



2011 Award Winners . . .

Seven Honored for Contributions to Medical Technology

About 30 years ago, **Timothy Vanderveen**, PharmD, redirected his career when he left hospital work to go into industry, determined to make an impact on infusion pump safety.

“The opportunity to play a role in developing safer intravenous (IV) infusion systems was one that I could not pass up,” says Vanderveen. “More than 60% of the most serious and life-threatening potential adverse medication events occur with powerful, high-risk IV medications.”

For his accomplishments in leading innovations in IV infusion pump safety, Vanderveen has been awarded the **2011 AAMI Laufman-Greatbatch Prize**.

Vanderveen first became interested in infusion pumps and IV medication safety while at the Medical University of South Carolina (MUSC), where he was responsible for the parenteral nutrition service. Ray R. Maddox, PharmD, director of clinical pharmacy, research, and pulmonary medicine for St. Joseph’s Hospital in Savannah, GA, worked with Vanderveen at MUSC.

“While at MUSC, Tim made very intuitive observations about IV fluid flow in various systems and under various environmental conditions that I believe must have contributed to some of his career achievements,” Maddox says. “After leaving MUSC he went into a setting where there were resources to answer questions arising from his earlier observations. In answering these questions Tim and his colleagues have developed unique solutions to multiple clinical IV infusion-related problems.”

In 1983, Vanderveen left MUSC and joined the IMED Corp., which eventually became part of CareFusion, a global corporation serving the healthcare industry. He now serves as vice president of the San Diego, CA-based Center for Safety and Clinical Excellence, which was started by CareFusion to foster collaboration between industry and clinicians in identifying and promoting best practices in medical care and patient safety.

Vanderveen says he has no regrets about switching to industry and has embraced his partnerships with clinicians, engineers, and others to improve infusion pump technology.

“This prize recognizes the contributions made by so many of my clinical and industry colleagues as, collectively, we have made major improvements in patient safety related to the administration of IV infusion medications,” he says.

Frank Painter: Sharing Knowledge With New Generations

A clinical engineering veteran of more than 35 years, Frank Painter has never shied away from using his knowledge and experience to teach the next crop of biomedical and clinical engineers.



Timothy Vanderveen

Painter, the director of the Clinical Engineering Internship Program for the University of Connecticut, has not only helped clinical engineers in the United States, but also internationally, leading clinical engineering workshops in Brazil, Columbia, Peru, and Mexico.

“His quiet yet effective demeanor has ensured he is well liked by all within the community,” says Bridget Moorman, president of BMoorman Consulting LLC in Dade City, FL. “He has been behind the scenes for over 30 years ensuring the profession of clinical engineering is understood, stays relevant, and is passed down to the next generation.”

For his efforts to promote and teach the profession, Painter has been awarded AAMI’s **2011 Clinical/Biomedical Engineering Achievement Award**.



Frank Painter

Paul Kelley: Branching Out

Throughout his tenure as director of biomedical engineering and green initiative at Washington Hospital Healthcare System in Fremont, CA, Paul Kelley has branched out to other departments to solve problems.

Kelley has worked with his hospital’s Medical Information Services staff to tackle interconnectivity issues, and helped to identify clinical engineering’s role in addressing these problems.

“I believe that it is Paul’s management skills, his diplomacy, and his aggressiveness in attacking hospital problems through clinical engineering solutions that have made his department a model for other hospitals to study,” says patient safety expert Marvin Shepherd.

Kelley has also been a major contributor to the California Medical Instrumentation Association (CMIA), and successfully organized biomed training programs throughout the country.

Because of his commitment to the biomed profession, Kelley is the recipient of the **AAMI/GE BMET of the Year Award**.

“I have had several mentors that have all made a significant impact on my professional career,” says Kelley. “Receiving this award is a testament to their inspiration, knowledge, and generosity. I hope I can someday inspire and pass on what I have learned to the next generation.”



Paul Kelley

James Wear: Going the Distance, Literally

James Wear has a lot of stamps on his passport, what with teaching clinical engineering on every continent except Antarctica.

Wear, who worked for 40 years in the Department of Veterans

Affairs Medical System training for engineers and technicians, has an impressive list of achievements. He has authored more than 200 manuscripts and technical guides that have been used internationally by both engineers and technicians, established a certification program for engineers in Malaysia, and trained engineers from other countries at his program at the University of Arkansas.

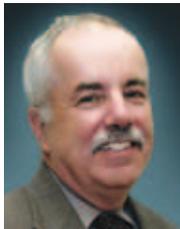
“He volunteered in North and South America, Eastern Europe, Africa, and Asia, for over 50 years,” says William A. Hyman, a professor of biomedical engineering at Texas A&M University in College Station, TX.

Wear was awarded the **AAMI Foundation/ACCE Robert L. Morris Humanitarian Award** for his efforts to spread clinical engineering to the entire world.

“I really appreciate this award especially since it was established to honor my dear friend Bob Morris,” he says. “I was fortunate enough to work with Bob on several projects and learned a lot from him.”

James P. Welch and George T. Bilke: Collaborating to Improve Technology

James Welch and George Bilke exemplify the term “effective collaboration,” with Welch being from industry and Bilke from biomedical engineering. Together, they have worked to develop new technology to improve patient monitoring.



James P. Welch



George T. Bilke

Welch, vice president of patient safety initiatives for Masimo Corp. in Irvine, CA, and Bilke, medical director of patient safety training for Dartmouth-Hitchcock Medical Center in Lebanon, NH, worked on physiological monitoring systems that improved the accuracy and capability of monitoring respiration in nonoperating room settings, such as general care floors and post-anesthesia care units.

Bilke and Welch also designed innovative pulse oximetry where “false alarms were reduced so that nuisance calls were minimized,” says Michael Ramsay, MD, chairman of the Department of Anesthesiology at Baylor University Medical Center in Dallas, TX. “The alarm signal was sent directly to the caregiver via a pager system directing them to go immediately to the patient’s room.”

Bilke and Welch received the **AAMI**

Foundation/Institute for Technology and Healthcare Clinical Application Award, which is given to an individual or group who has applied innovative clinical engineering practices or principles to solve patient care problems.

Bryce Rutter: Putting the Human In Human Factors

Bryce Rutter knows that human factors is an integral part of any device design and development. It is focusing on the human side of that design that sets him apart.



Bryce Rutter

“Bryce and his design team at Metaphase Design Group Inc. meticulously observe, test, study, and synthesize perceptions, behaviors, and emotions to develop holistic design solutions that work for the clinician, patient, and manufacturer,” says Sean Hagen, principal and director of research and synthesis of BlackHägen Design Inc. in Dunedin, FL.

At Metaphase, where Rutter serves as founder and chief executive officer (CEO) he helped develop a myriad of devices that deliver better healthcare while optimizing ergonomics. One of these was a new type of microdebrider, which is used by surgeons in ear, nose, and throat surgeries to shave tissue and bone.

“According to Bryce, if a medical product design fits the surgeon’s hand, mind, and body perfectly, then it minimizes potential use error and enhances the user’s surgical performance,” Hagen says.

For his contributions to new medical technology, Rutter is the recipient of the **AAMI/Becton & Dickinson (BD) Professional Achievement Award**. ■

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