

# Linda Travis Macomber

## Academic Curriculum Vitae

**Present Title:** Program Director Master of Science in Health Informatics and Clinical Assistant Professor  
National University

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Linda Travis Macomber, RN BSN MBA, is a faculty member at National University based in La Jolla, CA. Professor Macomber founded and launched the MS Health Informatics program in 2010, and currently teaches/advises students in emerging health technology innovation and leadership practices, develops curriculum, and leads the Virtual Health Tech Discovery Lab. Over the past several decades, she led many pioneering, comprehensive, global, and highly impactful health care information systems initiatives working with hospitals, clinics, consulting firms, and developers.

While her life and career have since taken her to all 50 states and five continents, she began her career as a pediatric RN and ICU nurse at the Harvard Medical School-affiliated Boston Children's Hospital. Professor Macomber written and presented extensively on innovations in health care, digital health, and electronic health records (EHRs) in clinical practice. Some highlights included launching health tech in Boston hospitals and Composite Health Care System (CHCS) for the Department of Defense in the 1980s, leading a requirements team for the predecessor to Kaiser Permanente's HealthConnect System, and launching Healthcare Technology Consulting in the 1990s. She chaired the prestigious National HIMSS Davies Award and lead community clinic EHR initiatives in the 2000s, then creating systems and care streams used by the Executive Health Clinic at Bethesda that serves the President of the United States and many leaders. Clients have included IBM, SAIC (now Leidos), Healthlink, Genentech, Anvita Health, the University of California, Community Clinics, the National Cancer Institute (NCI) and multiple start-ups.

She earned her BSN from the University of Michigan in Ann Arbor and her MBA from Northeastern University. Professor Macomber has maintained her active RN license since first earned in 1980. She joined HIMSS in 1989 and ANIA in 1993, serving in many roles. Current scholarly interests include a Pathways Methodology for personal educational and career growth & professional development, personal health informatics, decision support, virtual care/telehealth, and the effective infusion of innovative technologies into practice. Professor Macomber lives in San Diego, enjoys travel, loves her family and faith, and is the proud mother of Heather Cassidy Macomber, a Ph.D. candidate and neuroscience researcher at the University of Chicago.

### Core Career and Consulting History at a Glance

- Healthcare Tech Consulting, Principal 1994 to present
- National University, Founding Academic Program Director and Clinical Assistant Professor, 2010 to present
- Certification Commission for Health Information Technology, 2009-2011
- Council of Community Clinics, EHR Project Manager 2006-2007
- Children's Hospital and Health Center, Clinical Informatics Analyst 1999-2003 and also worked part time at University of Phoenix, Faculty Member and Curriculum Developer 1998-2001
- University of California San Diego, Manager of Nursing Information Systems, 1990-1994
- SAIC Science Applications International Corporation/DiStar Medical Systems, Senior Analyst 1987-1990
- SDK Medical Systems (now Eclipsis) Applications Consultant 1984-1987
- Children's Hospital Boston, Ma. Pediatric Intensive Care Nurse, 1981-1984 and Children's Hospital of Michigan, as a Pediatric Medical/Surgical RN, 1980-1981
- Summer positions during college with University of Michigan Alumni Association, Primary Care - Camp Infirmary Director, summer 1980 and Home Care and Long-Term Care Nursing Summers 1977 and 1979

## Selected Honors and Awards

Selected Awards	Selected Honors
Dean's Excellence Award 2018	Developed technology workflows used in the Executive Health Clinic where the US President and other national leaders receive their healthcare 2006
Athena Pinnacle Award for Education Nomination 2017	Certification Commission for Health Information Technology to serve as a Juror to certify vendor EHR systems 2009
Presidential Scholar Award National University 2015, 2016	Invited to speak at Claremont Graduate University Symposium "Innovation at the Pacific Edge" on California Networks for EHR Adoption 2006
Service Recognition Award from university staff 2014	Medical User Software Exchange International Educational Exchange 1st place award/International Meditech Information Exchange South Africa 2001
New graduate program achieved accreditation approval 2012	HIMSS Senior Member 2000
Spirit of HIMSS" National Recognition Award HIMSS 2009	Named key personnel on core team awarded the billion-dollar Department of Defense Composite Health Care System (CHCS) contract award 1988 This led to the digitization of the military health system with the core integrated patient care system subsequently used for over 30 years across the globe.
Community Leader Award	Sigma Theta Tau Honor Society 1997
Pioneer in multi-billion dollar global initiative	The first nurse to join development/deployment team for CHCS electronic patient care/EHR system awarded over a billion-dollar award. (over 2.5 billion in today's dollars) Thousands would follow over multiple decades across the globe.

## Education

### Undergraduate Graduate and Professional

University of Michigan  
Ann Arbor, Michigan  
Bachelor of Science Nursing  
Class President May 1980

### Graduate and Professional

Northeastern University  
Boston, Massachusetts  
Master of Business Administration Sept 1984

Graduate International Economics Studies  
Bolzano, Italy/Austrian Alps Summer 1984

### Health technology vendor-based technical education summary includes:

Meditech system on screen building, report writing, Orders, Patient Care Inquiry and Nursing/Clinical Charting, Siemens (SMS) system training for Invision OAS screen development, Clinical Observation Results, and Nursing, Veterans Administration, and Dept. of Defense system trainings, NextGen courses, self-taught programming in Mumps/Filemanager. She has participated annually in multiple healthcare and information technology-related conferences and continuing education sessions every year over the past 35+ years, maintaining over formal required RN CEU's 30 units every two years. See the end of the document for the most recent conference participation and continuing education credits earned.

## **Postgraduate Training/Residency/Industry-based Equivalents:**

### **Clinical Nursing Internship and Residencies/New Grad Program/Initial Post-Graduate Employment**

Nurse residencies were not the norm in 1980. Yet, new graduate programs at major academic medical centers served this same purpose at the time of building a bridge from academia to practice.

<i>Location</i>	Boston Children's Hospital Main Campus Longwood Ave, Boston, MA Affiliated with Harvard Medical School and Dana Farber Cancer Institute, Boston Children's is home to the world's largest research enterprise based at a pediatric medical center
<i>Discipline</i>	Pediatric ICU Nursing - RN ICU Nursing Division 86 - Systematically assessed needs, set goals, implemented/evaluated care of critically ill children on a multidisciplinary pediatric intensive care unit. Assisted with launching bone marrow transplant program and transport team.
<i>Dates</i>	1981-1984
<i>Location</i>	Children's Hospital of Michigan DMC Main Campus, Detroit, MI
<i>Discipline</i>	RN Pediatric and Medical/Surgical Nursing - Introduced primary care nursing to an adolescent medical/surgical unit. Represented hospital as a delegate to the Association for the Care of Children's Health. Camp counselor for children with cancer.
<i>Dates</i>	1980-1981

### **Informatics Internships and Residencies/Industry-based Equivalents**

Formal informatics internships, residencies, and postdocs were not readily available in the 1980s. Today, these continue to be emerging in this discipline. The closest equivalent practice-based experience was obtained through working at leading academic medical centers and with leading emerging health tech companies. Boston was an early center of innovation during this time and place to learn tech innovations in healthcare

<i>Location</i>	SDK Healthcare Information Systems Boston, MA (Acquired by Eclipses and then Allscripts)
<i>Discipline</i>	Emerging Health Informatics (Completed rotations working on health tech projects in nursing, lab, pharmacy, radiology, finance, registration, workload management, hospital spreadsheets, cost accounting, and decision support systems. Programmed and configured systems in Mumps, sold, and launched new systems into practice in Boston area hospitals. Studied and developed/deployed systems with entrepreneurs who created hospital systems starting in the 1959.
<i>Dates</i>	1984-1987

### **Research Fellowships/Research Grants/Research Work**

*Contributed and lead portions of several NIH and community-funded research grants that evolved through the decades of the 1990s and 2000s in the emerging discipline of informatics.*

<i>Location</i>	University of California San Diego Cancer Center National Cancer Institute/National Institutes of Health/UCSD
<i>Discipline</i>	Consumer Health Informatics CancerNet – a predecessor to Cancer.gov clinical trials for the use of technology in clinical practice
<i>Dates</i>	1994-1996

- Evaluated and reported clinical trials clinical data for NCI/NIH project.
- Provided educational outreach for clinicians on Internet health-related resources.
- Developed requirements/strategy for Internet applications in patient/staff education.

- Completed human subject documentation and obtained IRB approvals.
- Developed/published Web page to encourage anticipation in clinical trials.
- Educated physicians, nurses, and health care executives on clinical trials system project.
- Work lead to presentations at NIH in Bethesda, a publication, and presentations at HIMSS.

Location Council of Community Clinics San Diego  
 Discipline Recipient of California Networks for EHR Adoption Planning Grant funded jointly by the California Endowment, California Health Care Foundation, and Blue Shield of California  
 Dates 2006-2007

- Coordinated EHR planning, readiness, and system selection efforts for a diverse multidisciplinary collaboration of Southern California community clinic organizations.

**Military/Military Contractor Service:**

Location Global and San Diego  
 Discipline Health IT/New Composite Health Care System (CHCS) development and deployment Dates May 1987- Sept 1990 and again as a consultant in 2004-2005.

- Served as a military contractor with DiSTAR Medical Systems and Science Application International Corporation (SAIC), developing and deployed the original CHCS integrated clinical system used in all Military hospitals and clinics over the past 30 years.
- Lived and worked on bases deploying alpha-site software and training physicians and nurses.
- San Diego and Washington, DC. May 1987-Sept 1987
- Deployed to Fort Knox, Kentucky Sept 1987-March 1988
- Sheppard Air Force Base Texas and Zweibrucken, Germany 1988
- Tripler Oahu Hawaii and Charleston, SC 1989

Location Across the United States, San Diego, and globally through virtual technologies  
 Discipline Health Informatics  
 Dates 2005-2006

- Invited/honored to design workflow and use of systems that serve the President of the United States/Commander and Chief along with top military leaders at the Executive Health Clinic Bethesda
- Consulted with defense contractor Healthlink through Unisys at Naval Medical Center San Diego, Vandenberg, and remotely with many other bases.
- DOD work ended when IBM acquired Healthlink.

**Academic Appointments:**

Department: Health Sciences  
 University: National University School of Health and Human Services  
 Title: Academic Program Director and Clinical Assistant Professor  
 (Title for all program leads evolved from Program Lead to Academic Program Director in 2016.)  
 Dates: 2013-present

Department: Community Health  
 University: National University School of Health and Human Services  
 Title: Program Lead and Clinical Assistant Professor

(Health informatics moved from Dept. of Community Health to Dept. of Health Sciences)  
Dates: 2011-2013  
Department: Nursing  
University: National University School of Health and Human Services  
Title: Clinical Assistant Professor  
(Originally hired in Dept of Nursing/moved to Community Health to lead MS Health Informatics)  
Dates: 2010- 2011

Department: Health Sciences  
University: National University School of Health and Human Services  
Title: Adjunct Faculty  
Dates: 2009-2010

Department: Nursing  
University: University of Phoenix – San Diego Campus  
Title: Adjunct Faculty  
Dates: 1998-2001 (part time)

- Taught/mentored graduate nursing students teaching data-based decision support
- Wrote national healthcare information technology course curriculum.
- Provided editorial assistance for the nursing informatics program.

#### **Hospital/Health Care Delivery System Appointments:**

Department: Nursing  
Academic Medical Center: University of California San Diego Medical Center (Today UCSD Health)  
Title: Manager of Nursing Systems  
Dates: 1990-1994

- Coordinated the analysis, design, testing, training, and implementation of the SMS Invision product.
- Specialized in clinical documentation and order processing applications/taught nursing/allied health staff. Adapted system for use in a multidisciplinary patient-centered model. Incorporated into practice where: Care team chart to a collaborative patient problem list, charting and plans are based on care standards and exception methodology, vital signs/detailed fluid balance are directly tracked at the point of care, clinic physicians/home health access OR reports, H&Ps and discharge summaries.
- Designed/simplified the ordering process and prepared ordering system for MD use: diet progressions, nursing, ancillary interfaces, volume labs, respiratory, and meds/IVs.
- Coordinated Workload Management/Patient Classification/Staff Scheduling project using Grasp methodology meeting JCAHO requirements and achieving staff satisfaction. Joined nursing research and education team. Participated in a variety of committees to plan and open a new hospital, comply with JCAHO and other regulations, and ensure success of numerous quality/process improvement initiatives.

Department: Information Systems  
Academic Medical Center: Children's Hospital San Diego (Today Rady Children's)  
Title: Clinical Informatics Analyst  
Dates: 1999-2003

- Lead clinical point-of-care charting system design, development, screen configuration, testing, implementation, and staff education for Meditech-based system.
- Chaired committee for implementation/adoption of Nursing (NUR) Patient Care Inquiry (PCI) modules.

- Taught classes for nursing and allied health care professionals on effective use of systems in practice.
- Developed/configured screens and wrote/programmed NPR reports.
- Showed direct financial return on investment for clinical system pilots on Hem/Onc& Ortho units.
- Configured and tested software for pre-operative care and med/surg.
- Incorporated wireless technology into clinical practice for physician ICU rounds, and on patient care units.
- Developed budgets, project plans and workflow analysis and assisted with document scanning project.
- Investigated ICU systems, held focus groups with ICU staff, traveled to vendors and developed implementation feasibility study, purchased flowsheet software and developed prototype.
- Joined various task forces and committees including capacity planning, patient monitoring advisory, IS purchasing, JCAHO Prep, Grant development, and HIPAA.

## **Industry-based Employment**

Department: Healthcare Division  
 Organization/Corporation: Science Applications International Corporation (SAIC) and DiStar Medical Systems Corporation (SAIC acquired DiStar)  
 Title: Senior Systems Analyst  
 Dates: 1987-1990

- Contributed as a core member of the small original team that won over a 1.01 billion-dollar contract in 1988 to automate all U. S. Military Medical Treatment Facilities worldwide - Composite Health Care System. (CHCS)
- Contributed to successful marketing, design, development, and alpha site work that lead to award.
- Coordinated/managed project of 50 professionals meeting requirements for developing a training system to support education tri-service wide for patient scheduling and administration, pharmacy, lab,radiology, order entry, and nursing applications.
- Presented clinical/integration software meeting tri-service military requirements.
- Lead alpha site inpatient/outpatient training effort for integrated clinician-based order processing with decision support, quality assurance, risk management, and nursing acuity.
- Taught physicians to develop order sets/care guidelines and use CPOE and results reporting.
- Configured system and taught nursing and support staff to use phase I CHCS functionality.
- Participated on Medical Mobilization System Team that supported a comprehensive, integrated patient care system in a German contingency hospital, trained/supported clinicians, and demonstrated system to VIP's.
- Contributed to team that developed a prototype and sold the system to Canadian marketplace that included automated assessments, care plans, notes, med administration, patient education, vital signs, etc.
- Incorporated current technology into development: graphics, bedside terminals, and voice recognition.

## **Non-Profit/Association-Based Employment**

Department: Technology Service Organization  
 Organization: Council of Community Clinics  
 Title: EHR Project Manager  
 Dates: 2006 to 2007

- Contributed to winning EHR planning grant award for a consortium of community health centers from California Endowment, California Health Care Foundation, and Blue Shield of California.
- Coordinated EHR planning, readiness, and system selection efforts for a diverse multidisciplinary collaboration of Southern California community clinic organizations.
- Launched new EHR service line. Facilitated EHR planning and workgroup meetings, obtained planning grant funding, developed business plans, researched and shared EHR best practice.
- Developed a project charter, documented clinic workflow, developed/obtained agreement on requirements and evaluation criteria, researched vendors/products, and coordinated demonstrations and product evaluation.

## **Private Practice Principal Healthcare Tech Consulting, 1994 to present**

Established own consulting firm in Healthcare Information and Communication Technologies in 1994. Assisted organizations, physicians, nurses, allied health care practitioners, vendors, and educators to optimize performance by effectively adopting information technology into day-to-day practice. Client list includes: Anvita Health (Clinical Decision Support partner with Google), Midmark Diagnostic Group, LeonardoMD, United States Department of Defense through Unisys and Healthlink (now an IBM Company), Organization Development Associates/Genentech, Medical Record's Institute, SAIC, Kaiser Permanente, Patient Care Technology Systems, University of California San Diego (UCSD), National Institutes of Health(NIH)/National Cancer Institute (NCI)

### **Selected Consulting Engagements**

- Kaiser Permanente/SAIC - National Clinical Information Systems Planning - Lead team for National Clinical Data Repository/Results Reporting Project responsible for requirements development, database development, and user acceptance. The project included compliance with National Center of Quality Assurance (NCQA) regulations, results reporting database for Southern California, a system for patient letter notification, and testing an innovative three-tiered clinical data repository architecture/technology. Core work preceded and set the foundation for KP HealthConnect.
- Midmark Diagnostic Group – Developed educational materials for EHR meaningful use.
- Anvita Health/Humana– Assisted business development for emerging clinical decision support company acquired by Humana.
- Medical Records Institute – Developed/coordinated national conference nursing educational program.
- Healthlink, an IBM Company - Served as interim project manager and clinical analyst for Meditech implementation, supporting a hospital initiative to bring up a full suite of Client-Server applications.
- Department of Defense/Unisys/Healthlink - Joined the Healthlink/Unisys team to assist with the CHCS II electronic health record project for the Department of Defense, automating clinic health records for 9 million beneficiaries. Worked on a tri-service military project to incorporate more process and workflow-oriented training into clinical practice. Assisted with process mapping, curriculum, guides, and newsletter.
- Organization Development Associates - Assisted firm with presentations, course development. Developed project management methodology for multiple clients.
- Genentech/Biotechnology - Authored project management methodology and assisted with strategic development of physician thought leaders, including technology enabling business and communications processes. Created, tested, and administrated web-based surveys, analyzed survey results, and prepared management reports and presentations.
- Patient Care Technology Systems - Assisted start-up Emergency Department Information System (EDIS) vendor with competitive analysis, marketing/proposal development, integration strategy.
- Council of Community Clinics/JDA Consulting Arm of SAIC - Assisted with assessment and feasibility study for a managed care information system.
- University HealthSystem Consortium (UHC) /JDA Consulting Arm of SAIC - Developed decision support system for PACS systems assessment/strategic planning software for academic medical centers.
- UCSD Cancer Center - Completed an information technology assessment/planning engagement for a Bone Marrow Transplant program. Assisted with managed care system planning/reporting.

### **Licensure**

Current California Registered Nurse License RN 434639 1987-present expiration March 2022 Continuing education credits each year from 1980 to present

### **Memberships, Offices and Committee Assignments in Professional Societies**

- Healthcare Information Management and System Society Senior Member

- Initially joined HIMSS in 1989, 1<sup>st</sup> year for clinical informatics
  - Participated in 17 HIMSS Annual Conferences between 1989 and 2016
  - Founding member and initial Chair for Davies Community Health Organization Award 2008
  - Annual conference paper reviewer – 1990s
  - Contributed to HIMSS advocacy events in Washington, DC. 2008. This collective effort contributed to support the 2009 HITECH Act funding over 35 billion dollars for Health IT and codifying the Office of the National Coordinator for Health IT.
  - Member of additional task forces and committees over the past 27 years at HIMSS, including: Innovation Committee, Nursing, Community Health Task Force, Project Management and other Special Interest Groups. Served as moderator of sessions at several annual conferences.
- AMIA – American Medical Informatics Association conference participation in 1980s-90s with AMIA and IMIA and AMIA member 2014-present
  - Health Level Seven – participant in Rio De Janeiro 2010 and San Diego 2011 meetings
  - MUSE - Medical User Software Exchange 2000-2002 (Meditech Users Group)
  - Sigma Theta Tau International Honor Society Member and recipient of Community Leader Award 1999
  - ANIA - American Nursing Informatics (initially joined in early 1993 as one of the initial members/current member and Chair of Education Committee and 2017 conference for new San Diego ANIA chapter)
  - SNUG (SMS/Siemens Users Group) early 1990's
  - SCAMC (Symposium on Computer Applications in Medical Care – a predecessor to AMIA (1980s)
  - NEHA (New England Hospital Assembly) 1985-1987
  - Special Days Camp for Children with Cancer (1981)
  - Association for Children's Health 1980

#### **Board of Directors/Trustees Positions:**

- HIMSS SoCAL Board of Directors 2011-2012
- Saddleback College Advisory Board 2014-today
- TEPR – Towards an Electronic Patient Record Advisory Board 2009-2010

#### **Editorial Positions**

- Newsletter author and editor for Healthlink, an IBM company Government Services 2005. Newsletter distributed globally to IBM team.

#### **Service on National Grant Review Panels, Study Sections, Award Committees**

- Certification Commission for Health Information Technology – Served to certify EHR systems as member of commission 2008-2010
- Healthcare Information and Management Society (HIMSS) Paper Reviewer late 1990's – early 2000's
- Towards an Electronic Patient Record – Judge for National/International Electronic Health Record Awards 2007-2009
- National Institutes of Health, National Cancer Institute – Contributed to grantee working group and invited focus groups on the development of CancerNet (predecessor to Cancer.gov) NIH Campus, Bethesda, MD, 1995



### **Service on Selected Major Committees**

- International (*Health Level Seven, Contributor to working group meetings in Rio De Janeiro Brazil in 2010 and International meeting in San Diego in 2011*)
- National - HIMSS Davies Award Committee and Chair 2007-2009
- HIMSS Community Health Task Force 2006-2008
- Medical School/University - *UCSD Patient Care Information Systems Steering Committee 1991-1994*
- Hospital (*Rady Children's Hospital* Chaired EHR/nursing committee for implementation/adoption of Meditech Nursing (NUR) Patient Care Inquiry (PCI) modules. 1999-2003
- Editorial Boards Reviewer (*Towards and Electronic Health Record 2007-2010*)

### **Service on University-wide Committees**

- Department and School Faculty Selection Committee 2010-2012
- Undergraduate Council Member 2012-2013
- Senate Online Committee Member 2013-2015
- Member Task Force on Role of Department Chair 2012-2013
- Member Task Force on Education Technology 2014
- Task Force on the Learning Management System 2012-2013
- Member Task Force on Teaching and Learning 2014-2015

### **Service on School and Department Committees**

- Committee Chair for College of Professional Studies Strategic Planning
- Core Director Health Innovation Technology School of Health and Human Services (SHSS) Center of Excellence 2016-present
- Member Task Force on enrollment and academic progression
- Member Planetree Initiative Committee 2016-present
- SHHS Assessment Committee Member 2012-present
- Community Health Department Chair of Awards Committee and Coordinator for Assessment Summit 2012-2013
- Member Task Force on CEPH accreditation 2012

### **Service on Hospital Committees**

- Children's Hospital San Diego – Served on multiple committees including Quality Committee, JCAHO committee, Y2K committee, Privacy committee 1999-2003
- UCSD Medical Center – Served on multiple nursing and information systems committees and task forces 1990-1994

### **Service to the Community**

- Served on Saddleback College Advisory Board
- Participated and contributed to HIMSS, MIT Enterprise Forum, Connect, and Chamber of Commerce events
- Scripps Health/Scripps Mercy Physician Partners

- University of Michigan Alumni Association
- Northeastern University Alumni Association
- Served on multiple parent committees for Maria Montessori Preschool, Explorer Elementary Charter School, High Tech High Middle School, High Tech High International, Stanford University Online High School, and Columbia University Parent Association.
- Joined missionary team in Mexico to provide primary care services
- Scripps Health Foundation events
- Participated and contributed to numerous community and church events
- Member of Junior League of Boston and San Diego

### **Research/Innovation Training**

Exponential Medicine Conference virtually 2016, 2017, 2018  
 Invited to/Completed Singularity University Innovation Digital Education Program pilot Nov 2016  
 Future Med conference 2013, Exponential Medicine Coronado 2014, 2015  
 Completed CITI training 2013 and 2016  
 Studied under the guidance of Dr. Georgia Sadler at UCSD Cancer Center 1995-1997  
 Served in Department of Nursing Research and Education at University of California San Diego 1991-1994

### **Clinical Responsibilities**

Served as Pediatric and ICU nurse 1980-1984 in addition to BSN clinical rotations for 2 years at University of Michigan during BSN degree program.

### **Grant Support**

Co-Investigator  
 National University President's Research Award, \$6,650. Piper, B.F. (PI), Macomber, L.T., McEntire, N., Saria, MG, Subramanya, SR, & Bay, RC (Co-Is). Design and Development of an Electronic Mobile/Telehealth Symptom Monitoring System/Device (ePRO Fatigue<sup>®</sup>, Using the Piper Fatigue Scale-12 (PFS-12), and PROMIS Fatigue and Other Symptoms: A Pilot Study.

### **Publications**

Refereed Original Article in Journal

Macomber, L., Sadler GR. Cancer Information Highway: Enhancing Patient/Staff Education using the Internet. Conference Proceedings and Journal of the Healthcare Information and Management Systems Society Annual Meeting, vol. 1, 345-60, 1997, February.

Other Articles (Reviews, Editorials, etc.) In Journals; Chapters; Books; other Professional Communications

Macomber, L. (2009). *A Quick Reference to Economic Stimulus Funds: Achieving Meaningful Use of a Certified EHR*. Printed and Electronic publication sponsored and published by Midmark Corporation. Distributed to Midmark distributors and customers nationally.

Macomber, L. (2009). *Innovations in Ambulatory Practice: The Impact of Connected Medical Devices*. Publication by the Healthcare Management Information System Society (HIMSS) in The Digital Office.

Macomber, L. (2006) *High Tech/High Touch Connection: Designing Technology that Works for Your Clinic*. Council Connections publication.

Macomber, L. (2005) Newsletter author and editor for Healthlink, an IBM company Government Services.

Macomber, L., and Draper, P. (2004) *Project Management Lite*, a methodology and workbook publication developed for and sponsored by Genentech Corporation.

Macomber, L., (2001) *Survivor South African Safari*. MuseMatters, Muse International Medical Users Software Exchange

Macomber, L. (1991-1994) *At the Bedside: Where Caring and Technology Meet*, UCSD Medical Center, Numerous internal publications to UCSD physicians, nurses, administrators

Travis, L., (maiden name) *Patient Care Systems: Today's Development and Tomorrow's Vision*, publication for Kuopio University and Mumps Users Group, Helsinki, Finland. 1989

## Reports

*Davies Award for Community Health Organizations*, Primary author and editor working collaboratively with committee for Davies application guideline development. Published electronically on HIMSS Davies web site Feb 2008

*The Nursing Shortage: Can Technology Help?*, Contributed introductory and closing text along with case study to California Healthcare Foundation publication by First Consulting Group, 2002

*New Remedies*, Contributed to California NurseWeek article on using technology to recruit nurses, 2002

## Professional Presentations

### International Audience

Macomber, L., (2020, March) *Innovating Education: Using a Virtual Healthtech Discovery Lab*, Oral presentation at the 15<sup>th</sup> Annual Academic Forum HIMSS20, Orlando, FL. (transitioned to virtual presentation)

Farquharson, H, Parker, R., Piper, B.F., Lee, Z., Macomber, L.T, Ho, T., Todorova, Erickson, B., Humbles, P., Leslie, Reyes, (2018, October) *Interprofessional Education (IPE): Integrating Informatics and Simulation Content into SHHS: A Proposed Model* Poster session presented at the Planetree International Conference on Patient-Centered Care, Boston, MA.

Macomber, L. (2017, October). *Personal Health Informatics: Preparing Healthcare Professionals for Patient-Centered Technologies*. Poster session presented at the Planetree International Conference on Patient-Centered Care, Baltimore, MD.

Myers, M. and Macomber, L. (2015, January) *Zoom Your Classroom! Finding the Best Tools to Meet with Your Students and Colleagues Online In and Out of Your LMS*. Remote virtual oral presentation at the Hawaii International Conference on Education, Honolulu, HI.

Macomber, L. (2012, October) *What Apps are in your Pocket? The Value of mHealth Apps on the Front Lines of Community Health*. Oral Presentation at the 140th Annual Meeting of the American Public Health Association (APHA), San Francisco, CA.

Macomber, L. (2012, February) *Did you know there is an app for that?* Presentation at Healthcare Information Management System Society (HIMSS) Annual Meeting, HIMSS12 HIT XO, Las Vegas, NV. (Audience of over a thousand people for 60-minute oral presentation)

Macomber, L. (2008, May) *Clinical/Nursing Informatics: Trends in Practice*. Oral presentation at Towards an Electronic Patient Record (TEPR) conference, Fort Lauderdale, FL.

Macomber, L. (2001, Sept) *Healthcare Priorities across the Planet: The USA Perspective*. Oral presentation at the International Medical User Software Exchange (MUSE/MIX) meeting, (Sept 12, 2001 – just hours after 9/11 events in the USA) Drakensberg, South Africa.

Macomber, L. (2001, Sept) *You are Now Free to Move about the Medical Center: Using Wireless Laptops to Improve Patient Care*. Presentation at the International Medical User Software Exchange (MUSE/MIX) MUSE meeting, Drakensberg, South Africa.

Travis, L. (maiden name) (1989, Sept) *Patient Care Systems: Today's Development and Tomorrow's Vision*. Paper presented at Multiuser Utility Multiprogramming System (MUMPS) Meeting sponsored by Kuopio University, Helsinki, Finland

### **National Audience**

Piper, B.F. (PI), Macomber, L.T., Saria, MG, Subramanya, SR, & Bay, RC (Co-PIs). (2016, April) *Design and Development of an Electronic Mobile/Telehealth Symptom Monitoring System/Device (ePRO Fatigue<sup>®</sup>, Using the Piper Fatigue Scale-12 (PFS-12), PROMIS Fatigue, and Other Symptoms: A Pilot Study*. Western Institute of Nursing Annual Meeting. Anaheim, CA

Macomber, L., and Patmas, M. (2009, Feb) *High Tech High Touch Connections: Integrating Medical Devices Cost Effectively*. Presentation and PowerPoint proceeding publication eClinicalWorks National Users Conference, Sands Convention Center, Las Vegas, NV.

Macomber, L. (2001, May) *You are Now Free to Move about the Medical Center: Using Wireless Laptops to Improve Patient Care*. Oral Presentation at MUSE meeting, Anaheim, CA

Macomber, L., and Austein-Casnoff, C. (2008, Feb) *Launching the Davies Award for Community Health Organizations*. Oral Presentation at HIMSS Annual Meeting, Orlando, FL.

Macomber, L. (2007, May) *EHRs for Free Clinics*. Oral Presentation at Annual Meeting for the National Association of Free Clinics, Dallas, TX.

Macomber, L., (2007, May) *Connecting Communities: Creating a California Network for EHR Adoption*. Oral presentation at the Towards and Electronic Record (TEPR) Conference. Dallas TX

Macomber, L. (2006, Dec) *Community Clinics Health Network: Connecting for Care E-Health for People and Communities*. Oral presentation at Kay Center Symposium, Claremont Graduate University, Claremont, C

Macomber, L. (2000) *Using Mobile Laptops on Physician Rounds in the ICU*. Oral presentation at HIMSS national meeting, New Orleans, LA.

Macomber, L. (1997, April) *Computers, Systems, & Nursing Implications: Nursing in the Internet Era*. Oral Presentation at the Ambulatory Care Nursing Wave of the Future Sponsored by Kaiser/Sharp, San Diego, CA

- Macomber, L. (1997, May) *Consumer Health Informatics in the Internet Era, From Transition to Transformation*. Oral presentation at the American Hospital Association Meeting, Boston, MA
- Macomber, L., and Sadler, G., (1997, Feb) *The Cancer Information Highway: Enhancing Staff/Patient Education Using the Internet*. Oral presentation at the Healthcare Information Management Systems Society (HIMSS) Annual Meeting, San Diego
- Macomber, L. and Sutera, J. (1995, Sept) *UCSD Cancer Center's Physician Data Query/Patient Information File Demonstration Project*. NIH NCI Poster board/presentation/paper: Oral and poster presentation of survey results at National Institutes of Health, National Cancer Institute, Bethesda, MD.
- Macomber, L., and Sutera, J., (1995, Sept) *The Oncology Information Highway*. Oral presentation of paper at National Institutes of Health, National Cancer Institute, presentation and contribution to working group, Bethesda, MD
- Macomber, L. (2012, May) *Did you know there is an app for that? A quick tour of new mobile health opportunities for hospitals and health professionals*. Webinar presentation for the Nebraska Hospital Association. (Shared with hospital associations of other states including Arizona, Oklahoma, and Idaho)
- Macomber, L. (2012, April) *EHR Meaningful Use*. Oral presentation at Southern California HIMSS Annual Healthcare IT Conference. Los Angeles, CA.
- Macomber, L., Bruce, L, Majid, R., (2011, March) *Healthcare IT Education: The Future of Curriculum Development, Healthcare Enrollment, Student Selection, Training Modalities and Job Placement Expectations*. Oral presentation at the Healthcare IT Conference of the Healthcare Information and Management Society meeting on Healthcare Reform: Driving to 2015 and Beyond. Los Angeles, CA.
- Macomber, L. (2010, September) *Building a Strategic Workforce in the ERA of Electronic Health Records*. Oral presentation at HealthTECH, Workforce Forum Opening Plenary Session. San Diego, CA.
- Macomber, L. (1997) *Nursing in the Internet Era*. Oral presentation at the Clinical Nurse Specialist Network of Southern California, La Jolla, CA.

## **Regional/Local Audience**

- Macomber, L. (2017, Feb) *Creating 2020 Vision: Key Trends Influencing Informatics*. Presentation planned for Feb 3, 2017, San Diego American Nurse Informatics Association Meeting. Tri-City Medical Center, Oceanside, CA
- Macomber, L. (2016, November) *Career Opportunities in Health IT*. Oral presentation at the meeting of the Southern California Health Information Management System Society (HIMSS) Academic Alliance, San Diego, CA.
- Macomber, L. (2016, July) *Did you know there was an app for that?* Oral presentation at the San Diego American Nurse Informatics Association Meeting. San Diego, CA.
- Macomber, L. (2016, January) *Career Opportunities in Health IT*. Oral presentation at the meeting of the Southern California Health Information Management System Society (HIMSS) Academic Alliance, San Diego, CA.
- Macomber, L. (2015, Sept) ANIA - *Where High Tech meets Human Touch: Ideas for Chapter Next Steps*. Oral presentation at the San Diego Chapter meeting of the American Nurse Informatics Association, La Jolla, CA.
- Macomber, L. (2015, March) *The Power of Portfolios: Bridging the gap between Academia and Career Growth*. Oral presentation at the National University Spring Symposium, La Jolla, CA.

- Macomber, L. (2014, September) *Thirty apps in 30 Minutes*. Oral presentation and facilitated discussion for Scripps Mercy Physician Partners" Webinar, San Diego, CA.
- Macomber, L. (2013, September) *Did you know there is an app for that?* Oral presentation at the National University Fall Research Symposium, La Jolla, CA.
- Macomber, L. (2011, November) *Academic Portfolios*. Oral presentation at the National University Assessment Summit, La Jolla, CA.
- Macomber, L., and Branning, M. (2008, November) *Dollars and Sense: Is EMR a Smart Investment for your Practice*. San Diego County Medical Society, oral presentation and taped video podcast for membership, San Diego, CA.
- Macomber, L. (2008) *21<sup>st</sup> Century Nursing: The Impact of Informatics on Patient Care Delivery and Outcomes*. Oral presentation at the Sigma Theta Tau Nursing Honor Society, San Diego, CA.
- Macomber, L. (2006) *EHR*. Oral Presentation at Council Connections Annual Meeting, San Diego, CA.
- Macomber, L. (1997) *Internet Resources for Cancer Patients*. Oral presentation at Cancer Support Group, San Diego Public Library, San Diego, CA.
- Macomber, L. (1997, May) *Nursing in the Internet Era*. Oral presentation at Sigma Theta Tau Nursing Honor Society, University of San Diego, CA.
- Macomber, L. (1991-1994) *At the Bedside: Where Caring and Technology Meet*. UCSD Medical Center, Numerous internal presentations to UCSD physicians, nurses, administrators, San Diego, CA.

### **Selected CEUs, Continuing Education, and Professional Event Participation**

- 30 hours formal informatics/health IT CEUs submitted for RN License every 2 years for over 30 years (500+ hours) •  
Most recent years formal CEUs obtained primarily from the annual HIMSS meetings (13-15 hours/year) including HIMSS19 in Orlando, HIMSS18 in Las Vegas, HIMSS17 in Orlando, HIMSS16 in Las Vegas, HIMSS15 in Chicago, HIMSS14 in Orlando, and HIMSS13 in New Orleans, HIMSS12 in Las Vegas and HIMSS11 in Orlando, together with Nursing Informatics and other pre-symposiums before HIMSS, and regional HIMSS Spring Southern California Clinical Informatics Symposiums.
- Details follow of these and many additional continuing education meetings, educational and professional events. On average, several days each month devoted to continuing education. More detail is included in recent year that is similar to previous years.
- Additionally, countless videos viewed to screen to include in courses, publications, case studies, podcasts, blogs, LinkedIn, Ted Talks, CES, and Twitter feeds reviewed for news and potential inclusion in course curriculum.
- Some events are tech, some are health, some are health tech, yet continuing education needed for all.

### **2020**

Numerous virtual events including ANIA, HIMSS, ONC, Healthcare Innovations, MedCram, This Week in Health IT

### **2019**

HIMSS19, HIMSS Patient Experience Conference, ANIA SD conference, MIT Enterprise Forum

**2018**

Nov Health Informatics Summit, Beverly Hills, CA  
Oct Planetree International, Baltimore, MD, Oct 15-18

June HIMSS Patient Informatics La Jolla, CA all-day event June 30  
May HIMSS Clinical Informatics Symposium, Beckman Center, Irvine, CA all-day event  
Feb HIMSS17 Orlando, FL week-long event

**2017**

HIMSS 9<sup>th</sup> Annual CIO Forum, Richard Nixon Library, Yorba Linda, CA Dec 8 all-day event  
Nov Assessment Summit, National University, La Jolla, CA Nov 4 all-day event  
Health IT Summit, Beverly Hills, CA Nov 10 all-day and evening event  
Health IT Career Roundtable, San Diego CA Nov 17 evening event  
San Diego Chamber of Commerce, Nov 30 evening event  
ANIA San Diego – evening event  
Oct World of Watson – Live streaming from Las Vegas – Oct 24-25 focus on Cognitive Technologies  
Exponential Medicine – Live streaming and networking events Hotel Del Coronado, CA Oct 8-10 emerging tech  
Sept HIMSS 6<sup>th</sup> Annual Privacy and Security Forum Hoag Hospital Newport Beach, CA Sept 30, all-day event  
Fall Symposium National University La Jolla, CA Sept 6-8, all-day and evening events  
ANIA San Diego Sept 14, evening event  
July MIT Enterprise Forum Annual Summer July 27 evening event  
ANIA San Diego evening meeting  
June Congressional Luncheon June 20 San Diego Hilton  
April HIMSS 8<sup>th</sup> Annual Clinical Informatics Summit – Irvine CA April 8 all-day event  
Western Institute of Nursing Anaheim, CA April 9 all-day and evening events  
Scripps Health Rancho Sante Fe, CA April 10 evening event  
California Telehealth San Diego, CA April 17-19 all-day and evening events  
Mar HIMSS Annual Conference & Exhibition, February 29 - March 4, 2016 Las Vegas all-day and evening events  
National University Spring Symposium March 15-17 all-day and evening events  
School of Health and Human Services Meeting March 13-14 all-day and evening events  
Feb ANIA San Diego Jan 20 evening event  
Jan Health IT Career Roundtable hosted at National University San Diego January 15 evening event

**2016**

Dec HIMSS 9<sup>th</sup> Annual CIO Forum, Richard Nixon Library, Yorba Linda, CA Dec 8 all-day event  
Nov Assessment Summit, National University, La Jolla, CA Nov 4 all-day event  
Health IT Summit, Beverly Hills, CA Nov 10 all-day and evening event  
Health IT Career Roundtable, San Diego CA Nov 17 evening event  
San Diego Chamber of Commerce, Nov 30 evening event  
ANIA San Diego – evening event  
Oct World of Watson – Live streaming from Las Vegas – Oct 24-25 focus on Cognitive Technologies  
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Western Institute of Nursing Anaheim, CA April 9 all-day and evening events

Scripps Health Rancho Sante Fe, CA April 10 evening event  
 California Telehealth San Diego, CA April 17-19 all-day and evening events  
 Mar HIMSS Annual Conference & Exhibition, February 29 - March 4, 2016 Las Vegas all-day and evening events  
 National University Spring Symposium March 15-17 all-day and evening events  
 School of Health and Human Services Meeting March 13-14 all-day and evening events  
 Feb ANIA San Diego Jan 20 evening event  
 Jan Health IT Career Roundtable hosted at National University San Diego January 15 evening event

**2015**

Dec Chamber of Commerce networking event Dec 9 Hotel Del Coronado, Coronado CA  
 Nov Assessment Summit National University Nov 2 La Jolla CA  
 Exponential Medicine – Hotel Del Coronado, CA  
 Singularity University Digital Executive Program Nov 10-11  
 Sept Fall Symposium National University La Jolla, CA Sept  
 Aug MIT Enterprise Forum Annual Summer event  
 May 8<sup>th</sup> Annual Clinical Informatics Summit – Irvine CA  
 Apr HIMSS Annual Conference & Exhibition Chicago (CEUs)  
 Nursing Informatics Symposium  
 Mar National University Spring Symposium  
 Jan IHT2 San Diego

**2014**

Dec Adjunct Summit Dec  
 Nov Assessment Summit National University Nov 2 La Jolla CA  
 Exponential Medicine – Hotel Del Coronado, CA  
 Sept Fall Symposium National University La Jolla, CA Sept  
 Aug MIT Enterprise Forum Annual Summer event Aug 6  
 July Virtual Briefing, "Challenges for the next generation workforce development and diversity in Health IT" July 22  
 June Adjunct Faculty Summit  
 May 8<sup>th</sup> Annual Clinical Informatics Summit – May 2 held in Irvine CA and live broadcast feed to community event  
 on National University Campus at NU  
 April iPad mini workshop -  
 Mar National University Spring Symposium March 25-27  
 Chamber of Commerce Networking Event – San Diego March 4  
 Feb HIMSS Annual Conference & Exhibition Orlando Feb 23-27

**Key Skills**

- +Higher education – taught hundreds of graduate students and guided them to the next steps in their careers and lives
- +Health IT/EHR/Health Care/Nursing Informatics
- +Planning, program/project initiation, leadership and coordination, EHR vendor/system selection -  
 Innovation - Early adopter of technology applications.
  - 1984 RN/MBA writing papers online
  - 1984 email and joined health IT developer/consulting firm
  - 1985 Mumps programming, creating/deploying nursing systems
  - 1987 Developed e-prescribing/CPOE/Internet/Integrated patient care systems orders/results
  - 1991 Patient-centered care



- 1993 Online clinical documentation/ charting
  - 1994 Launched healthcare tech consulting firm
  - 1995 Web/consumer health, 1998 CDR/Enterprise
  - 2000 Wireless laptops in practice
  - 2007 Advanced clinical decision support
  - 2010 mhealth/apps
  - 2013 FutureMed/Exponential Medicine
  - 2014 Genomics
- Education, coaching, writing, editing, curriculum development, scenarios/simulations

### **Curriculum Responsibilities**

- Course lead for HTM 552 EHR Meaningful Use, HTM 520 Health Information Exchange, HTM 660 Systems Management and Planning, HTM 680 Case Studies, HTM 692 Health Informatics Capstone, HTM 310 Health Informatics, and HTM 460 Health IT Simulation

### Teaching Responsibilities

- 2009-2113- HSC 410 Health Informatics
- 2011-present – HTM 310, HTM 552 and HTM 692

Workflow optimization, process mapping, process improvement, decision support, design, development, quality assurance, value realization, presentations, publications, and marketing