

Curriculum Vitae

Howard Dale Silverman MD, MS

Business Address

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Summary of Professional Experience

Associate Dean for Information Resources and Educational Technology (August 2009 – present)

University of Arizona College of Medicine – Phoenix; Phoenix, Arizona

- Continue to oversee and coordinate IT services as described below
- Leading work transformation and data integration efforts to improve accuracy and efficiency in Academic Affairs, Faculty Affairs and Financial Affairs
- Multiple curricular, student advising and committee involvements including Biomedical Informatics Theme Director

Assistant Dean for Information Resources (May 2007 – August 2009)

University of Arizona College of Medicine – Phoenix; Phoenix, Arizona

- Oversee and coordinate IT services on a new and growing campus (desktop support, networking, computing security, applications development, servers, etc.), media services, academic computing, application and web development services, and the biomedical library.
- Actively participate in the ASU Biomedical Informatics Department, including chair the Curriculum Committee, develop and teach graduate courses in biomedical informatics.
- Served as co-director of the CARE-IT Lab (Clinical Applications, Research and Education Interoperability Testbed)
- Develop and implement extensive biomedical informatics components of the medical school curriculum.

Special Assistant to the Vice Dean for Administration (December 2005 – May 2007)

University of Arizona College of Medicine – Phoenix; Phoenix, Arizona

- Created infrastructure and related processes for curricular development, composed LCME application leading to successful accreditation, admissions and faculty development, promotion and tenure at new branch campus of the University of Arizona College of Medicine
- Created biomedical informatics curriculum to be used by the new medical school.

Education Director and Clinical Professor of Family and Community Medicine (July 2003 to December 2005)

Program in Integrative Medicine, University of Arizona College of Medicine; Tucson, Arizona
Accomplishments:

- Doubled enrollment in the two year distance learning program known as the Associate

- Fellowship resulting in increased tuition revenues of over \$500,000 per year
- Lead curricular development and implementation of innovative online training in Integrative Medicine, including the production of 5 “Clinical Approaches” online modules, two Botanicals medicine modules, two nutrition modules
- Lead design and implementation of evaluation processes and accreditation
- Overall curricular planning, organization and implementation of the Associate Fellowship in Integrative Medicine, comprising 1,000 hours of instruction in a highly innovative integrated online and retreat format
- Principle Investigator for \$690,000 Defense Department grant to implement a one-year version of the Associate Fellowship for military clinicians
- Created novel four year Integrative Family Medicine residency-fellowship and obtained approval as an experimental program from Family Practice RRC
- Designed, facilitated and implemented departmental planning and governance structures

System Director of Medical Informatics and Clinical Innovation (July 1999 to June 2003)

Banner Health Arizona; Phoenix, Arizona

Accomplishments:

- Led and directed technology related projects and act as an effective liaison between clinicians and non-clinical I/T staff.
- Led successful design and implementation of Care Transformation which led to enterprise-wide process redesign and standardization and implementation of a ‘franchise model’ clinical systems implementation strategy. This effort culminated in significant ROI while increasing staff satisfaction and retention. Created and staffed the CLINIC oversight group.
- Implemented web and PDA projects, including design and implementation of web-based “Clinical Connectivity” physician portal resulting in over 13,000 face sheets per month directly accessed online, design and implementation of a Care Management Data System, evaluation of vendor products, advising the CIO on clinical issues, actively participating as System Director in senior I/T leadership activities such as strategic planning, budgeting, communications and project management
- Act as internal clinical consultant to all I/T departments, particularly the Clinical Systems Information Technology, Web, Customer Support and Strategic Planning groups
- As member of senior Care Management team, created and implemented new systemwide Care Management and Organizational Performance department, encompassing care management, organizational performance and innovation
- Provide leadership for systemwide Clinical Data Management and Clinical Innovation functional teams
- Responsible for leading all aspects of development and implementation of integrated physician web portal with connectivity to disparate legacy systems. Included conversion from prior “green screen” system and planning/implementation for training, support, legal, security, administration and other issues
- Worked effectively with HIMS directors to guide planning, funding and implementation of regional SoftMed implementation
- Successfully negotiated systemwide Enterprise Software License Agreement with major vendor and was responsible for organizing implementation team
- Initiated a process to stabilize and expand successful pilot efforts utilizing Cerner’s

- DISCERN functionality and participate in multiple Discern workgroups
- Responsible for planning, implementation and evaluation of pilot project sponsored by 3COM and PatientKeeper utilizing handheld computers used by physicians for charge capture

Director of Curricular Affairs, Medical Education Department (July 1999 to November 2000)

Good Samaritan Regional Medical Center; Phoenix, Arizona

Accomplishments:

- Founded and chaired medical education faculty group I/T Steering Group servicing five core residencies with approximately 50 faculty and 200 residents and fellows
- Coordinated accreditation efforts across residency programs
- Created interdisciplinary curricula to meet new ACGME requirements

Chief Medical Officer (March 1997 to April 1999)

American Centers for Health & Medicine (Catholic Healthcare West); Phoenix, Arizona

Accomplishments:

- Responsible for medical direction of two innovative integrative medicine clinics blending traditional allopathic primary care with “alternative” therapies
- Worked in tandem with billing supervisor to adapt existing billing systems for use in the integrative medicine environment
- Creation of innovative curriculum to educate physicians in the discipline of Integrative Medicine

Samaritan Health Services I/T Department (1994 to 1997)

Samaritan Health Services; Phoenix, Arizona

Accomplishments:

- Founded and directed the SHS/CERNER Computerized Ambulatory Record System Workgroup. This group collaborated on the implementation of Cerner at Samaritan Health System’s newly built Ahwatukee ambulatory multispecialty clinic
- Worked closely with Cerner to implement new functionality in their software to improve user satisfaction at the Ahwatukee facility

Founding Member (1992 – 1996)

Chair, Samaritan Health System Information Systems Physician Advisory Committee

Accomplishments:

- Recruited systemwide group of physicians and organized them to provide clinician input to I/T during Cerner installation
- Founded Discern workgroup which led to the creation of an active rules group and subsequent JAMA publication detailing benefits of clinical rules and follow-up mechanisms

Family Practice Residency Program Director (July 1993 to March 1997)

Good Samaritan Family Practice Residency; Phoenix, Arizona

Accomplishments:

- Lead multiple design teams to create, implement and evaluate innovative curricula

- Created integrated data system to track resident training including information concerning applicants, graduates and all aspects of resident performance during training
- Planned, directed and implemented complete redesign of physical plant, clinical, administrative and training functions resulting in significant increases in volume and quality of both patient care and teaching
- Managed multimillion dollar budget, 15-20 staff and 32 physician Family Practice department
- Organized and led care improvement processes and teams

Associate Director, Good Samaritan Family Practice Residency (July 1991 to July 1993)
 Good Samaritan Family Practice Residency; Phoenix, Arizona

Assistant Director, Good Samaritan Family Practice Residency (July 1986 to July 1991)
 Good Samaritan Family Practice Residency; Phoenix, Arizona

Private Practice in Family Medicine (1983 – 1986)
 Phoenix, Arizona

Education and Training

1997 – 1998	University of California Los Angeles Acupuncture
1995 – 1996	National Institute for Program Director Development Faculty Development Fellowship
1992 – 1993	University of Arizona College of Medicine; Tucson, Arizona Dean's Teaching Scholar Program
1986 – 1987	University of Arizona College of Medicine; Tucson, Arizona Faculty Development Fellowship
1980 – 1983	Good Samaritan Regional Medical Center; Phoenix, Arizona Family Practice Residency
1976 – 1980	Stanford University School of Medicine Doctor of Medicine
1972 – 1975	Massachusetts Institute of Technology Master of Science, Computer Science/Electrical Engineering
1969 – 1972	Purdue University Bachelor of Science (summa cum laude) with double major in Computer Science and German

Certification / Licensure

Diplomate, American Board of Family Medicine
 Recertified 1983 – 1990, 1989 – 1996, 1996 – 2003, 2002 – 2009, 2009 - 2016
 Certificate of Added Qualification in Geriatrics, ABFP (1988-1998)
 Arizona Board of Medical Examiners #12791
 DEA AS1097410

Faculty Appointments

2008 - present University of Arizona College of Medicine; Phoenix, Arizona
Clinical Professor of Basic Medical Sciences

2005 – present Arizona State University; Tempe, Arizona
Clinical Professor of Biomedical Informatics

1995 - present University of Arizona College of Medicine; Tucson, Arizona
Clinical Professor of Family and Community Medicine

1982 – 1988 Arizona State University; Phoenix, Arizona
Adjunct Professor, Department of Human Aging and Development

1975 – 1976 Massachusetts Institute of Technology; Cambridge, Massachusetts
Research Staff, Electrical Engineering & Computer Science

Grants

P.I., Geriatric Education Training Grant (1988)	\$ 240,000
P.I., Integrative Medicine Distance-Learning Program	\$ 690,000
Dates: 26-09-2002 – 29-04-2006	
Award Number: DOD DAMD17-02-C-0134	
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TOTAL Awards	\$ 930,000

Honors

Summa Cum Laude and Phi Beta Kappa, Purdue
Sigma Xi and Phi Kappa Phi, Massachusetts Institute of Technology
Orinocco Foundation Scholarship, 1977 (Work/study in Caracas, Venezuela)
Robert A. Price Award for Teaching Excellence in Family Practice, 1990 & 1997

Professional Organizations

American Medical Informatics Association
Health Information Healthcare Information and Management Systems Society (HIMSS)
American Academy of Family Practice
Arizona Academy of Family Practice
American Academy of Medical Acupuncture

Bibliography and Presentations

Publications (Journals and books):

Silverman H, Ho Y, Kaib S, Danto Ellis W, Moffitt M, Chen Q, Nian H, Gadd C: “A novel approach to supporting relationship-centered care through EHR ergonomic training

- in preclerkship medical education”, Acad Med (accepted for publication)
- Silverman H, Cohen, T, Fridsma D: “The Evolution of a Novel Biomedical Informatics Curriculum for Medical Students”, Acad Med. 2012;87:84–90.
- Greenes RA, Panchanathan S, Patel V, Silverman H, Shortliffe EH: “Biomedical Informatics in the Desert - A New and Unique Program at Arizona State University”, IMIA Yearbook 2008 2008 3 1: pp. 150-156.
- Silverman, H: “Healing and the Jewish Imagination: Spiritual and Practical Perspectives on Judaism and Health” (edited by Rabbi William Cutter PhD), Invited Book Chapter, Jewish Lights Publishing (2007).
- Craigie FC, Silverman HD, Maizes V: “Teaching Spirituality on the Web: Experiences from the University of Arizona Associate Fellowship in Integrative Medicine”, Explore!, Volume 16, Number 2 (2007), pp. 56-62.
- Maizes V, Silverman H, Lebensohn P, Koithan M, Kligler B, Rakel D, Schneider C, Kohatsu W, Hayes M, Weil A: “The Integrative Family Medicine Program: An Innovation in Residency Education”, Academic Medicine, Volume 81, Number 6 (June 2006), pp. 583-589
- Silverman H: “Creating Ceremony and Ritual in the Medical Encounter.” Invited book chapter in the second edition of Integrative Medicine, edited by Dr. David Rakel, Saunders / Elsevier, Philadelphia (2007), pp. 1197 – 1203.
- Silverman H, Corbus F: “Physicians Finding Fulfillment”, Maricopa County Medical Society Round-Up, Volume 51, Number 8 (August 2005), pp. 37-40
- Silverman H, Schneider T: “*Modalities – Spirituality*” in Integrative Oncology Principles and Practice, ed. Mumber MP; Taylor & Francis Group (2006)
- Silverman H, Corbus F: Meaning and Medicine, Maricopa County Medical Society Round-Up, Volume 50, Number 10 (October 2004), pp. 27-31
- Burdick T, Hensing J, Kirkman-Liff B, Nenaber P, Silverman H, Simington M: “Managing Knowledge to Improve Healthcare Quality in Banner Health”. Book chapter in Creating Knowledge-based Healthcare Organizations, edited by Wickramasinghe N, Gupta J and Sharma S. Idea Group Publishing 2005, pp. 337-352
- Silverman H: “Creating a Spirituality Curriculum for Family Practice Residents”; Alternative Therapies Vol 3(6): 54-61 (November, 1977).
- Silverman H & Hammerschlag C: Healing Ceremonies: Creating Personal Rituals for Spiritual, Emotional, Physical and Mental Health; Perigee Books (May 1997)
- Silverman H.: "Creating a Spirituality Curriculum for Family Practice Residents", National Institute for Program Director Development Fellowship Project (May 1996)
- Silverman H., Nunez L., Feller D.: "Treatment of Common Eye Emergencies", American Family Physician, 45(5):2279 - 2287 (May, 1992).
- Silverman H.: "Aging and Ceremonies", (Fall 1990) in Generations , the Journal of the American Society on Aging.
- Silverman H.: "Role Strain:Illness in a Physician's Family", Family Systems Medicine 7(4):454 - 457.
- Silverman H.: "Giving Bad News in a Good Way", Senior Patient , March / April 1989, pages 51 - 54.
- Silverman H., Croker N.: "Pain Management in the Terminally Ill", Postgraduate

- Medicine, June 1988, pages 181 - 188.
- Dodge J., Bachman C., Silverman H.: "Fecal Incontinence in Elderly Patients",
Postgraduate Medicine, June 1988, pages 258 - 270.
- Gorry G.A., Silverman H., Pauker S.G.: "Capturing Clinical Expertise. A Computer
Program That Considers Clinical Responses to Digitalis"; American Journal of
Medicine, 64(3): 452 - 460 (March 1978)
- Silverman, H.: "Hematopoiesis"; Slide/Cassette Learning Program, Fleischman Learning
Center, Stanford University School of Medicine (1977)
- Silverman, H.: "A Digitalis Therapy Advisor"; Master's Thesis TK-147, Project MAC,
Massachusetts Institute of Technology (1975)

Selected Invited Presentations:

- 2011 Annual AAMC Meeting: "Developing an Informatics Program to Meet Market Need"
(November 7, 2011)
- AAMC Webinar: "Informatics and the Workforce" (September 22, 2011)
- "Informatics at the Core of a New Medical Campus" American Association of Medical
Colleges Group on Information Resources, San Francisco, CA (May 2, 2008)
- "The Journey Towards Meaning and Fulfillment in Medical Practice" AAFP Women's
Health and Physician Wellness Conference, Ponte Vedra Beach, Florida (April 28,
2007)
- "Discovering Meaning and Fulfillment in Medical Practice" AAFP Women's Health and
Physician Wellness Conference, Ponte Vedra Beach, Florida (April 27, 2007)
April 27, 2007
- "Change Management - Receiving Acceptance of New Medical Information Systems from
Physicians and other Staff (Panelist)" Lawson 2002 Healthcare CIO Summit,
Phoenix, Arizona (March 11, 2002)
- "Alternative & Complementary Medicine: What's It All About?" The Healthcare
Roundtable CEO Retreat, San Marcos Island, Florida (November 6, 1998)
- "Alternative & Complementary Medicine", Illinois Hospital Association, Chicago, Illinois
(October 22, 1998)
- Keynote: "Aging as a Journey Toward Wisdom and Completion" 1998 Governor's
Conference on Aging, Flagstaff Arizona (May 15, 1998)
- Workshop: "HEALING CEREMONIES: Creating Personal Rituals for Spiritual,
Emotional, Physical and Mental Health", 1998 Governor's Conference on Aging,
Flagstaff Arizona (May 15, 1998)
- "Complementary & Alternative Medicine: What's It All About?" Woodland Healthcare
Educational Retreat, Berkeley California (April 25, 1998)
- "Operationalizing a Complementary Health Program in a Care Delivery System", The
Leadership Institute, Miami Florida (November 21, 1997)

Other Selected Talks and Teaching Responsibilities:

- "Teaching Integrative Medicine Within an Innovative Four Year FP Residency-
Fellowship", Program Directors' Workshop, Kansas City, Missouri (6/5/2005).
- "Teaching Integrative Medicine Within an Innovative Four Year FP Residency-

Fellowship”, RAP Workshop, Kansas City, Missouri (4/5/2005).

“Creating a 4-year Integrative Medicine Family Medicine Residency Fellowship”, 37th STFM Annual Spring Conference, Toronto, Canada (May 14, 2004)

“Looking Back, Looking Forward at the Incorporation of Spirituality in Family Medicine Practice and Teaching”, F. Craigie PhD, P. Cole MD, R. Hatch MD MPH, H. Silverman MD MS, Seminar presented at the Society of Teachers of Family Medicine Conference on Families and Health, San Diego, California(3/3/2000)

“Alternative & Complementary Medicine: What’s It All About?”, The Healthcare Roundtable CEO Retreat, San Marcos Island, Florida (November 6, 1998)

“Alternative & Complementary Medicine”, Illinois Hospital Association, Chicago, Illinois (October 22, 1998)

Keynote: “Aging as a Journey Toward Wisdom and Completion”, 1998 Governor’s Conference on Aging, Flagstaff Arizona (May 15, 1998)

Workshop: “HEALING CEREMONIES: Creating Personal Rituals for Spiritual, Emotional, Physical and Mental Health”, 1998 Governor’s Conference on Aging, Flagstaff Arizona (May 15, 1998)

“Complementary & Alternative Medicine: What’s It All About?”, Woodland Healthcare Educational Retreat, Berkeley California (April 25, 1998)

“Operationalizing a Complementary Health Program in a Care Delivery System”, The Leadership Institute, Miami Florida (November 21, 1997)

Spirituality in Family Practice Education and Clinical Care”, STFM 30th Annual Spring Conference, Boston Massachusetts (May 3-7, 1997)

Spirituality and Clinical Medicine: The Physician and Patient in a Spiritual Context”, presented at the Northeast Regional STFM Meeting, Washington DC (October 10-13, 1996)

Implementing and Using a Simple and Effective Patient Continuity System”, presented at the Annual Program Directors’ Workshop, Kansas City Missouri (June 7-11 1996)

Integrating Managed Care into the Educational Environment”, presented at the Annual Association of Hospital Medical Educators Conference, St. Petersburg Florida (May 7-9, 1996)

Managed Care Education: A Hands On Approach Integrating Principles with Practice in a Family Practice Residency”, presented at the 29th Society of Teachers of Family Medicine Annual Spring Conference, San Francisco, California (April 27 - May 1, 1996)

"Computer Assisted Curricular Design", proposed for presentation at the STFM 26th Annual Spring Conference (April 24-28, 1992)

Personal

Married: Sharon Silverman
 Children: Rachel and Arielle
 Birthdate: September 29, 1951
 Languages: German (fluent)
 Spanish (proficient)