

Mark Edwin Frisse
Accenture Professor
Department of Biomedical Informatics
Vanderbilt University

Education

University of Notre Dame	1974	B.S. (Pre-Professional Studies)
Washington University in St. Louis	1978	M.D.
Stanford University	1987	M.S. (Medical Information Science)
Washington University in St. Louis	1997	MBA

Licensure & Certification

Medical Licensure, 1980 (Missouri)
Board Certification: Internal Medicine, 1983

Appointments/Employment

1978 – 1980	Resident, Internal Medicine, Washington University
1980 – 1982	Post-Doctoral Fellow, Hematology and Oncology, Washington University
1982 – 1983	Instructor, Internal Medicine, Washington University
1982 – 1983	Chief Resident, Internal Medicine, Washington University
1983 – 1991	Assistant Professor, Internal Medicine, Washington University
1983 – 1999	Attending Physician, Barnes Hospital
1985 – 1987	NLM Training Fellow, Division of Medical Informatics, Stanford University
1991 – 1998	Associate Professor with Tenure, Internal Medicine, Washington University
1992 – 1999	Associate Dean, Academic Information Management, Washington University
1997 – 1999	Academic Director, Health Care EMBA Program, John M. Owen School of Business
1998 – 1999	Professor, Internal Medicine, Washington University
1999 – 2002	Vice President, Chief Medical Officer, & Director, Express Scripts
1999 – 2002	Director, Practice Patterns Science subsidiary, Express Scripts
2002 – 2004	Vice President, Clinical Transformation, First Consulting Group
2004 –	Accenture Professor, Department of Biomedical Informatics, Vanderbilt University
2010 –	Professor of Management (Adjunct), Vanderbilt Owen Graduate School of Management
2012 –	Professor of Nursing (Adjunct), Vanderbilt University School of Nursing

Service and Awards

1974	Phi Beta Kappa
1974	Lawrence Baldinger Pre-Medical Sciences Award
1978	Upjohn Prize for Metabolism Research
1978	Robert Carter Award
1978	Alpha Omega Alpha
1987-1990	ACP Teaching and Research Scholar
1989	Fellow, American College of Physicians
1989-1992	Board of Scientific Counselors, Lister Hill Center
1991	Fellow, American College of Medical Informatics
1992-1995	Board of Directors, American Medical Informatics Association
1992	Program Chair – the Sixteenth Annual Symposium on Computer Applications in Medical Care
1994-1997	National Board of Directors, Epilepsy Foundation of America
1997	Ida & George Elliot Prize (Medical Library Association)
1997	Co-Chair, National Program Committee for the Medical Library Association
1998-2000	Committee, Enhancing the Internet for Medical Applications, National Research Council, Computer

	Science and Telecommunications Board, National Academies of Science and Engineering
2003 – 2006	Board of Directors, American Medical Informatics Association
2005 – 2006	Co-Chair, Connecting for Health, Policy Subcommittee
2009	Program Chair, Spring Congress, American Medical Informatics Association
2005 – 2007	Board of Directors, eHealth Initiative
2006 – 2008	Board of Directors, SureScripts, LLC
2008 – 2009	Member, State of Tennessee Governor’s eHealth Committee
2007 –	National HIT Policy Committee, American Medical Association
2009	Co-Chair, Expert Panel on Lab Data Integration, High Value Health Care Project. Engelberg Center for Health Care Reform at the Brookings Institution.
2009 –	Fellow, New York Academy of Medicine
2010	Health and Human Services Office of the National Coordinator Strategic Plan Workgroup
2010	Advisory Committee. Substitutable Medical Apps, Reusable Technologies (SMART) Project, Strategic Health IT Advanced Research Projects (SHARP) Program funded through the Office of the National Coordinator for Health Information Technology.
2010 – 2012	Academic Progress Committee, Department Biomedical Informatics (Chair)
2012 – 2013	Clinically Integrated Network Technology Evaluation Task Force, Vanderbilt Health Affiliate Network (Chair)

Editorial

Academic Medicine
American Journal of Managed Care
American Journal of Pharmacy Benefits
Annals of Internal Medicine
Health Affairs
Health Services Research
International Journal of Medical Informatics
Journal of the American Medical Informatics Association
Journal of Biomedical Informatics
JAMA Internal Medicine
Journal of General Internal Medicine
New England Journal of Medicine

Teaching

1981 - 1982	Coursemaster, Introduction to Clinical Medicine. Washington University School of Medicine
1987 – 1993	Director, Training Program in Medical Informatics. Washington University School of Medicine
1989	Course Master, Advanced Artificial Intelligence. Graduate Program, Department of Computer Science
1994 - 1995	Lecturer in Medical Decision-Making, Introduction to Clinical Medicine
1991	Instructor, Problem-Based Learning Elective. Washington University School of Medicine
1993 - 1997	Coursemaster, Medical Informatics Elective
1996 - 1998	Lecturer, Managerial Cost Accounting, John M. Olin School of Business
1998	Coursemaster, Managed Care, John M. Olin School of Business
1998	Coursemaster, Information Technology, John M. Olin School of Business
2004 –	Lecturer, Foundations of Biomedical Informatics, Vanderbilt
2008 – 2011	Coursemaster, Capstone Projects. Owen Graduate School of Management
2012	Coursemaster, Systems Approach to Care. Vanderbilt Center for Better Health

Publications

Edited Books and Proceedings

1. Campbell JW, Frisse ME, eds. Manual of Medical Therapeutics, 24th Edition. Boston: Time Warner Books; 1983.
2. Frisse ME, editor. Proceedings of the 16th Annual Symposium for Computer Applications in Medical Care. New York: McGraw-Hill; 1992.

Book Chapters

1. Frisse ME. Leadership Issues: Midwestern University Health Sciences Center. In: Lorenzi NM, Riley RT, Ball M, Douglas JV, eds. Transforming health care through information: Case studies. New York: Springer-Verlag; 1995:196-200.
2. Frisse ME. Introduction to Modern Medical Practice: Medical Informatics. In: Stein JH, ed. Internal Medicine, 6th edition. St. Louis: Elsevier (Mosby); 1998:26-29.
3. Hersh WR, Detmer WM, Frisse ME. Information-retrieval Systems. In: Shortliffe EH, Perreault LE, eds. Medical informatics: computer applications in health care and biomedicine 2nd ed. New York, NY: Springer; 2000:539-572.
4. National Research Council, Computer Science and Telecommunications Board. Networking Health. Prescriptions for the Internet 2001. Washington DC, National Academies Press; 2001.
5. Frisse ME, Heekin WM. State Government Initiatives: Convener, Partner, and Leader in Developing Statewide Health Information Networks, in Paper Kills: Transforming Health and Healthcare with Information Technology, D. Merritt, Editor. 2007, CHT Press: Washington.
6. Frisse, ME. Information Technology Platform Requirements. in Olsen L, Grossman C McGinnis JM, Learning What Works: Infrastructure Required for Comparative Effectiveness Research. L. Olsen, C. Grossman and J. M. McGinnis. 2011, Washington, The National Academics Press.
7. Frisse ME, Florance V, Mandl KD, Kohane IS. The Future of Biomedical Informatics, in Shortliffe EH, Cimino JJ, eds. Medical informatics: computer applications in health care and biomedicine 4th ed. New York, NY: Springer; 2013 (to appear)

Peer Reviewed Publications and Reports

8. Scheidt WR, Frisse ME. Nitrosylmetalloporphyrins. II. Synthesis and Molecular Stereochemistry of Nitrosyl-alpha, beta, gamma, delta,-tetraphenylporphinoiron (ii). Journal of the American Chemical Society 1975; 97:17-21.
9. Mill WB, Frisse ME. Herpes Zoster In Hodgkin's Disease. Missouri Medicine 1978; 75:515-518.
10. Frisse ME. Searching For Information In A Hypertext Medical Handbook. In: Hypertext'87; 1987; Chapel Hill, NC: ACM 1987. p. 57-66.
11. Frisse ME. Searching For Information In A Hypertext Medical Handbook. Communications of the ACM 1988; 31:880-886.
12. Bieber M, Feiner S, Frisse ME, Hayes P, Peper G, Scacchi W. Expert Systems And Hypertext. In: Hypertext'89; 1989 November 5-8, 1989; Pittsburgh, PA: ACM; 1989. p. 392.
13. Frisse ME, Cousins S. Information Retrieval From Hypertext: Update On The Dynamic Medical Handbook Project. In: Hypertext'89; 1989 November 5-8, 1989; Pittsburgh, PA: ACM; 1989. p. 212.
14. Frisse MD, Cousins, SB. Guides for hypertext: An overview. Artificial Intelligence in Medicine 1990; 2:303-314
15. Frisse ME, Agosti M, Bruandet M, Hahn U, Weiss S. Panel: Hypertext: "Growing Up?" In: Vidick J-L, editor. IGIR'90, 13th International Conference on Research and Development in Information Retrieval; 1990 September 5-7, 1990; Brussels, Belgium: ACM; 1990. p. 343-347.
16. Frisse ME. The Case for Hypermedia. Academic Medicine 1990; 65:17-19.
17. Bernstein M, Brown P, Frisse ME, Glushko R, Zellweger P, Landow G. Structure, Navigation, And Hypertext: The Status Of The Navigation Problem. In: Walker J, editor. Hypertext'91; 1991; San Antonio, Texas: ACM; 1991. p. 363-366.
18. Frisse ME, Cousins S, Hassan S. WALT: a Research Environment For Medical Hypertext. In: Walker J, editor. Hypertext'91; 1991 December 15-18, 1991; San Antonio, Texas: ACM; 1991. p. 389-394.
19. Frisse ME, Cousins SB, Hassan SW. Information Retrieval Using A "Digital Book Shelf". Proceedings Of the Annual Symposium on Computer Applications in Medical Care 1991:803-807.

20. Frisse ME, Cousins S. Models for Hypertext. *Journal of the American Society for Information Science* 1992; 43:183-191.
21. Cousins SB, Frisse ME, Chen W, Mead CN. Stochastic Simulation Algorithms For Query Networks. *Proceedings Of the Annual Symposium on Computer Applications in Medical Care* 1991:696-700.
22. Zimmerman JB, Cousins SB, Hartzell KM, Frisse ME, Kahn MG. A Psychophysical Comparison Of Two Methods For Adaptive Histogram Equalization. *Journal of Digital Imaging* 1989; 2:82-91.
23. Frisse ME, Marrs K, Schoening P. A Method For Publishing Genomic Maps. *Proceedings of the 16th Annual Symposium on Computer Applications in Medical Care* 1992:376-379.
24. Cousins SB, Chen W, Frisse ME. A Tutorial Introduction To Stochastic Simulation Algorithms For Belief Networks. *Artificial Intelligence in Medicine* 1993; 5:315-340.
25. Jain NL, Murphy JF, Hassan SW, et al. Interactive electronic whiteboards in the medical classroom. *Proceedings of the Annual Symposium on Computer Applications in Medical Care* 1994:54-58
26. Frisse ME. Ubiquitous Computing. *Academic Medicine* 1992; 67:642-644.
27. Frisse ME. The Health Of The Computer-Based Patient Record. *Academic Medicine* 1992; 67:441-443.
28. Frisse ME. Medical Informatics In Academic Health Science Centers. *Academic Medicine* 1992; 67:238-241.
29. Frisse ME. Making Networks Work. *Academic Medicine* 1993; 68:764-766.
30. Frisse ME. Acquiring Information Management Skills. *Academic Medicine* 1994; 69:803-806.
31. Frisse ME, Kelly EA, Metcalfe ES. An Internet Primer: Resources And Responsibilities. *Academic Medicine* 1994; 69:20-24.
32. Frisse ME, Schnase JL, Metcalfe ES. Models for Patient Records. *Academic Medicine* 1994; 69:546-550.
33. Metcalfe ES, Frisse ME, Hassan SW, Schnase JL. Academic networks: Mosaic and the World Wide Web. *Academic Medicine* 1994; 69:270-273.
34. Frisse ME. What is the Internet Learning About You While You Are Learning About The Internet? *Academic Medicine* 1996; 71:1064-1064.
35. Frisse ME. The commerce of ideas: Internets and Intranets. *Academic Medicine* 1996; 71:749-753.
36. Frisse ME. Re-imagining the Medical Informatics Curriculum. *Academic Medicine* 1997; 72:36-41.
37. Frisse ME. Technology and Physician Responsibility. *MD Computing* 1998; 15:212-213.
38. Frisse ME. Computers and Productivity: Is It Time For A Reality Check? *Academic Medicine* 1998; 73:59-64.
39. McNamee LA, Launsby BD, Frisse ME, Lehmann R, Ebker K. Scaling An Expert System Data Mart: More Facilities In Real-Time. *Proceedings of the AMIA Annual Fall Symposium* 1998:498-502.
40. Braude RM, Florance V, Frisse ME, Fuller S. The Organization Of The Digital Library. *Academic Medicine* 1995; 70:286-291.
41. Florance V, Braude RM, Frisse ME, Fuller S. Educating Physicians To Use The Digital Library. *Academic Medicine* 1995; 70:597-602.
42. Frisse ME, Braude RM, Florance V, Fuller S. Informatics and medical libraries: changing needs and changing roles. *Academic Medicine* 1995; 70:30-35.
43. Fuller S, Braude RM, Florance V, Frisse ME. Managing information in the academic medical center: building an integrated information environment. *Academic Medicine* 1995; 70:887-891.
44. Frisse ME. Digital Libraries & Information Retrieval. *Proceedings of the AMIA Annual Fall Symposium* 1996:320-322.
45. Frisse ME, Tolva JN. The Commerce Of Ideas: Copyright in the Digital Era. *Academic Medicine* 1996; 71:45-53.
46. Frisse ME. IAIMS: Planning for Change. *Journal of the American Medical Informatics Association* 1997; 4:S13-9.
47. Frisse ME. Information Retrieval: A Health Care Perspective. *Information Processing and Management* 1997; 33:123-124.
48. Frisse ME, Florance V. A Library For Internists IX. Recommendations From The American College of Physicians. *Annals of Internal Medicine* 1997; 126:836-846.
49. Frisse ME. Medical Informatics' Promised Land: Are We There Yet? *Academic Medicine* 1999; 74:1301-1306.
50. Frisse MC. The Business Value of Health Care Information Technology. *Journal of the American Medical Informatics Association* 1999; 6:361-367.
51. Frisse ME. Healthcare in a Networked World. *The Journal of the American College of Dentists* 1999; 66:51-56.
52. Frisse ME, Musen MA, Slack WV, Stead WW. How should we organize to do informatics? Report of the ACMI Debate at the 1997 AMIA Fall Symposium. *Journal of the American Medical Informatics Association* 1998; 5:293-304.

53. McMullin ST, Reichley RM, Watson LA, Steib SA, Frisse ME, Bailey TC. Impact of a Web-based Clinical Information System on Cisapride Drug Interactions and Patient Safety. *Archives of Internal Medicine* 1999; 159:2077-2082.
54. Piccirillo JF, Mager DE, Frisse ME, Brophy RH, Goggin A. Impact of First-Line vs Second-Line Antibiotics for the Treatment of Acute Uncomplicated Sinusitis. *Journal of the American Medical Association* 2001; 286:1849-1856.
55. Cox ER, Motheral B, Frisse ME, Behm A, Mager D. Prescribing COX-2s for Patients New to Cyclo-Oxygenase Inhibition Therapy. *The American Journal of Managed Care* 2003; 9:735-742.
56. Cox ER, Frisse ME, Behm A, Fairman KA. Over-The-Counter Pain Reliever and Aspirin Use Within a Sample of Long-Term Cyclooxygenase 2 Users. *Archives of Internal Medicine* 2004; 164:1243-1246
57. Frisse ME, Marchibroda J, Welebob E. HIE Takes Shape In The States. *Journal of the American Health Information Management Association* 2005; 76:24-28.
58. Frisse ME. State And Community-Based Efforts to Foster Interoperability. *Health Affairs* 2005; 24:1190-1196.
59. Agency for Healthcare Research and Quality. Laboratory Exchange Meeting: Final Report. Rockville, MD: Agency for Healthcare Research and Quality; December, 2006. (*A principal author of this report*)
60. Frisse ME. Comments on Return On Investment (ROI) As It Applies To Clinical Systems. *Journal of the American Medical Informatics Association* 2006; 13:365-7.
61. Agency for Healthcare Research and Quality. Findings From The Evaluation of E-Prescribing Pilot Sites (AHRQ Publication No. 07-0047-EF); April, 2007. (*A principal author*)
62. Frisse ME, Holmes RL. Estimated Financial Savings Associated With Health Information Exchange And Ambulatory Care Referral. *Journal of Biomedical Informatics* 2007; 40:S27-32.
63. Hripcsak G, Kaushal R, Johnson KB, et al. The United Hospital Fund Meeting On Evaluating Health Information Exchange. *Journal of Biomedical Informatics* 2007; 40:S3-10.
64. Coffman T, Porter JP, Frisse ME. Reducing HIE Costs through Real-Time Data Feed Visualizations. *Proceedings of the AMIA Annual Fall Symposium* 2008:913.
65. Fahey C. Long Term Care Workshop: Creating Solutions for New York State. New York: CUNY; 2008 October, 2008. (*A principal author*) <http://markfrisse.com/docs/ny-ltc-final-report.pdf>
66. Frisse ME, King JK, Rice WB, et al. A regional health information exchange: architecture and implementation. *Proceedings of the AMIA Annual Fall Symposium* 2008:212-6.
67. Johnson KB, Gadd C, Aronsky D, et al. The MidSouth eHealth Alliance: Use and Impact In the First Year. *Proceedings of the AMIA Annual Fall Symposium* 2008:333-337.
68. University of Puerto Rico. Planning for Health Care Improvement for the People of Puerto Rico; 2008. <http://www.md.rcm.upr.edu/ehsrc/pdf/report.pdf> (*Principal Author*)
69. Porter JP, Starmer J, King J, Frisse ME. Mapping laboratory test codes to LOINC for a regional health information exchange. *Proceedings of the AMIA Annual Fall Symposium* 2007:1081.
70. Frisse, M., J. King, and J. Cunningham, Transition of a Health Information Exchange Platform from a University-Based System to a Commercial Vendor. *Proc AMIA Annu Fall Symp*, 2010. p. 1421-1423.
71. Frisse, M., et al., Development and Use of a Medication History Service Associated with a Health Information Exchange: Architecture and Preliminary Findings. *Proc AMIA Annu Fall Symp*, 2010: p. 242-245.
72. Frisse ME. Health information technology: One step at a time. *Health Affairs* 2009; 28:w379-w84.
73. Frisse ME. Health Information Exchange In Memphis: Impact On The Physician-Patient Relationship. *Journal of Law Medicine & Ethics* 2010; 38:50-57.
74. Johnson KB, Unertl KM, Chen Q, Lorenzi NM, Nian H, Bailey J, Frisse M. Health Information Exchange Usage In Ambulatory Settings: The Who, What and Why. *Journal of the American Medical Informatics Association*. 2011, 18(5): 690-697.
75. Gadd, CS, Ho Y, Hala CM, Blakemore D, Chen Q, Frisse ME, Johnson KB. User Perspectives on the Usability of a Regional Health Information Exchange. *Journal of the American Medical Informatics Association*. 2011,18(5): 711-716.
76. Frisse ME, Johnson KB, Nian H, Davison CL, Gadd CS, Unertl KM, Turri PA, Chen Q. The Financial Impact of Health Information Exchange on Emergency Department Care. *Journal of the American Medical Informatics Association*. 2012, 19(3): 328-333.
77. Nadas A, Frisse ME, Sztipanovits J. Modeling Privacy Aware Health Information Exchange Systems. *International Workshop on Engineering EHR Solutions (WEES)*. Amsterdam, the Netherlands. 2012.

78. Payne TH, Bates DW, Berner ES, Bernstam DV, Covvey HD, Frisse ME, Greenes RA, Hoffer EP, Kuperman G, Lehman HP, Liang L, Middleton B, Omenn GS, Ozbolt J. Healthcare information technology and economics. *Journal of the American Medical Informatics Association*. 2013, 20(2):212-217.
79. Frisse, ME. Commentary: Clinical informatics. *Medical Care* 2012; 50:S36-S37.
80. Bailey, JE, Pope, RE, Elliott E, Wan JY, Waters TM, Frisse ME. Health Information Exchange Reduced Repeated Diagnostic Imaging for Back Pain. *Annals of Emergency Medicine* 2013, 62(1): 16-24.
81. Bailey JE, Wan JY, Mabry LM, Landy SH, Pope RA, Waters TM, Frisse ME. Does health information exchange reduce unnecessary neuroimaging and improve quality of headache care in the emergency department? *J Gen Intern Med* 2013, 28(2): 176-183.
82. Nadas A, Juracz L, Olsen AJ, Frisse ME, Sztipanovits J. PolicyForge: A Collaborative Environment for Formalizing Privacy Policies in Health Care. 2013, 5th International Workshop on Software Engineering in Health Care (SECH'13), San Francisco.

Research Funding

Ongoing Research Support

Strategic Health IT Advanced Research Projects on Security (SHARPS).
Source: Office of the National Coordinator for Health Information Technology (HHS)
Amount: \$ 15 million
Award Number: 90TR000301.
PI: Carl Gunter (U of Illinois)
Vanderbilt Sub-contract PI: Janos Sztipanovitz
Role: Director of privacy policy modeling, implementation, and evaluation

MyHealth Team: Regional Team-Based And Closed-Loop Control Innovation Model For Ambulatory Chronic Care Delivery.

Source: CMS Health Care Innovation Award Program
PI: Robert Dittus
Role: Director, Project Management Office
Funding Amount: \$18,846,090

Past Research Support (through Vanderbilt)

State and Regional Demonstrations in Health Information Technology
Source: AHRQ
Amount: \$5.2 million
Award number: GR-06-17554-00
Funding Period: October 2004 – September 2010
PI: David Goetz (State of Tennessee)
PI: Mark Frisse (Vanderbilt)

State and Regional Demonstrations in Health Information Technology
Source: State of Tennessee
Amount: \$7.2 million
Dates: October 2004 – September 2010
PI: Mark Frisse (Vanderbilt)

Title: State-wide Health Information Technology Planning
Number: State of Tennessee (grant)
Agency: Officer of the Governor, State of Tennessee
PI: Mark Frisse
Funding Period: 8/1/2004 - 1/31/2005
Amount: \$1,140,000

Patient Safety Research Coordinating Center
Award Number: AHRQ-04-0012 (contract)
Source: Agency for Healthcare Research and Quality
PI: National Opinion Research Center Funding Period: 10/1/2004 - 9/30/2007 (with possible two-year extension)
Amount: \$500,000 (Vanderbilt sub-contract)

Past Research Support (through Washington University)

Teaching and Research Scholar Award
Agency: American College of Physicians
P.I.: Mark E. Frisse
Funding Period: July 1988 – June 1991
Amount: \$20,000/yr

Description: To promote research in medical digital libraries

Studies in Information Retrieval Research

Agency: Washington University Center for Intelligent Computing Systems

P.I.: Mark E. Frisse

Funding Period: July 1990 – June 1992

Amount: \$100,000

Computer-Aided Diabetes Therapy

Agency: Miles Laboratories, Inc.

P.I.: Mark E. Frisse

Funding Period: July 1988 – June 1990

Amount: \$109,000

A Human Yeast Artificial Chromosome Database

Number: 5-R01-HG00223

Agency: Office of Human Genome Research

P.I.: Mark E. Frisse

Funding Period: January 1991 – December 1993

Amount: \$247,452

Information Retrieval Research

Agency: Apple Computer, Inc. (T. Oren, S. Weyer, Advanced Technology Group)

P.I.: Mark Frisse

Funding Period: 1991 – 1993

Amount: \$50,000

Description: Development of Bayesian networks as an adjunct to the Macintosh operating system.

Connections to NSFNet: A Multi-campus Demonstration

Number: NCR 9221461

Agency: National Library of Medicine/National Science Foundation

P.I.: Mark Frisse

Funding Period: 9/15/92 – 2/28/94

Amount: \$50,000

Title: IAIMS Planning at Washington University Medical School

Number: Go8 LM06002-01

Agency: National Library of Medicine

P.I.: Mark E. Frisse

Funding Period: 10/1/96 – 9/30/97

Amount: \$149,949

Status: October 1, 1996

Decision Support Deployment in Diverse Clinical Settings: Health Applications for the National Information Infrastructure

Number: N01-LM-6-3550

Agency: National Library of Medicine

P.I.: Michael G. Kahn → Mark E. Frisse

Funding Period: 9/30/96 – 1/31/2000

Amount: \$1,303,815

Status: Phase 1 award (\$432,736) through 1/31/98