ERIC M. LIEDERMAN, MD, MPH, CPE, FHIMSS

5628 Guthrie Place, Davis, CA 95618
(530) 297-5468 (H) - (510) 368-4319 (M)
emljal@cs.com, linkedin.com/in/ericliederman

KAISER PERMANENTE

>200,000 staff, including >12,000 MDs serving 12M Kaiser members with $60B annual revenue

National Leader, Privacy, Security and IT Infrastructure, The Permanente Federation   **2017-present**
Director of Medical Informatics, Accountable Exec for Privacy & Security   **2005-present**
Report to TPMG Associate Executive Director and Permanente Federation SVP. Accomplishments:

- Lead Meaningful Use to success for 99.6% of physicians in Stage 1, >95% in Stage 2; & 100% of hospitals in both
- Oversaw successful $5b program to improve network, install VOIP, and implement disaster recovery
- Govern >$800M annual national and regional IT investment budget
- Oversaw successful implementation of new claims system integrated with EHR
- Completed ICD-10 transition to successfully meet 2015 federal deadline with no significant issues
- Protecting privacy without harming patients with forensic audit monitoring to reduce violations >98%
- Supervise imaging informatics and biomedical device integration programs
- Oversee national health plan claims system implementation
- Developed and implemented duplicate EHR infrastructure at a 2nd data center, reducing outage time 84%
- Increased EHR availability to 99.99% through process improvement & elimination of single points of failure
- Enhanced wireless mobile computing reliability by 400%, to support bedside paperless care 24/7
- Oversaw successful implementation of a new laboratory information system
- Cut $250 million from successful multi-year EHR deployment, with resulting HIMSS Analytics Level 7 designation

UNIVERSITY OF CALIFORNIA DAVIS HEALTH SYSTEM

500-bed academic medical center & Level 1 Trauma Center with an $800 million annual operating budget.

Medical Director, Clinical Information Systems   **2000-2005**
Reported to Executive Director of Clinical Information Systems. Accomplishments:

- Led 100% of community MDs to use ambulatory CPOE and clinical documentation
- Reduced paper generation by 95% in community clinics
- Led the development of standard, evidence-based order sets & decision support
- Innovated an accountability-based privacy protection process which protected information without impairing care
- Implemented a web-distributed PACS system, saving $2.1 million & 22 physician-years annually
- Instituted patient e-messaging, creating new revenue, raising MD productivity 11% & lowering phone calls 18%
- Installed hospital WiFi and wireless mobile workstations, VOIP & patient web access
- Selected and implemented an Electronic Medical Record in all venues of care
- Designed and built a clinician results portal to improve clinical decision-making and security
- Deployed a digital dictation-transcription and e-signature system, for use by all clinicians
- Raised rate of signing of verbal order within 48 hours from 8% to 95% with e-signature, policy & process change

CATHOLIC HEALTHCARE WEST N. CALIFORNIA & MEDCLINIC MEDICAL GROUP

5 of the 41 CHW hospitals plus MedClinic, a 130-physician multi-specialty medical group.

Medical Director, Clinical Information Systems, **CHW Northern CA**   **1997-2000**
Medical Director, Information Systems, MedClinic Medical Group
Reported to CHW CIO and to the MedClinic Medical Director and Board of Directors. Accomplishments:

- Contributed to financial turnaround (from a $1.1M monthly loss to near-profitability) by:
  - Analyzing clinical and administrative data mining to improve provider utilization and quality
  - Developing disease management programs for diabetes, asthma, anticoagulation, CHF & CAD
- Implemented vendor ambulatory clinical data repository and clinical messaging systems
- Built a data warehouse & disease management programs for diabetes, asthma, anticoagulation, CHF & CAD

Lead Physician Advisor, Utilization Management, **CHW Northern CA**   **1998-2000**
Reported to CHW CMO. Accomplishments:

- Decreased bed days per 1000 by 18%, and average LOS by 21%
- Reduced CHF & Coumadin hospitalizations by 60-80% with disease management programs
- Lowered cardiac LOS through reorganization of catheterization lab staffing and hours
- Streamlined ER patient flow and reduced "social" admissions through resident ER case managers

Chief, Internal Medicine Department, **MedClinic Medical Group**   **1998-1999**
Reported to MedClinic Medical Director. Accomplishments:

- Recruited internists and mid-level providers to expand department by 50% in six months
- Reduced staff FTEs 18% through cross training and job-sharing without productivity loss

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CLINICAL & ACADEMIC POSITIONS
General Internist, The Permanente Medical Group, Sacramento, CA   **2005-present**
Assoc. Clinical Professor of Internal Medicine, UC Davis Health System, Sacramento, CA   **1998-2005**
Instructor, UC Davis Medical Informatics Masters Program, Sacramento, CA   **2000-2004**
General Internist, MedClinic (now Mercy) Medical Group, Sacramento, CA   **1996-2000**
US Navy Flight Surgeon, Marine Corps Air Station New River, Jacksonville, NC   **1991-1993**

EDUCATION & TRAINING
Advanced Training Program, Intermountain Healthcare, Salt Lake City, UT   **2005**
M.P.H. in Health Policy and Management, University of Massachusetts, Amherst, MA   **1994-1996**
Internal Medicine Resident, Baystate Medical Center, Springfield, MA   **1994-1996**
Otolaryngology Resident, Eye and Ear Institute, University of Pittsburgh, PA   **1993-1994**
US Navy Flight Surgeon Training, Naval Aerospace Medical Institute, Pensacola, FL   **1990-1991**
General Surgery Intern, Naval Regional Medical Center, Oakland, CA   **1989-1990**
M.D., Tufts University School of Medicine, Boston, MA   **1985-1989**
B.A. Classical Archaeology, Dartmouth College, Hanover, NH (Magna Cum Laude)   **1980-1984**

CERTIFICATIONS, FELLOWSHIPS & MEMBERSHIPS
Diplomate, American Board of Internal Medicine (ABIM)   **1997** (**Cert to 2027**)
Diplomate in Clinical Informatics, American Board of Preventive Medicine (ABPM)   **2015 (Cert to 2025)**
Diplomate/Certified Physician Executive, American Assoc. for Physician Leadership (AAPL)   **1998 (Lifetime)**
Fellow, Health Information and Management Systems Society (HIMSS)   **2014 (Lifetime)**
Member, Association of Medical Directors of Information Systems (AMDIS)   **2001-present**
Member College of Healthcare Information Management Executives (CHIME)   **2015-present**
Member, American Medical Informatics Association (AMIA)   **1998-present**
Member American College of Physicians   **1998-present**
Member, California Medical Association   **1997-present**

MEDICAL LICENSURE
California – active (G70728)   **1996-present**

PUBLICATIONS
Liederman EM. T*he CMIO and Privacy and Security*. Chapter in: Rydell RL and Landa HM, editors. The CMIO Survival Guide, Boca Raton: CRC Press; 2018. p. 123-130

Liederman, EM. *Capitation and Cognitive Dissonance: The Economics of Models of Care*. Clinical Informatics News. http://www.clinicalinformaticsnews.com/cln/2015/3/20/capitation-cognititve-dissonance-economics-models-of-care.html. March 20, 2015.

Liederman EM. *Protecting Privacy Without Harming Patients*. Clinical Innovation+Technology. February 25, 2014

Liederman EM. *Organizational Readiness for the CMIO*. Chapter in: Bria WF, Rydell RL, editors. The CMIO Survival Guide, Chicago: HIMSS; 2011. p. 27-33

Bold RJ and Liederman EM. *Web Relationships Between Physicians and Individuals Seeking Information on Hepatopancreatobiliary Diseases – Invited Critique*. Arch Surg; 141(12):1182. Dec 1, 2006

Liederman EM. *Protecting Privacy Without Harming Patients*. Most Wired Online. June 6, 2006

Srinivasan M, Liederman EM, Baluyot N & Jacoby R. *Saving time, improving satisfaction: the impact of a digital radiology system on physician workflow and system efficiency*. J Healthcare Info Mgmt 2006; 20(2):123-131

Kimmel Z, Greenes R & Liederman EM. *Personal health records*. J Med Prac Mgmt. 2005;Nov/Dec:147-152

Liederman EM, Sands DZ & Handley M. *Patient portals*. Chapter in: Miller J, editor. Implementing the Electronic Health Record: Case Studies and Strategies for Success. Chicago: HIMSS; 2005. p.85-94

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Liederman EM, Lee JC, Baquero VH & Seites PG. *The impact of patient-physician web messaging on provider productivity*. J Healthcare Info Mgmt 2005;19(2):81-86

Liederman EM, Lee JC, Baquero VH & Seites PG. *Secure web messaging: the impact on providers & patients*. J Gen Intern Med 2005;20(1):52-57

Liederman EM, Zimmerman EM, Athanasoulis MA, Young MAC. *System-wide rollout of doctor-patient secure web messaging: the UC Davis "virtual care" experience*. Chapter in: Whitten P, Cook D, editors. Understanding Health Communication Technologies. San Francisco: Jossey-Bass; 2004. p.244-250

Curry MP, Trask L, Liederman EM, Zeboski A & Hutchinson D. *Verbal order compliance – how we achieved it*. J AHIMA 2004;75(7):38-41

Liederman EM, Zimmerman E. *Secure web messaging: independent study shows it's a win for physicians, patients and payers*. In: Proceedings of AHIMA National Convention; 2003 Oct 18-23; Minneapolis, MN

Liederman EM and Morefield CS. *Web messaging: a new tool for patient-physician communication*. J Am Med Inform Assoc 2003;10:263-274

Liederman EM. *Clinical practice guidelines face legal tests*. Click Medical Management Journal, July 2000.

Liederman EM. *Reflections on the role of pharmaceutical companies' disease management programs.* Disease Management 1(3):163-170, May 1998

Liederman EM, Post JC, Aul JJ et al. *Analysis of adult otitis media: PCR vs culture of bacteria, viruses and HIV.* Annals of Otology, Rhinology & Laryngology 107(1):10-16, January 1998

Buchman, C, Liederman E, Aul J, Post JC, Ehrlich GD: *Molecular microbiologic analysis of otitis media in adults*. Sixth International Symposium on Recent Advances in Otitis Media, Fort Lauderdale, Florida, June 4-8, 1995

SPEAKING ENGAGEMENTS

Collaborating on Cybersecurity (Panel Moderator). AMDIS annual conference, Ojai, CA June 2018

Collaborative cybersecurity protection. Epic Information Security Advisory Council. Verona, WI April 2018

Protecting our patients: What physicians need to know about cybersecurity. AMA meeting, Honolulu November 2017

How to protect privacy without harming patients. Epic Users Group Meeting, Verona, WI September 2017

Preventing cybercrime without impairing care delivery. National Health ISAC, Orlando, FL May 2017

Preventing cybercrime without impairing care delivery. Epic Experts Group Meeting, Verona, WI April 2017

How to protect privacy without harming patients. Epic Users Group Meeting, Verona, WI September 2016

Moderator*: Cybersecurity Panel.* AMDIS annual conference, Ojai, CA June 2016

How to protect privacy without harming patients. Epic Users Group Meeting, Verona, WI August 2015

Protecting Privacy without Harming Patients AND *Panel on Authorized Sharing of PHI and Ensuring Privacy and Security*. Medical Informatics World Conference. Boston, MA April 2015

How to protect privacy without harming patients. Epic Users Group Meeting, Verona, WI September 2014

How to protect privacy without harming patients. Epic Users Group Meeting, Verona, WI September 2013

How to protect privacy without harming patients. Epic Users Group Meeting, Verona, WI September 2012

Who owns the data? Panel at the Northern California HIMSS Clinical Informatics Forum, San Francisco, CA. May 2012

Securing electronic personal health information (ePHI): From the data warehouse to the point of care. Panel at Institute for Health Technology Transformation Conference, San Francisco, CA. March 2012

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Protecting privacy without harming patients. HIMSS Annual Conference, Las Vegas, NV. February 2012

Balancing privacy protection with patient care. Keynote at Global E-Health Forum, Hamburg, Germany. October 2011

How to protect privacy without harming patients. Epic Users Group Meeting, Verona, WI September 2011

How to meaningfully protect privacy without harming patients. HIMSS Annual Conference, Orlando, FL. February 2011

Protecting privacy without harming patients. Epic Users Group Meeting, Verona, WI September 2010

Transactional patient portals - what, why and how | How to "meaningfully" protect privacy without harming patients. HIMSS Annual Conference, Atlanta, GA. March 2010

Protecting privacy without harming patients. Epic Users Group Meeting, Verona, WI September 2009

Trust … but monitor. Safeguarding patient privacy and system integrity. Epic Security Forum, Verona, WI April 2009

Balancing privacy protection with patient care | Business-IT Integration: Secret Sauce for Success | Security Governance for a Diverse Enterprise. Epic Users Group Meeting, Verona, WI September 2008

Freeing the data: data extraction challenges and opportunities to support complex clinical care goals. Epic Physician/Nurse/Pharmacist Advisory Council, Madison WI April 2008

Balancing privacy protection with patient care | Cutting the cord: going wireless at Kaiser hospitals. Epic Users Group Meeting, Verona, WI September 2007

Best of breed vs. single vendor | Structured documentation vs. free text. AMDIS Annual Conference, Ojai, CA July 2007

Managing clinical content across the enterprise. Epic "Venti" Large Customer Conference. St. Louis, MO May 2007

Balancing privacy protection with patient care. Epic Physician Advisory Council, Madison, WI March 2007

Clinical decision support roundtable. HIMSS Annual Conference, New Orleans, LA February 2007

Measuring effectiveness. Epic "Venti" Large Customer Conference, Napa, CA November 2006

Alert strategy, governance, oversight and management issues. KP HealthConnect Decision Support Summit, Emeryville, CA October 2006

Protecting privacy in RHIOs. CalRHIO Privacy Summit, San Francisco, CA October 2006

Safeguarding patient privacy without compromising care. HIMSS Webinar, October 2006

Safeguarding patient privacy without compromising care. Epic Users Group Meeting, Madison, WI September 2006

Developing a Content Management System | Designing Functionality for Clinic-Administered Medication. Epic Physician Advisory Council, Madison, WI March 2006

Protecting patient privacy with personal accountability | Doctor-patient e-messaging: vendor-provider collaboration. HIMSS Annual Conference, San Diego, CA February 2006

An innovative collaboration in online doctor-patient communication: lessons learned, results achieved and future directions. AMIA Annual Symposium, Washington, DC October 2005

The patient's role in the EHR evolution McKesson EHR Readiness Symposia, San Francisco, New York City & Chicago, October 2005.

Safeguarding patient privacy without compromising care | The case of the missing film: UC Davis goes digital Epic Users Group Meeting, Madison, WI September 2005

Protecting patient privacy with personal accountability. AMDIS Annual Conference, San Diego, CA July 2005

Protecting patient privacy with personal accountability | Connecting patients and providers electronically. TEPR Annual Conference, Salt Lake City, UT May 2005

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Physician-patient online communications. Healthcare Intelligence Network Web Conference April 2005

E-visits: data, disease and practice management. HIMSS Annual Conference, Dallas, TX February 2005

Online physician-patient communication. CMA Leadership Academy, La Quinta, CA November 2004

Creative ideas in managing privacy and security in the EMR. Epic Users Group Meeting, Madison, WI September 2004

Doctor-patient electronic communication in the U.S. & Europe. Intl Med Informatics Assoc, San Francisco, Sept 2004

Personal health records. AMDIS Annual Conference, San Diego, CA July 2004

Changing clinician workflow using digital imaging technology. TEPR Annual Meeting, Fort Lauderdale, FL May 2004

Electronic messaging. Blue Cross Blue Shield National Council of Physician Executives, Chicago, IL May 2004

Focus on patient safety. Epic Physician Advisory Council, Madison, WI April 2004

The personal health record. HIMSS Annual Conference, Orlando, FL February 2004

Doctor-patient electronic communication in the US and Europe. TEHRE Annual Meeting, London, UK December 2003

Doctor-patient webVisits: who pays…who wins? Consumer Directed Healthcare Conference, Nashville, TN Nov. 2003

What happens when doctors & patients communicate securely online? The UC Davis experience.
AHIMA National Convention, Minneapolis, MN October 2003

Protecting patient privacy | Patient web messaging. Epic Users Group Meeting, Madison, WI September 2003

Virtual care at UC Davis. AMDIS Annual Conference, San Diego, CA July 2003

What happens when patients communicate with doctors online? TEPR Annual Meeting, San Antonio, TX May 2003

Patient-provider electronic messaging: two health systems' experience.
HIMSS Annual Conference, San Diego, CA Feb 2003

Virtual care at UC Davis Health System. AMDIS Annual Conference, Ojai, CA July 2002

Analysis of adult otitis media: PCR vs. culture of bacteria, viruses and HIV.
Sixth International Symposium on Recent Advances in Otitis Media, Fort Lauderdale, FL September 1996