

ACCE News

Vol. 10, No. 6 – November 2000



Rymantas Batakys, Al Jakniunas & Jim Wear (l. to r.)

11th ACEW: Baltics 2000 in Vilnius, p.6

Medical Error Committee

An Ad Hoc Committee on Medical Errors has been established, p. 12.

ACCE News Goes Electronic

This issue is being sent electronically to members, p. 3.

ACCE Committee Policy

The ACCE Board issues a Policy and Guide on Committees, p.12.

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ACCE News

21 Bob's Lane

Setauket, NY 11733

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 Web Page
Accenet.org

Editor's e-mail address:
Dyro@alum.mit.edu

President's Message

Jennifer C. Ott, MSBME, jennifer.ott@tenetstl.com

The weather outside is frightful and my day has gone from bad to worse. Sometimes I am amazed that I can accomplish anything at all during the course of a workday. The good thing is that there is always a light at the end of the tunnel. Today that light came in the form of Antonio Hernandez who sent a wonderful letter I would like to reproduce here.

Dear Mrs. Ott:

On behalf of PAHO, I wish to thank the Board of the American College of Clinical Engineering and ACCE members for the continuing cooperation and support in presenting Advanced Clinical Engineering Workshops.

The most recent workshop held in Panama City, Panama from 13-17 November 2000 was a major success. There will be significant long-term impact on Clinical and Hospital Engineering policies and programs in Panama as a result of the workshop. The ACCE members who volunteered their time as faculty are to be commended for the quality of the presentations.

Future workshops to be sponsored by PAHO and, with the cooperation of ACCE are planned for other Latin American countries during the next few years. I appreciate the efforts of the ACCE in cooperating to spread knowledge of technology management and clinical engineering to other parts of the hemisphere.

Sincerely yours,
Antonio Hernandez, Regional Advisor
Health Services Engineering and Maintenance

Essential Drugs and Technology Program
Pan American Health Organization

I know there are those members who may disagree with the efforts ACCE spends on international events but with sincere appreciation like this and the necessity that exists throughout the world it is certainly not energy wasted or misdirected. My hat goes off to those ACCE members who participated as the Panama ACEW faculty. And a big thank-you to Antonio who has always been such a great supporter of ACCE in all its activities. He is truly a joy to work with. Remember to try to keep the light at the end of the tunnel in view especially during this season of hustle and bustle. Happy holidays and talk with you next year!



Jennifer Ott

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ACCE News

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Editor

Joseph F. Dyro, Ph.D., CCE
21 Bob's Lane, Setauket, NY 11733
dyro@alum.mit.edu ; (631) 751-7244; -7802 Fax

Assistant Editor

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

Circulation

Kathy Zaveron, kzaverton@umcaz.edu

Photography

Sam Miller, samiller@localnet.com

Advertising

Jay Hall, jaywhall@aol.com , (Rates & Deadlines)

Address corrections:

Caroline Campbell
Washington Hospital Center, Room 5A90
110 Irving St., NW
Washington, DC 20010
cac1@mhg.edu ; (202) 877-7151

ACCE
5200 Butler Pike
Plymouth Meeting, PA 19462-1298
(610) 825-6067

Editor Responds

I thank all who have responded with constructive criticism and all who have applauded the efforts of the *e-ACCE News* team.

Yes, Harry, electronic distribution will save a bundle in mailing costs, savings that will be redirected to member services. All previous issues of the *News* will eventually be posted on the ACCE web site. Our Webmaster is working on it.

Craig, as soon as an issue of the *News* is on the Web, all members with e-mail will be notified of the appropriate link. Several members without e-mail and members with e-mail but who would like the hard copy as well will receive a copy by way of U.S. Postal Service as in the past.

Shehzad, you have the ACCE Board and the *ACCE News* team to thank for the brilliant idea. It's just another improvement in member service. Thanks for the feedback.

Yadin, I couldn't agree with you more. Those are lovely pictures of the Dyro family. I also agree with your suggestion to relocate the *e-News*. Future issues will be posted on the ACCE web site.

The Editor encourages readers to express their views by way of letters that might be printed here for the benefit of the readership. He also likes to get mail.

If you are reading this from a hard copy and would rather have the electronic version, please send your e-mail address to Kathy Zaveron at kzaverton@umcaz.edu You will be notified by e-mail when the next issue of the *e-News* is available on the Web. If you want hard copy as well, apprise Kathy of this.

Letters

ACCE News, 21 Bob's Lane, Setauket, NY 11733
631-751-7802 fax; dyro@alum.mit.edu

Electronic ACCE News Saves Trees

Editor -- I prefer the electronic version to the one we get mailed. It should save quite a bit in mailing costs. I would also like to know if all the previous issues were going to be scanned in so that we could have a complete electronic library of back issues. A text only version would also be nice.

EMAIL....DON'T COST NUTTIN'.....YET
Harry Zabinsky, hzcamel@camels.com

Editor -- Just keep sending us an e-mail every time a new newsletter is available (with the link to it)! Thanks for doing this!
Craig Bakuzonis, BAKUZ@shands.ufl.edu

Editor -- It's a brilliant idea! Regards,
Shehzad Leghari, shehzad@leghari.com

Editor -- I enjoyed receiving the *e-ACCE News* very much. As usual it is very informative and done well. I do, however, find it sub-optimal to have this professional society newsletter part of an individual homepage (in spite of the lovely Dyro family pictures). I suggest relocating the site to a more appropriate location.

Yadin David, FACCE,
ybdavid@texaschildrenshospital.org

A Healthcare Technology Management System for Nepal

Shiv Jankhar Jha and Roger Schmitt, r.schmitt@gtz.org.np

Since 1998 the German Government has co-financed a project with His Majesty's Government, the Ministry of Health, Nepal to promote maintenance for the public health sector focusing mainly on equipment utilities and buildings. A major finding in 1997 was that non-functional equipment and facilities impede the adequate delivery of appropriate health services. The Physical Assets Management Project (PAMP) was developed with the GTZ (German Technical Co-operation) as the implementation agency. The project objective is to establish a sustainable maintenance management system within the national public health context over the next 10-12 years. The author, serving as Team Leader based at the Ministry of Health, coordinates the project.

The project focuses on establishing a sustainable system through –

- Capacity Building: development of human resources and maintenance systems including facilities and
- Ownership: development of a HCT Policy, its legal approval and implementation within Nepal's public health policy with the delegation of responsibilities accordingly.

Expected results have been identified and the key outcomes to be reached are the development of an HCT policy to include organizational aspects and the development of human resources with managerial, administrative and technical skills as well as functioning maintenance facilities.

Cape Town Meeting

In November 1999, ACCE together with the World Health Organization (WHO) and the Medical Research Council (MRC) presented an international workshop on "Advanced Healthcare Technology and its Management" in Cape Town, South Africa. The Workshop was attended by 35 experts from the African continent in addition to experts from the United States and Europe. The Workshop presented an opportunity to familiarize and sensitize the decider level at the Nepal Ministry of Health with technology management principles. Furthermore, the meeting presented a chance to exchange experiences with other developing country representatives and learn from the international expertise in the field. We were at a stage in the project where we were still struggling to convince deciders within the Ministry of Health of the importance of establishing a department division/section responsible for equipment and infrastructures. Moreover, the need to train qualified technical staff was also imperative in addition to the need to develop and implement a HCT Policy or strategy for the health system.

Fortunately, a delegation from the Ministry of Health was authorized to attend this important meeting in South Africa. The delegation was comprised of the Health Secretary, Mr. Shree Kant Regmi, the Chief of Planning and Monitoring Division, Dr. B.B. Kharki, and the Director of the Logistic Management Division in the Department of Health Services, Dr. Shiv Jankhar Jha. They

were joined by the PAMP Program officer, Mr. Satish Gurung and myself, the Project Team Leader. The selection of the delegates was quite encouraging as the highest level of deciders within the Ministry of Health was included.

Workshop Activities

The Nepali delegation enthusiastically attended all the sessions of the one-week workshop, which provided them with the opportunity to hear the experiences of other developing countries as well as gain knowledge and information from the international experts. Bob Morris's presentation on experiences in China and Mongolia was fascinating. Binseng Wang's talk on financial issues and the Brazilian experience was enriching. Peter Heimann made an outstanding contribution by presenting a future software package known as Essential Healthcare Technology (EHTP). Frank Painter, James Wear and Joe Dyro gave an overview of US aspects. Case studies by representatives from Cameroon, Senegal, Malawi and Mozambique (ACCE's Enrico Nunziata) completed the picture. A further highlight was Dr. Piet Human's presentation focusing on communication entitled *Do It by Learning*. According to Dr. Human, Europeans and western people, in general, have the communication problems not the Africans. This view is shared by the author based on personal experience in developing countries in Africa. Mladen Poluta's presentation on human resource development made quite an impact.

For the Nepali delegation Dr. B.B. Karki presented a comprehensive overview of the Nepal experience, the country and its current health systems. An important event during the week was the dinner organized by PAMP/GTZ, which provided a forum for Andrei Issakov of WHO to give a comprehensive explanation on Health Care Technology (HCT) policy issues and WHO's support in general. Peter Heimann, Yunkap Kwankam, and Bob Morris supported the discussions. A visit to Robbin s Island by the Nepali delegation completed the successful participation of the group prior to departing on the long journey home to Katmandu.

Outcome of the Nepal delegation's participation

Shortly after returning from Cape Town, the author had an intensive meeting with the Health Secretary during which three major directives were issued:

- 1) a HCT policy should be developed and a committee responsible for guiding this process should be established,
- 2) a special 2-year training course for technicians should be initiated, and
- 3) a division responsible for medical technology equipment should be established within the department of health services.

Developments to date

- At this stage, the HCT Policy has been drafted. Several meetings were organized with the assistance of WHO and a preliminary draft has now been approved for translation into the Nepali language prior to dissemination to all national stakeholders. The implementation phase is expected to start before June 2001.
- In February 2001 the first 2-year diploma course for technicians is planned in conjunction with the national technical school. The candidates will be selected from existing

staff within the public health sector, *e.g.* health workers and technical staff. It is agreed that a minimum of 15 students will be enrolled in the course. The selection criteria will be finalized in the forthcoming month.

- Furthermore, a proposal elaborated with the assistance of PAMP has been forwarded to the Ministry of General Administration to create a section for Equipment and Maintenance within the Department of Health Services. This procedure can be time consuming and we do not expect final approval prior to the end of 2001. However, as this document has been developed and forwarded by the Ministry of Health itself to the Ministry in charge, it would appear that the local authorities are serious in their approach, thus prompting the attainment of this important organizational change within a shortened time frame.
- Additionally, the selection of Bob Morris to perform a Health Care Technology Equipment survey in Nepal in January 2000 was approved. He was later joined by Dr. David Porter to

complete the technology assessment.

Conclusion

The decision to participate at the workshop with highest-level representatives of HMG/MoH proved to be a key success. Even one year after the visit, members of the delegation praise the "voyage" and refer often to what was discussed during that week. The Minister himself recently attended a meeting in which an action plan for the project was developed and presented. The suggestion of the author to organize and host a similar meeting in Nepal in 2001 was highly supported by the Minister. ACCE has given its support and James Wear, ACEW Nepal coordinator, has established a preliminary program. The ACEW in April 2001 will be the first meeting of this kind in the sub-region. WHO's endorsement of the Workshop further confirms its importance for Nepal and its neighboring countries.

Meetings

InfraTech

On October 12, 2000 F. Painter, A. Levenson, B. Wang, J. Wear, and T. Judd (Facilitator) met to discuss the status of InfraTech and to draft recommendations for use of InfraTech in 2001-2002. WHO will fund and PAHO will provide systems for another two years of operations. The following recommendations of Al Jakniunas were discussed: distance learning, bibliography database on subjects related to InfraTech, and electronic publishing of accomplishments in developing countries related to InfraTech subjects.

The Current Listserv has the following capabilities:

1. Stream of consciousness discussions on topics of interest. For example, trends in biomedical engineering has been an informative discussion for the last two months, recently leading to a call for an international Health Technology Management (HTM) website, where many could come for general information and articles. Government and public services personnel could come for more specialized data and information and private consulting companies could pay a minimum fee for services.
2. Calendar of worldwide HTM-related events
3. Listing of participants on Listserv (currently estimated 120)

A Resource Library was discussed. Such a library would consist of bibliography of files, with brief explanation of contents. Files would contain a wide variety of contents, from a wide variety of sources, such as ACCE information about Advanced CE or HTM Workshops, perhaps curriculum information from these workshops, or information provided from any InfraTech participant about any topic relevant to the wider participant base, *e.g.*, status of HTM development in a given developed or developing country. Also discussed was linking to other relevant HTM websites for distance learning, *e.g.*, Yadin David's Medical Technology Management distance-learning course www.tmc.edu/cth/mtm-01 or the University of Wisconsin distance-learning courses. These courses could be solicited from ACCE and InfraTech members.

The group, recognizing the decreasing use of the ACCE Message Board, recommended offering InfraTech to all ACCE members. Since there is Listserv email traffic at least once per week, those desiring to post an ACCE message could either add an ACCE message to an InfraTech email or refer ACCE members and others in an InfraTech email to the ACCE website to further review the issue.

WHO plans to use a subset of the InfraTech participants in a limited distribution InfraTech format to facilitate communications between developers and users of the Essential Health Technology Package (EHTP) to share common experiences and build common understanding.

ACEW Baltics 2000

Advanced Clinical Engineering Workshop Baltics 2000

Joseph F. Dyro, dyro@alum.mit.edu

The 11th Advanced Clinical Engineering Workshop (ACEW) was held in Vilnius, Lithuania on September 25-29, 2000. Some forty delegates from Lithuania, Estonia and Latvia attended the ACEW held at the Vilnius University Hospital.

Host of the event was the Hospital's Chief Biomedical Engineer, Rimantas Batakys. His organization and support during the ACEW was efficient and effective. Internet access was made available for the faculty. The modern conference facilities were comfortable and well-appointed. Ample, varied and tasty nourishment was obtained from the adjoining cafeteria and refreshments were had at the morning and afternoon breaks. Simultaneous translation was provided.

Pieter Heimann gave introductory remarks welcoming delegates and faculty on behalf of the World Health Organization and Andrei Issakov. Dr. Daiva Brogiene, Director of the Department of Health Care of the Ministry of Health, acquainted the participants and faculty with the status of Medical Technology Support in the Baltics. At this point a historic event occurred, the signing of the agreement to establish BaltMedTech, a cooperative effort to advance health care technology management in Lithuania, Estonia and Latvia. Signatories to the agreement were Dr. Narif Plavins representing Latvia, Rima Baisiere for Lithuania, and Siim Aid for Estonia.



Latvia, Lithuania and Estonia sign BaltMedTech Agreement

Dr. Antanas Vinkus, General Director of Santarisskiu Klinikos, *i.e.*, the University Hospital, was pleased to be able to host the ACEW. ACEW faculty lead by workshop coordinator Al Jakniunas was comprised of Tobey Clark, Yadin David, Joe Dyro, Bob Morris and Jim Wear. The faculty were joined by Lars Löefstedt of Uppsala University Hospital, Raymond Matulionis of the University of Wisconsin, and Erkki Vauramo of Helsinki University of Technology.

After the official welcome and signing of the BaltMedTech Project agreement, Al Jakniunas gave a condensed overview of the workshop topics. Yadin David followed with Health Care Technology and Health Care Technical Services and then Components of Technology Assessment and Strategic Planning. Pieter Heimann concluded the opening day with a discussion of National Healthcare Equipment Policy and the WHO Essential Healthcare Technology Package.

Day Two consisted of Planning, Selection and Procurement Strategies by Jakniunas, Technology Assessment in the Local Healthcare Facility by David, Ongoing Relationships with

Manufacturers by Clark, and Ambulatory Healthcare Demonstration Center by Matulionis.

Morris began the third day with a talk on Maintenance and Service Management, Löefstedt followed this with a presentation on Quality Assessment of a Clinical Engineering Department, and Clark



(shown right) ended the day with Budgeting and Financial Reporting. The veterans on the ACEW faculty watched the rookie Clark, like a hawk and unanimously agreed that he did great on his first ACEW outing.

Wear addressed Human Resource Development on the morning of the fourth day and Dyro spent the afternoon on Safety and Risk Management, Accident/Incident Investigation, and Quality Improvement.



"I can drink the lot," Heimann boasts.

The last day saw Morris presenting Installation of Medical Equipment and the entire faculty joining in a panel discussion of Utility Systems. Jakniunas concluded with a Summary of Workshop Goals, Objectives, and Conclusions. Many delegates remained for a final presentation by Morris on Medical Equipment Troubleshooting.

Social functions included a reception following the first day co-hosted by BaltMedTech and ACEW. In the evening of the second day, the faculty and delegates dined at a traditional Lithuanian folk restaurant where entertainment included musicians and waiters and waitresses in native costume.



Dyro pours a libation

Comfortable accommodations were provided close to the Hospital for the faculty and delegates. As luck would have it these accommodations were next door to the home of Franek Dyro and family, cousins of ACEW faculty member Joe Dyro. Joe, who traveled to Lithuania with his mother, Mary Dyro, stayed with their Vilnius relatives.



Dyro cousins: Jolita, Vitalij, Joe, Mary, Franek & Vera

The faculty helped Dyro celebrate his birthday at a local wild game restaurant

where elk, moose, bear and wild boar were served up in traditional Lithuanian style accompanied by delicious wild mushrooms and hearty beet soup. Bob Morris challenged the well-recognized excellent Lithuania vodka when he proffered a bottle of Mongolian vodka. Bob had acquired the bottle while in Mongolia just before the Workshop. It proved to be as delicious as it was ephemeral.

General Alfred Thanks the Troops

Al Jakniunas, AJakniunas@huhosp.org

I thank the entire faculty for the great job done in Vilnius. I have received many good comments from Lithuanians, Latvians and Estonians as to the valuable material presented at the workshop. If I could summarize all in one sentence it would be *"So much great stuff in such a short time..."*

Or *"..this will help us realize what we have to do next..."*.



A special thanks to Joe Dyro for the wonderful

songs we had all the evenings, to Jim Wear for last-minute agenda changes two or three times a day with a smile, to Yadin David for providing the image of the clinical engineer with an unlimited budget, to Tobey Clark for taking the first cold shower so that I could have a hot shower, to Peter Heimann for accomplishing the impossible feat of getting the three Baltic countries to agree on a single goal, and to Bob Morris for staying clean and not ending up in the Vilnius airport jail. Last but not least, thanks go to the man from WHO, ACCE member Andrei Issakov, without whom this event would not have occurred.

David Reflects on the Baltics

Yadin David,

ybdavid@texaschildrenshospital.org

Now that I am back at the office I began to realize what a week in the Baltic it was. I, for one, am very happy for having this opportunity to meet such an intelligent group of people and be part of one of the best Advanced Clinical Engineering Workshops ever. I missed Andrei, but I'm sure we'll have another chance to raise a glass with him.



Mary Dyro gives Yadin, Bob & Jim some presentation tips

There is so much to do and so little resources to do it with. However, The great ACCE team under general Al's leadership and WHO private Andrei's support witnessed a somewhat historic event, the three Baltic countries signing an important agreement, the formation of BaltMedTech, a good omen for a new beginning. What a great feeling it was to share the expertise of ACCE with a progressive group that is so interested in improving the health conditions and clinical environment of their respective countries. I was proud to have been part of such a great team and of such an event.

On the Move and In the News

ACCE New Members

The ACCE Board recently approved the following new members:

- Mizhi Feng
- Daniel Dennis Weiser
- Ronal G. Cushman

Congratulations!

Dyro Finds His Roots

Immediately following the Baltic ACEW, Joe Dyro, his mother and cousin Franek drove into neighboring Belarus to the village of Spieglica where Joe's mom was born and lived before coming to America. There, Joe met many close relatives and stayed with first cousin Teresa Dyro. The two found a great deal in common including a love for music.



Jozef and Teresa

Hernández Receives PAHO Director's Award

In a first for The Pan American Health Organization/World Health Organization (PAHO/WHO), the PAHO Director's Award went to Antonio Hernández. Every year a Staff Awards Ceremony is held in

Washington, DC to honor Washington-based and country-based staff with awards recognizing 10, 15, 20, and 25 years of service. Awards are also given for Meritorious Contributions, Superior Performance, and Special Recognition. During the ceremony held on May 9, 2000, Dr. George A.O. Alleyne, Director of PAHO, presented the 1999 Director's Award to Antonio Hernández,



Antonio Hernández

The commendation accompanying the award recognized the following:

"work has been consistently of high caliber but over the past year his cooperation with regard to the sensitization and preparation to avoid Y2K problems has been outstanding. This work has been recognized as such within and without the Organization".

This marks the first time at PAHO that an engineer in the health services area received this award.

Congratulations, Antonio!

Patail to Patient Safety Post

Bryanne Patail is moving into a newly created position at Beaumont Hospital, Royal Oak, Michigan. He will be Director of Medical Engineering and Process

Improvement. Bryanne will be working closely with Beaumont's Medical Director for Quality Improvement and its Nursing Director of Clinical Management and Quality. This outstanding clinical engineer will be a member of a multi-disciplinary team to conduct sentinel event meetings and implement process improvement ideas. He will utilize the clinical engineering systems approach in all phases of medicine.



Bryanne Patail

This is a landmark event. It recognizes the essential role clinical engineering will play in the future in health care process improvement. The move is a logical consequence of Beaumont's focus on the patient. Beaumont therefore is in the lead in following recommendations of the Institute of Medicine in its recent report, *To Err Is Human: Building a Safer Health System*. It realizes that one of the most effective ways by

which patient safety can be improved is to establish a director-level position for a clinical engineer to use his expertise in the building process.

Bronzino Honored

Students, graduates, colleagues and friends gathered at Trinity College, Hartford, Connecticut on October 20, 2000 to honor Dr. Joseph Bronzino. Bronzino recently retired from his position as Director of the Greater Hartford Clinical Engineering Internship Program. A reception was held in the Faculty Club followed by dinner in Hamlin Hall.

Bronzino was hailed as an individual whose dedication and drive made the Clinical Engineering Internship Program such a tremendous success for a quarter century.

Dyro Progresses on Handbook of Clinical Engineering

Dr. Joseph F. Dyro, Editor-in-Chief of the *Handbook of Clinical Engineering* to be published by Academic Press, reports that most chapter authors have received their assignments and are busily preparing their

drafts.

The *Handbook* is one in a series of handbooks beginning with Bronzino's *Handbook of Biomedical Engineering*. The *Handbook of Clinical Engineering* will cover all facets of clinical engineering and will serve as an indispensable reference for the student, educator and practitioner. For more information on the Handbook including the complete Table of Contents, please go to www.dyro.org.

THE VIEW FROM THE PENALTY BOX *David Harrington, davesbt@kersur.net*

At the close of this century it is a good time to look back over what we have accomplished as clinical engineers and to spend some time planning for the new century and its challenges.

Some of our chronologically challenged members started in our profession when funding was not a problem for technology. Others came into the profession as funding started to tighten and others joined when funds were difficult to come by. Each group has made significant contributions to our chosen field.

When some of us entered the field tubes were widely used and if the circuit was solid state that meant individual transistors. We could troubleshoot to the component level, rewind transformers and modify circuits as we went along. Then, 24 years ago the original Safe Medical Device act prevented us from doing many of the "tricks" that we used to keep devices going. The field started to move from engineering to record keeping and CYA. Lawyers started to look over our shoulders and we had to change our styles.

In the 80's with DRGs in place not only was the CYA more common but also funding was slowing down. In the 60's equipment changed every 4 to 5 years, in the 70's the change increased to 5 to 7 years, in the 80's most equipment was in place for 7 to 9 years and now it is unusual to replace equipment less than 11 years old.

With more equipment, older equipment, and less funds we in clinical engineering got very creative in our asset management. Equipment got moved from the ICU, to the recovery room, to the step down units, to the day surgery and pre-op areas. We moved equipment three and four times in its life as we added to the top and stopped getting rid of the older equipment until parts were no longer available.

In the 90's our workloads increased but staffing didn't. Paperwork increased and did little to enhance either patient care or fiscal well being of hospitals and capital budgets for equipment plunged to new lows. Capital budgets for new lobbies and offices soared as hospitals competed with hotels for best lobby designs. Many

of our members became discouraged and left our profession for other industries.

As we enter the new century we, as clinical engineers, have to become more aggressive in being patient advocates. We need to prepare and PUBLISH true cost of ownership of the equipment for which we are responsible. We need to prepare and PUBLISH better ways of serving patients with the equipment for which we are responsible. We need to prepare and PUBLISH sound training programs for both the users and the people who work for us on the equipment for which we are responsible. We need to get involved with capital planning long before the equipment arrives for incoming inspection. We need to take back from risk management incident review and reporting. We need to take back from the user departments the review of service contracts. We need to review all service contracts before they are signed, looking for true costs, not just price, and the benefit to the patient of that service contract. Lastly, we need to get involved with the political process to prevent any more "feel good" laws to benefit everyone but the patient.

We know what has to be done to get healthcare costs relating to technology under control and to improve access to healthcare for all that need it. It is time for our voices to be heard in the boardrooms, the insurance companies and the legislature. We cannot do it individually but collectively we can.



Workplace Profiles

Biomedical/Clinical Engineering Department at SUNY Downstate Medical Center - University Hospital of Brooklyn

Ira Soller, MSEE, PE

The State University of New York Downstate Medical Center, located in the heart of urban Brooklyn, New York, is a regional resource for patient care, education, research and community services for the nearly 3 million people living in Brooklyn and surrounding vicinity. In 1998 Downstate received worldwide recognition when Dr. Robert Furchgott, Distinguished Professor Emeritus, received the Nobel Prize in Medicine

The Biomedical/Clinical Engineering Department at SUNY Downstate is known as the Scientific & Medical Instrumentation Center (SMIC). Established under the leadership of Dr. Seymour Ben-Zvi in 1963, several years before Dr. Caceres coined the term "clinical engineering," it is one of the oldest clinical engineering programs in the nation. SMIC's current Director, Ira Soller, appointed in 1993, has been on staff since 1977, previously serving as Assistant, Associate, and Acting Director.



Ira Soller, SMIC Director

While SMIC is primarily a clinical engineering department that provides services to University Hospital of Brooklyn, the teaching hospital of Downstate and one of three hospitals within the State

University of New York (SUNY) system. SMIC also maintains a biomedical engineering component that provides technical support services to the academic and research community at Downstate, including grant and patent assistance. SMIC includes electronic and electro-mechanical laboratories and a machine shop. It has been involved in many unique activities.

On April 22, 1970, the W. K. Kellogg Foundation awarded SMIC a three-year grant of \$129,216, to develop and conduct a Preventive Maintenance Program pertaining to hospital equipment. By so doing the Foundation addressed the then pressing need to improve equipment maintenance throughout the industry. This Preventive Maintenance Program served as a prototype for other hospitals throughout the country. Interestingly, this award was made prior to Ralph Nader's article in the *Ladies Home Journal* (March 1971), which spurred the growth of the clinical engineering profession. Nader exposed the hazardous electrical conditions existing in hospitals and recommended that hospitals hire "biomedical engineers" to provide advice on electrical equipment and its installation and on electrical wiring.

SMIC folklore includes tales of how Dr. Damadian, a pioneer in the development of MRI, "scrounged" some parts from SMIC to assist in his development of an MRI machine at Downstate, which in 1977 produced the first human images using magnetic resonance imaging. SMIC recently assisted Dr. Randall Barbour to develop a prototype of an optical tomography, near infrared, clinical imaging system that has the potential of one-day becoming as important as MRI.

As UHB's full service clinical engineering department, SMIC is involved in all phases of medical instrumentation selection and usage. The department provides technical services covering the life cycle of the patient-care/patient-related medical instrumentation (excluding x-ray and ionizing radiation devices) used at the Hospital. These services start with the planning stages prior to equipment purchase and end with the formalities of retirement and disposal of older units from service after their functional or technological usefulness is over.

SMIC services include pre-purchase and bid evaluation, acceptance testing, defect resolution, equipment repair, maintenance, and contract review. SMIC is continuously on the lookout for failure trends that might signal the need to intensify preventive maintenance procedures. Staff members interface with vendors/manufacturers for defect resolution, and to arrange for in-service education for clinical staff as required.

SMIC provides input to the Clinical Capital Equipment Acquisitions Committee about equipment requiring timely replacement, and is involved in technology management issues relating to proposed new acquisitions. For example, it has provided

ACCE News

the UHB Medical Director with reports dealing with the acquisition of an open-MRI device for the institution. SMIC's Administrator Marcia Wilkow developed and maintains a computerized Clinical Capital Equipment Tracking Spreadsheet Report of all clinical capital equipment purchases. SMIC works closely with Purchasing and Expenditures Processing to assure that medical instrumentation is not ordered unless the purchase requisition has been reviewed nor paid for until it has successfully passed SMIC acceptance testing.

SMIC's equipment involvement extends to technical issues relating to medical equipment planning for renovated and new areas within the Hospital and overseeing vendor/manufacturer equipment installation. Close monitoring of vendor compliance to contract, including timeliness of installation, for the replacement of hospital-wide physiological monitoring equipment, resulted in UHB receiving substantial goods and services at no additional cost.

Open interaction with the hospital community is paramount in a successful biomedical/clinical engineering program. SMIC is an active participant in numerous hospital committees and provides timely response to issues raised. Committees include Safety, Adult Critical Care, CPR, Neonatal, Special Care Units, and MIS Steering. In addition, SMIC generates technical reports for Hospital Administration and provides input to the Institutional Review Board (IRB). Such interfacing and report generation was crucial during the recent Y2K project as it helped raise the consciousness level of the organization to pertinent issues, thus assisting to ensure that sound business decisions were made, resulting in a successful outcome.

A core component of a clinical engineering department is the support it provides its institution in risk reduction. UHB's Quality Assurance and Risk Management look to SMIC for assistance with regulatory issues, agency surveys, patient/equipment incident investigations, and hazard and recall alerts. SMIC staff has also been called upon to give expert witness testimony.

SMIC maintains history records for the medical devices that fall within its province, and assists during regulatory agency inspections including JCAHO, FDA, DOH, AABB, and CAP. At present SMIC is responsible for almost 10,000 active medical devices. A centralized Instrumentation Technical Manuals Library and Equipment Evaluation Library are also maintained. Hence, SMIC is the first place one goes when questions arise regarding patient-care and/or patient-related equipment.

In-house maintenance and repair is provided for a full range of sophisticated, state-of-the-art medical equipment, such as anesthesia machines, ventilators, and dialysis units. Outside OEM vendor repair and service contracts are obtained for specialized equipment as required. SMIC provides emergency medical instrumentation engineering services during working hours to all patient care units, the operating rooms, and offsite facilities (3 family clinics, 1 dialysis center, 1 school based clinic) – one of the key benefits of having an in-house clinical engineering department. After-hours and weekend support is provided by an engineer on-call so that 24x7 coverage is provided.

A unique component of SMIC service is that of providing dedicated clinical engineering support to UHB's Open Heart Cardiothoracic Surgical Team. This engineer assists in equipment setup prior to the operation, equipment troubleshooting during the

surgical procedure, patient transport to an appropriate Intensive Care Unit, and related bedside physiological monitor hookup.

On a community level, SMIC has participated in the New York City SVA Training Program, NYANA's internship for newly arrived immigrants and SUNY Farmingdale's Biomedical Engineering Internship Program.

SMIC's senior technical staff keeps abreast of the latest trends, issues and regulatory requirements that could affect the hospital, such as the impact of the new FCC frequency allocation for wireless medical telemetry. John Czap, Associate Director, has participated in seminars for OSHA and FEMA and has been involved with the New York City Mayor's Office of Emergency Management. He is SMIC's lead person for patient incident investigations and response to environmental emergencies that could affect medical equipment. Leonard Klebanov, Associate Director, is routinely involved in major medical instrumentation technical issues including requisition review for new electronic equipment and systems, acceptance testing, and oversight of replacement of the hospital-wide physiological monitoring equipment. He also supervises SMIC's On call/Recall Team. Administrator, Marcia Wilkow's financial and administrative skills are vital to department functioning and her desk often serves as command center, especially during times of crisis. Lab Supervisors, Luis Cornejo and Sophia Zikherman, contribute important technical expertise. Mr. Cornejo is active in review of requisitions for electro-mechanical equipment and supervises acceptance testing, PM and repair. Ms. Zikherman supervises PM and repair services for electronic equipment. Other SMIC staff members likewise contribute unique talents to the department and Emma Johnson, SMIC's Secretary, keeps us all on track.

SMIC's Director plays an active role in the clinical engineering community. He has presented at AAMI Expositions on clinical engineering legal testimony, the impact of healthcare changes on clinical engineering, and clinical engineering department restructuring. He also contributed to the University Healthcare Consortium *Compendium of Cost Saving Projects*. As a member of the Greater New York Hospital Association Y2K Workgroup he was active in defining appropriate policy. He is Coordinator of the New York City Metropolitan Area Clinical Engineering Directors Group and a representative to AAMI's Biomedical Organizations Committee. He also serves on SUNY Farmingdale's Engineering Technology Curriculum Advisory Committee. In 1999, he received an American College of Clinical Engineering Advocacy Award for his article on Clinical Engineering that was published in the 27-volume *Wiley Encyclopedia of Electrical and Electronics Engineering*. He is a recipient of the SUNY Chancellor's Award for Excellence in Professional Service.

For further information please contact:

Ira Soller, MSEE, PE, Director Biomedical Engineering, SUNY Downstate Medical Center, 450 Clarkson Ave., SMIC Box 26, Brooklyn, NY 11203. Phone 718-270-3192, Fax: 718-270-3194.

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ACCE Policy and Guidelines For Committees

1. As part of the organizational structure, ACCE will utilize both standing and ad hoc committees. Standing committees will be formed to address long-term issues such as education, advocacy, membership, and international. The Board of Directors may from time to time establish an ad hoc committee to address a particular issue. At the time of formation, the Board will appoint a chairperson and communicate the mission of the committee and its reporting structure to that chairperson.
2. Each committee will be comprised of at least 4 members including the chairperson. The chairperson will recommend committee membership to the governing Vice President for submission to and endorsement by the Board. Diversity in committee membership is encouraged.
3. Chairpersons and members of committees will serve for terms of 3 to 5 years with a staggered rotation of members, including the chairperson, to facilitate continuity. Ad hoc committee members and chairpersons may serve shorter terms. At the formation of an ad hoc committee, the chairperson will project timeframes for the committee to achieve its goal(s) and membership terms will be determined based on that timeframe.
4. The chairperson or his/her designee will be present at all Board meetings, typically scheduled on a bi-monthly basis, for presentation of a committee report describing the recent activities of the committee. While it is not necessary to participate in the entire Board meeting, it is required that the Chair or designee be present at the assigned discussion time. If a change in the assigned time is needed, this will be pre-arranged with the Secretary. A written version of this report for inclusion in the meeting minutes will be forwarded to the Secretary within 2 working days of the Board meeting.
5. A summary of committee activities, appropriate for publication in the newsletter, will be submitted to the newsletter editor by the chairperson or his/her designee for publication in each newsletter issue. When a committee is formed, or in July for existing committees, the newsletter editor will give each committee chair a schedule for the submission of articles related to the committee's activities, for publication in the newsletter. Committees will submit articles in accord with this schedule.
6. As part of any new chairperson's orientation, the governing Vice President will review the need to protect certain information as confidential. The chairperson will in turn review this need with new committee members. The chairperson and members will support this requirement as a term of committee membership.
7. As part of the new chairperson's orientation, the governing Vice President will review the need to seek the Board's approval to speak on behalf of ACCE or its Board. When discussing or writing about issues related to ACCE's actions, directions, or philosophy, the chairperson will be required to identify their views as being individual views that are not necessarily representative of ACCE or the Board unless approved in advance by the Board.
8. In June of each year, the Board will review the continued relevance of the committee to ACCE's mission. At its discretion, the Board may dissolve any committee that is no longer relevant to ACCE's mission or that has fulfilled its purpose and concluded its business. The Chairperson of each Committee will submit a listing of its membership roster to its governing Vice President annually in June. The Board will review the roster for endorsement annually in July.

Medical Error Ad Hoc Committee

Matt Baretich accepted the nomination of the Board to chair the recently formed Medical Errors Ad Hoc Committee. The Board also expressed its appreciation of his efforts in reviewing and editing the *ACCE White Paper on Medical Errors* and acting as a leader with other ACCE members in tracking this most important issue.

Baretich and his committee will keep the Board informed of the progress of the *White Paper*. The action plan elaborated in the *White Paper* will serve as a steering document for the Committee. Those interested in serving on this committee should contact Matt at baretich@webaccess.net.

ACCE International Committee

The International Committee met on September 20, 2000. This ACCE Standing Committee is comprised of Tom Judd (Chair), George Johnston, Alan Levenson, Sam Miller, Frank Painter, Al Jakniunas, and Bob Morris. The Committee thanked outgoing Chairman Sam Miller for an incredible job well done during his tenure. Al Levenson asked to invite Ismael Cordero of Orbis to join the Committee.

ACEWs – The Committee has oversight of Advanced Clinical Engineering or Health Technology Management Workshops (ACEW). It keeps both the Board and Education Committee

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informed of ACEW activities. Future ACEWs are as follows: Panama, November 2000 (Ira Tackel – Coordinator); Peru, 2001 (Frank Painter); Nepal, April 2001 (Jim Wear); Cuba, 2001 (tentative); India, pending (Dave Simmons); and various sites in Latin America (Antonio Hernandez). Three ACEW roles were identified and defined. *ACEW Faculty Manager*, currently, Bob Morris, ensures all ACEW faculty development and coordination. *ACEW Overall Coordinator*, now, Frank Painter, is ACEW overall coordinator. He maintains previous workshops database, sets the future calendar, assigns Coordinators, ensures Coordinators have ACEW Guidelines, and promotes ACCE membership sponsorship as appropriate. ACEW Coordinators provide participant and other information to build history. *ACEW Lead Educators*, at present, Drs. Jim Wear and Joe Dyro, edit and coordinate ACEW content. The Committee discussed support of ACEWs from the World Health Organization (WHO) and non-governmental organizations (NGOs) such as Orbis, which sponsored the 1995 ACEW in China. The necessity of ensuring accountability and timely payments were stressed.

InfraTech – The ACCE International Committee has oversight/sponsorship of InfraTech; it recommends to the Board and WHO/PAHO sponsorship and use. Al Jakniunas, InfraTech administrator, maintains 2 databases (Listservs) – Membership and Events Calendar. Sponsorship beyond January 2001 is pending. A meeting on October 12, 2000 will address the following issues: use of InfraTech for distance learning; development of bibliography of subjects related to InfraTech, and electronic publishing of accomplishments in emerging countries related to InfraTech subjects. Recent InfraTech discussions featured trends in clinical engineering and organizations that support health technology management issues in developing and developed countries. Through these discussions all learned of the HealthTech database of these organizations, see www.healthtechnet.com/associations.

Other – 20 ACCE memberships have been sponsored through August 2000. George Johnston will be in Belize 4 months beginning October 1. Ways to assist George and other ACCE members who go on extended assignments to do CE work in international settings were discussed. Jonathan Gaev of ECRI is assisting George as he does medical electronics and maintenance training as well as CE management training in Belize. Sam Miller will coordinate with the Webmaster the development of an International Page on the ACCE website. Bob Morris will go to Mongolia in 2001, Al Jakniunas, to Lithuania, and Tom Judd, to Kirgizstan.

Several ACCE members are being trained to be WHO Essential Health Technology Package (EHTP) trainers in developing countries. EHTP is a software package, which links diagnostic (ICD) codes to essential health care

technology resources needed including medical devices, drugs, human resources and facilities. This new tool will allow developing countries to match resources needed to disease prevalence and to identify gaps in those resources in such a way as to attract outside investment and assistance.

The next meeting will be November 15, 2000 at 12:30 pm.

ACCE Board Meeting Highlights

October 18, 2000

Present: Jennifer Ott, Elliot Sloane, Caroline Campbell, Henry Montenegro, Jim Wear, and Tom Judd

President's Report (Jennifer Ott)

A Secretariat Job Description is nearing completion. See Ad on back cover of this issue of *ACCE News*. The Board and members are encouraged to contact their U. S. Senators in support of the bill recently passed by the House of Representatives to create an NIH Institute of Bioimaging and Bioengineering. The AIMBE Council of Societies will form a Public Affairs Advisory Committee consisting of one member from each member society for the purpose of periodic review of public policy issues. The Executive Committee has approved a Policy and Guidelines for Committees. Joe McClain has drafted a Business/Strategic Plan to be reviewed by the Board at the next meeting. Members are encouraged to contact Senator Spector and their individual U.S. Senators to voice concerns over an FDA/CDRH 21CFR issue, *i.e.*, that all software, instructions, and test devices necessary for assembly, installation, adjustment, and testing for X-ray equipment and service instructions for lasers be made available at the cost of publication and distribution. See the September issue of *ACCE News*, p. 3, for details.

First Vice President's Report (Elliot Sloane)

There has been no further FDA action concerning the consensus recommendations on the proposed regulation of servicers and remanufacturers of medical equipment. Membership survey results are being analyzed. The Webmaster is creating an international page.

Second Vice President's Report (Raymond Zambuto)

An agreement with HealthTech to develop particular sessions is being implemented. A partnership agreement with AAMI is nearing completion. The ACCE Symposium at AAMI next June will feature HIPAA and will be co-chaired by Ray Zambuto and Steve Grimes.

Secretary's Report (Caroline Campbell) The membership directory for 2000 will be distributed electronically to those with e-mail. Hard copy will be sent to others.

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Treasurer's Report (Henry Montenegro)

The accounts show a healthy balance. A CPA is being chosen to review the books on a regular basis.

CCE Committee's Report (Frank Painter)

ACCE's certification proposal will be discussed at the next AAMI Board meeting.

Membership Committee's Report (Kelly Galanopoulos)

The Membership Committee recommends that the following memberships be recognized: Individual – Mizhi Feng and Associate – Daniel Dennis Webster and Ronald G. Cushman.


The Board approved the Committee's recommendations.

Education Committee's Report (Jim Wear)

Wear noted at an ASHE national meeting he attended discussion of increasing clinical engineering membership. ASHE and ACCE collaboration is recommended. Francine Reibman will conduct the December teleconference.

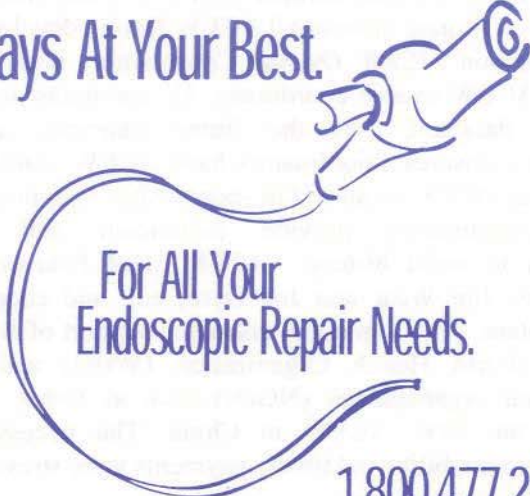
International Committee's Report (Tom Judd)

ACEWs have been a great success. See Committee Report in this issue of *ACCE News* on page 12.



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ACCE Annual Symposium

Healthcare Insurance Portability and Accountability Act (HIPAA)

HIPAA federal regulations require healthcare providers to protect the privacy and security of individually identifiable healthcare information. When the final rules are published, they will affect virtually all high technology in healthcare and impact many departments, including Clinical Engineering.

The Symposium will give an understanding of what HIPAA is, its impact, and how to formulate a plan to deal with it. The Symposium is presented by ACCE as a part of the AAMI 2001 Conference & Expo in Baltimore.

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State of Ohio Board of Proprietary Schools Registration 94-05-1398T

Calendar of Events

- IEEE EMBS Third International Conference on Information Technology Applications in Biomedicine – ITAB '00, Nov. 9-10, 2000, Washington, DC, Swamy Laxminarayan, 201-228-7068/7021, 201-363-8986 fax, s.n.laxminarayan@ieee.org.
- 10th International Conference on Biomedical Engineering, Dec. 6-9, 2000, Singapore. <http://www.nus.edu.sg/DB/icbme/>.
- International Conference on Biomedical Engineering (ICBME - 2001), January 24-26, 2001, Anna University, Chennai, India. Dr.G. Ravindran, 91 - 44 - 2351723 x-3169, raviguru@annauniv.edu, www.annauniv.edu/bme.
- AIMBE 10th Annual Event, Health Care in the New Millennium: Merging Biology, Information Technology and Engineering, March 1-3, 2001, Washington, DC. www.aimbe.org
- ACEW 2001, Lima Peru, March, 2001. Contact Frank Painter at frpainter@earthlink.net.
- W 2001, Katmandu, Nepal, April 9-13, 2001. Contact James Wear at wearjam@lrn.va.gov
- HealthTech 2001, April 22-25, 2001, Cleveland, Ohio, www.healthtechnect.com/HT2001/SPEAKAPP.html
- II Congreso Latinoamericano de Ingenieria Biomédica, Mayo 23-27, 2001, La Habana, Cuba, www.hab2001.sld.cu.
- 4th Annual ACCE Symposium, Healthcare Insurance Portability and Accountability Act (HIPAA), June 9, 2001, education@aami.org.
- AAMI Annual Conference, June 9-13, 2001, Baltimore, MD, education@aami.org.
- MEDICON 2001, June 12-15, 2001, Pula, Croatia, www.crombes.hr/MEDICON2001.
- Medical Physics, June 18, 2001, Moscow, Russia. www.medphys2001-msu.ru.
- 23rd Annual International Conf. of the IEEE Engineering in Medicine and Biology Society, Oct. 25-28, 2001. Istanbul, Turkey.

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How would you or someone you know like to earn a cool \$2700 per year plus expenses assisting the wonderful organization of ACCE with general secretariat duties?

If you are interested or would like more details please contact Jennifer C. Ott, ACCE President at (314) 577-8018 or via e-mail at Jennifer.ott@tenetstl.com