration: Call (401)434-1270	Pan American Health Organization Washington, DC Info/Registration: Call (610)825-6000 x168
Cost	☞ \$495 Workshop Registration Westin Hotel, \$119 Single/Double 10% off HealthTech '97 Registration	\$495 Workshop Registration GWU Dorm, \$45 Double/\$37 Single
Precedes	☞ HealthTech '97, May 11-14, 1997	AAMI Annual, June 7-11, 1997

### WORKSHOP CONTENT

- ⇒ *Assess, Acquire & Manage Technology*
- ⇒ *Understanding the New Healthcare Market*
- ⇒ *Hazard Reduction and Quality Improvement*
- ⇒ *Best Clinical Engineering Business Practices*
- ⇒ *Technology Trends: EMC, CGMP, Telemedicine*

Plus Lunch 'n Learn -- **ABCs of Communication** by *Journal of Clinical Engineering Leaders*  
-- **Medical Device Standards** by TBA

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