

## Curriculum Vitae – Alan Lipschultz, PE, CCE, CSP, CPPS

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### **Licenses and Certification:**

[Professional Engineer](#) – State of Delaware, License # 7875

[Certified in Clinical Engineering](#) – Healthcare Technology Foundation, Certificate # 66

[Certified Safety Professional](#) – Board of Certified Safety Professionals, Certificate # 9174

[Certified Professional in Patient Safety](#) – Certification Board for Professionals in Patient Safety at the National Patient Safety Foundation

### **Educational Background:**

<b>M.S.</b> Electrical Engineering	Washington University St. Louis, MO	1973
<b>Certificate in Health Care Technology</b> Interdepartmental Graduate Program in Biomedical Engineering	Washington University St. Louis, MO	1973
<b>B.S.</b> Electrical Engineering	University of Maryland College Park, MD	1971

### **Professional Services:**

**2012-present:** [B. H. Barkalow & Associates, LLC](#), Newaygo, MI. **Clinical Engineering Expert Consultant** for hospitals, medical device companies, legal firms, and insurance carriers. Responsibilities consist of providing biomedical, clinical, and forensic engineering support to clients, that can include incident investigations, reports of findings, as well as expert witness testimony. Medical technology experience includes familiarity with the design, use and malfunctions associated with defibrillators, electrosurgical units (ESU), infusion pumps, patient monitors and many other medical devices found in hospitals. Experience includes: working familiarity with standards related to medical devices, overall healthcare technology and patient safety; providing hospital biomedical and clinical engineering program quality assurance services; establishing hospital-based biomedical departments; medical equipment selection; provision or establishment of computerized medical device control programs for preventive maintenance and maintenance; [The Joint Commission](#) (TJC) compliance reviews and pre-inspection surveys; medical technology-related quality assurance procedures; and assistance in hospital risk management as related to applied medical technology including sentinel event investigations.

**2011-present:** [HealthCare Technology Consulting, LLC](#), North Bethesda, MD. President. Same text as above for B. H. Barkalow & Associates, LLC.

**1989-2011:** [Christiana Care Health System](#), Newark, DE. Director of Clinical Engineering.

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Accomplishments included: development of the Clinical Engineering program; supervised a department that provided direct or monitored outside services to provide for preventive maintenance, calibration, repair and in-service education for all medical devices, to include dialysis equipment. Led projects for the hospital, such as: the selection and installation of a flexible monitoring system that encompassed major changes in clinical practice and provided tight interface with system-wide Information Services computer network; worked as the team leader to evaluate and implement a new Smart IV Pump technology; and served as a member of hospital committees, including Patient Safety Committee, Environment of Care Committee, and the Medical Products Implementation Committee.

**1973-1989:** [Waterbury Hospital](#), Waterbury, CT. Director of Clinical Engineering. Same responsibilities, similar experience and accomplishments as listed above for Christiana Care Health System.

### **Publications and Presentations:**

Computerized Maintenance Management Systems – Design Features for HTM *Biomedical Instrumentation & Technology*: [Sep/Oct 2014, Vol. 48, No.5](#), pp.384-388.

‘No Problem Found’ Service Calls – Keep Digging  
*Biomedical Instrumentation & Technology*: [Jul/Aug 2014, Vol. 48, No.4](#), pp.384-388.

The Complexity of Clinical Alarm Systems  
*Biomedical Instrumentation & Technology*: [May/Jun. 2014, Vol. 48, No. 3](#), pp. 204-210.

Why **You** Should Care about Batteries  
2014 AAMI Annual Meeting – Philadelphia PA.

*Making Sense of Revised CMS Medical Equipment Maintenance Requirements*  
*Biomedical Instrumentation & Technology*: [Mar/Apr. 2014, Vol. 48, No. 2](#), pp. 122-130.

*Healthcare Technology Is on the Move,*  
*Biomedical Instrumentation & Technology*: [Jan/Feb. 2014, Vol. 48, No. 1](#), pp. 50-53.

*Medical Device Batteries: Ubiquitous And Problematic,*  
*Biomedical Instrumentation & Technology*: [Nov/Dec. 2013, Vol. 47, No. 6](#), pp. 494-498.

*The Importance of Imaging Technology,*  
*Biomedical Instrumentation & Technology*: [Sep/Oct. 2013, Vol. 47, No. 5](#), pp. 420-424.

*Improving your Equipment Intake Process,* Angie Baltz and Alan Lipschultz,  
*Biomedical Instrumentation & Technology*: [May/Jun. 2013, Vol. 47, No. 4](#), pp. 328-332.

Medical Device Problem Reporting & Surveillance  
2013 AAMI Annual Meeting – Long Beach, CA.

*Controlling Repair Part Costs Through Supply Chain Management,* Dick Herrick and Alan Lipschultz,  
*Biomedical Instrumentation & Technology*, [May/Jun. 2013, Vol. 47, No. 3](#), pp. 244-247.

*Adverse Patient Events Involving Medical Devices,*  
*Biomedical Instrumentation & Technology*, [Mar./Apr. 2013, Vol. 47, No. 2](#), pp. 152-156.

*The Challenges of Patient-Supplied Medical Equipment,*

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Biomedical Instrumentation & Technology, [Jan./Feb. 2013, Vol. 47, No. 1](#) pp. 64-67.

*A Win on Many Fronts - The Case for Medical Equipment Inspectors*,  
Biomedical Instrumentation & Technology, [Nov./Dec. 2012, Vol. 46, No. 6](#), pp. 456-458.

*Modification and Customization of Medical Equipment*,  
Biomedical Instrumentation & Technology, [Sept./Oct. 2012, Vol. 46, No. 5](#), pp. 370-373.

Wireless Spectrum -- Strategic Plan to Avoid Conflicts @ Christiana Care –  
2012 AAMI Annual Meeting – Charlotte, NC.

Addressing Alarm Management Issues – Identifying the Challenge –  
2011 AAMI Annual Meeting – San Antonio, TX.

Isolated Power – Updates and a Discussion of Regulations –  
2009 AAMI Annual Meeting – Baltimore, MD.

NFPA 99: A Review of the Upcoming Revision – 2008 AAMI Annual Meeting – San Jose, CA.

Solutions to Patient-Supplied Medical Equipment – 2007 AAMI Annual Meeting – Boston, MA.

Physiologic Alarms: Techniques for Standardizing Alarms in Your Institution –  
2006 AAMI Annual Meeting – Washington, DC.

Telemetry Monitoring and Patient Safety – 2005 AAMI Annual Meeting – Tampa, FL.

Clinical Alarms Management: JCAHO Initiatives Update and Remote Alarms –  
2004 AAMI Annual Meeting – Boston, MA.

Telemetry: A Time of Rapid Transition – 2002 AAMI Annual Meeting – Minneapolis, MN.

Clinical Engineering and Information Technology: Collaborating for Success –  
2001 AAMI Annual Meeting – Baltimore, MD.

A Three Way Service Philosophy Match: In-house vs. ISO vs. OEM –  
2000 AAMI Annual Meeting – San Jose, CA.

Perspectives on Specifying and Purchasing an Image Guided System –  
1998 AAMI Annual Meeting – Philadelphia, PA.

Decision Process for Implementing a Maintenance Insurance Program –  
1997 AAMI Annual Meeting – Washington, DC.

*Perspectives on Electrical Equipment used Oxygen-enriched Atmospheres*,  
Medical Instrumentation, Jul./Aug. 1984, Vol. 18, pp. 239-244.

*Computerized Arrhythmia Systems: A Review*,  
Journal of Clinical Engineering, Jul./Sep. 1982, Vol. 7, pp. 229-234.

### **Professional Affiliations:**

Association for the Advancement of Medical Instrumentation ([AAMI](#)) (1973-present)

American College of Clinical Engineering ([ACCE](#)) (1990-present)

American Society of Professionals in Patient Safety ([ASPPS](#)) (2012-present)

National Fire Protection Association ([NFPA](#)) (2012-present)

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### **National Leadership and Recognition:**

- Recipient, [AAMI Clinical/Biomedical Engineering Achievement Award](#) (2006)
- Recipient, [ACCE/HTF Marv Shepherd Patient Safety Award](#) (2012)
- Co-Chair, [AAMI Standards Board](#) (1993-present)
- Editorial Board (AAMI) for [Biomedical Instrumentation and Technology](#) (1987-present)
- Member, [AAMI Technology Management Council](#) (2004-present)
- Chair, [NFPA 99 Technical Committee on Medical Equipment](#) (2007-present)
- Member at Large, [ACCE Board of Directors](#) (2012-present)
- Advisory Board ([ECRI Institute](#)) for [Health Devices](#) (2007-2011)
- Member, [AAMI Electrical Safety Committee](#) (1975-present)
- Member, [AAMI Infusion Device Committee](#) (2010-present)
- Member, [AAMI Medical Device Alarm Committee](#) (2011-present)
- Member, [Healthcare Technology Safety Institute – Clinical Alarms Steering Committee](#) (2012-present)
- Member, [Healthcare Technology Safety Institute – Infusion Devices Steering Committee](#) (2013-present)
- Member, [National Coalition for Alarm Management Safety](#) (2014-present)
- Member, [National Coalition for Infusion Therapy Safety](#) (2015-present)

### **Professional and Character References:**

- Gary W. Ferguson, Executive Vice President and Chief Operating Officer, Christiana Care Health System
- Mary Logan, President, AAMI
- Scott Skinner; System Director, Clinical Engineering; Norton Healthcare, Louisville KY
- Robert Stiefel, President, RHS Biomedical Engineering Consulting
- Carol Davis-Smith, VP for Clinical Technology, Kaiser Permanente