Curriculum Vitae

Thursday, November 13, 2014

Name: James J. Cimino
Position: Chief, Laboratory for Informatics Development
Address: NIH Clinical Center, Room 6-2551, 10 Center Drive, Bethesda, Maryland 20892
Phone: 301-443-9696 **Fax**: 301-402-0244
E-mail: ciminoj@cc.nih.gov

Education:

1977	Sc.B.	Brown University (Biology), Providence, Rhode Island
1981	M.D.	New York Medical College, Valhalla, New York

Postdoctoral Training:
Internship and Residency:

1981-1982	Intern in Medicine, Saint Vincent's Hospital, New York, New York
1982-1984	Resident in Medicine, Saint Vincent's Hospital, New York, New York

Research Fellowship:

1985-1988	Research Fellow, Medical Informatics, Mass. Gen. Hospital, Boston, MA

Licensure and Certification:

1983	New York State Medical License
1984	Certified, American Board of Internal Medicine
1985	Massachusetts Full Medical License

Academic Appointments:

1985-1988	Fellow, Department of Biostatistics, Harvard School of Public Health, Boston, MA
1986-1988	Preceptor, New Pathway Project, Harvard Medical School, Boston, MA
1988-1995	Assistant Professor of Medicine, College of Physicians and Surgeons, Columbia University New York, New York
1995-2002	Associate Professor of Medical Informatics in Medicine, College of Physicians and Surgeons, Columbia University, New York, New York
2002-2007	Professor of Biomedical Informatics and Medicine, College of Physicians and Surgeons, Columbia University, New York, New York
2008-Present	Adjunct Professor of Biomedical Informatics, College of Physicians and Surgeons, Columbia University, New York, New York
2008-Present	Senior Scientist, Lister Hill Center for Biomedical Communications, National Library of Medicine, Bethesda, Maryland
2010-Present	Adjunct Professor of Biochemistry and Molecular & Cellular Biology, Georgetown University School of Medicine
2013-Present	Professor of Biomedical Informatics, Uniformed Services University of the Health Sciences

Clinical Appointments:

1983-1984	Attending Physician, Emergency Med., Mercy Comm. Hosp., Port Jervis, NY
1984-1985	Attending Physician, Community Med., St. Vincent's Hospital, New York, NY
1984-1985	Attending Physician, Emergency Med., Mount Vernon Hosp., Mt. Vernon, NY
1984-1985	Attending Physician, Emergency Med., New Rochelle Hosp., New Rochelle,NY
1985-1988	Clinical Fellow, Dept. of Med., Massachusetts General Hosp., Boston, MA
1985-1988	Attending, Medical Walk-In Clinic, Mass. General Hospital, Boston, MA
1988-1998	Associates in Medicine, Presbyterian Hospital, New York, NY
1988-1995	Assistant Attending Physician, Medicine, Presbyterian Hospital, New York, NY
1992-2007	Medical Staff, Washington-Heights Ambulatory Care Network, New York, NY
1995-1998	Associate Attending Physician, Medicine, Presbyterian Hospital, New York, NY
1998-2007	Associates in Medicine, New York Presbyterian Hospital, New York, NY

1998-2002	Associate Attending Physician, Medicine, New York Presbyterian Hospital, New York, NY
2002-2007	Attending Physician, Medicine, New York Presbyterian Hospital, New York, NY
2004-2007	Volunteer Attending Physician, Columbia Student Medical Outreach (CoSMO) Clinic, New York
2008-Present	Chief, Laboratory for Informatics Development, NIH Clinical Center, Bethesda, Maryland
2008-Present	Attending Physician, Internal Medicine Consult Service, NIH Clinical Center, Bethesda, Maryland

Teaching Responsibilities:

1986-1988	Clinical Skills Preceptor, New Pathway (Harvard)
1989-1990	Coordinator, Medical Informatics Seminar Series
1988-2007	Clinical Instructor in Medicine (Columbia)
1989-2005	Preceptor, Introduction to Epidemiology (Columbia)
1990-1991	Instructor, Introduction to Medical Informatics (Columbia MI G4001)
1991-1996	Course Director, Quantitative Models of Medical Decision Making (Columbia MI G4002)
1997-2004	Course Director, Representation of Medical Data (Columbia MINF G4020)
1999-Present	Course Director, National Library of Medicine Woods Hole Biomedical Informatics Course
1998-2004	Vocabulary Tutorial II, HL7
1999-Present	What is Biomedical Informatics?, NLM Woods Hole Biomedical Informatics Course
1999-Present	Principles of Controlled Medical Terminologies, NLM Woods Hole Biomedical Informatics Course
2000-Present	Practical Considerations for Choosing a Controlled Terminologies in Health Care Applications AMIA Fall Symposium Tutorial
2002-Present	Principles of Database Design, NLM Woods Hole Biomedical Informatics Course
2005-2007	Understanding and Representing Data in the Clinical Record, Fourth Year Medical Curriculum, Columbia University College of Physicians and Surgeons
2005-2006	Coding and Representation, Columbia University Biomedical Informatics Short Course
2005-Present	Course Director, Exploration of Clinicians' Information Needs (Columbia BINF G4022)
2008-Present	Training Director, Clinical Informatics Postdoctoral Fellowship, National Library of Medicine
2009-Present	Special Presenter (Internal Medicine and Biomedical Informatics), National Youth Leadership Forum on Medicine
2012-Present	Lecturer, Medical Genomics for Clinicians and Researchers, Foundation for Advanced Education in the Sciences (FAES), NIH

Honors:

1992	Elected to Fellowship in the American College of Medical Informatics
1995	Priscilla M. Mayden Award for Excellence in Medical Informatics, University of Utah
1996	National Information Infrastructure Awards, Semi-Finalist in Health Category
1998	Elected to Fellowship, American College of Physicians
2002	President's Award, American Medical Informatics Association
2006	Elected to Membership in the American Clinical and Climatological Association
2006	Medal of Honor, New York Medical College
2006	Elected to Fellowship, New York Academy of Medicine
2009	NIH Clinical Center Director's Award
2012	Donald A. B. Lindberg Award for Innovation in Informatics, American Medical Informatics Association
2013	NIH Clinical Center Director's Award
2014	Elected as a Member of the Institute of Medicine

Scientific Posts:

1991-1995	Board of Scientific Counselors, National Library of Medicine
1991-1995	Program Committee, Symposium on Computer Applications in Medical Care
1993-1999	Elected to Columbia University Faculty Council, Department of Medicine (two terms)
1993-1999	Editorial Board, Journal of the American Medical Informatics Association
1994	IAIMS Ad Hoc Review Committee, National Library of Medicine
1994-1999	Board of Directors, American Medical Informatics Association (two terms)

1994-1997	Electronic Medical Records Steering Committee, National Library of Medicine
1995-1996	IAIMS External Advisory Committee, University of Pittsburgh
1996	Chairman, Scientific Program, AMIA Fall Symposium
1996-2002	Systematized Nomenclature of Medicine (SNOMED), Editorial Board, College of American Pathologists
1996-2000	Computer-Based Patient Records Institute, Davies Award Section Committee
1997	Editorial Board, Intermedic: a Journal on Internet and Medicine (R.M. Sabbatini, S Cardoso, eds.)
1997-2002	Editorial Board, Handbook of Medical Informatics (J.H. van Bemmel, M.A. Musen, eds.)
1997-2003	Co-chair, Health Level Seven (HL7) Vocabulary Technical Committee
1998	Institute of Medicine, Committee on Internet Access to the National Library of Medicine's Toxicology and Environmental Health Databases (TOXNET)
1998-1999	Elected Secretary of the American Medical Informatics Association
1999-2012	Editorial Board, Methods of Information in Medicine
1999-2002	Chair, HEALNET Scientific Advisory Committee (Canadian Centers of Excellence)
1999-2002	Medical Informatics and Technology Applications Consortium Board (NASA Advisory)
1999-2005	Elected to Columbia University Faculty Council, Department of Medical Informatics (two terms)
2000-Present	Associate Editor, Journal of Biomedical Informatics
2001-2004	Secretary, American College of Medical Informatics
2002-Present	Editorial Board, BioMed Central
2004	National Center for Scientific Review, Ad Hoc Review Committee
2005-2007	Board of Directors, American Medical Informatics Association
2007	University of California at Davis, Center for Translational Science Center Advisory Board
2009-2014	Medical Informatics Committee, American College of Physicians
2009-2011	Clinical Decision Support Technical Expert Panel, National Quality Forum
2010	Scientific Program Chair, American College of Medical Informatics
2011-Present	Data Warehouse External Advisory Committee, University of Wisconsin-Madison
2013	Institute of Medicine, Roundtable on Value and Science-Driven Health Care: Digital Learning Collaborative
2013	Institute of Medicine, Planning Committee for Workshop on Data Harmonization for Patient-Centered Clinical Research

Invited Keynotes:

1994	Keynote Speaker, Brazilian Conference on Medical Informatics, Porto Alegre, Brazil
1995	Plenary Speaker, Medinfo '95, Vancouver, Canada
1996	Keynote Speaker, COACH (Canadian medical informatics association), Toronto
1997	Keynote Speaker, New Technologies in Hospital Information Systems, Ulm, Germany
1998	Keynote Speaker, Electronic Patient Records in Medical Practice (EPRiMP), Rotterdam
1999	Keynote Speaker, National Cancer Institute, Annapolis, Maryland
1999	Keynote Speaker, Rocky Mountain Regional Medical Informatics Fair, Denver, Colorado
1999	Cornerstone Lecturer, AMIA Annual Symposium, Washington, DC
2000	Keynote Speaker, 7th International Congress of Nursing Informatics, Auckland, New Zealand
2002	Keynote Speaker, Medical Informatics Europe (MIE), Budapest, Hungary
2005	Keynote Speaker, IAIMS Consortium, Boston, MA
2006	Keynote Speaker, GMDS (German Society for Medical Informatics annual meeting), Leipzig, Germany
2007	Keynote Speaker, 2007 Electronic Health Record Observatory, Nybørg, Denmark
2008	Plenary Keynote, Northern California / Nevada Medical Library Group, Las Vegas, Nevada
2008	Plenary Speaker, Technologic Innovations in Nursing Education, Hilton Head, South Carolina
2008	Technology Invited Speaker, Mid-Atlantic Chapter of the Medical Library Association, Morgantown, WV
2009	Keynote Speaker, Summer Institute of Nursing Informatics, U. of Maryland, Baltimore, MD
2010	Keynote Speaker, City-Wide Medical Grand Rounds, University of Buffalo School of Medicine, Buffalo, NY
2010	Plenary Keynote, DIA/FDA CDER/CBER Computational Science Annual Meeting, Bethesda,

MD

2010	Plenary Keynote, Upstate New York and Ontario Medical Library Association, Syracuse, NY
2011	Plenary Keynote, Greater China eHealth Forum, Kowloon, Hong Kong
2011	Plenary Keynote, Central Pennsylvania Health Sciences Library Association, Hershey, PA
2011	Plenary Keynote, North Atlantic Health Sciences Libraries Association, Uncasville, CT
2012	Keynote, Eighth International Conference on Data Integration in the Life Sciences, College Park, MD
2012	Plenary Keynote, Catalan Forum for eHealth (Fòrum CIS), Barcelona, Spain
2013	Keynote, Information Technology in Health Care, Victoria, British Columbia, Canada
2014	Keynote. Informatics Technology for Cancer Research (ITCR) Initiative Annual Principal Investigator Meeting, Rockville, MD
2014	Keynote, Health Informatics and Technology Conference, Baltimore, MD

Memberships:

1987-1989	American Association for Medical Systems and Informatics (AAMSI)
1989	Health Education Committee
1989-Present	American Medical Informatics Association
1990	Nominations Committee
1991-1995	Awards Committee, Chairman, Student Paper Competition
1992-1996	Hospital Information Systems Working Group
1994-1997	Board of Directors
1998-1999	Secretary
1994-2009	Telecommunications Committee
1994-2006	Meetings Committee
2000-2006	Chair
1996-Present	Internet Working Group
2005-2007	Board of Directors
2011-2012	*Board of Directors (Ex Officio)*
1990-1993	Integrated Academic Information Management Systems (IAIMS) Consortium Board
1991-1999	ASTM Committee E31 - Computerized Systems
1992-Present	Fellow, American College of Medical Informatics
2001-2004	Secretary
2009-2010	President-Elect
2011-2012	President
2013-2014	Past-President
1992-Present	Member, American College of Physicians
1998-Present	Fellow
1994-Present	International Medical Informatics Association Working Group 6 - Codes and Structures
1997-2008	Member, Health Level 7 (HL7)
1997-2003	Co-chair, Vocabulary Technical Committee
2002-2004	Board Member, Open Health Terminology Consortium
2006-2011	Fellow, American Clinical and Climatological Society
2006-Present	New York Academy of Medicine
2011-2012	Member, International Health Terminology Standards Development Organization Tech. Comm.
2014-Present	Member, Institute of Medicine

Fellowships, Grants and Contracts:

1985-1988	Medical Informatics Fellowship, National Library of Medicine
1986-1988	Senior Investigator, Unified Medical Language System (UMLS), National Library of Medicine (PI: G. Octo Barnett)
1989-1994	Senior Investigator, Integrated Academic Information Management Systems (IAIMS), National Library of Medicine (PI: Paul Clayton and Rachel Anderson)
1989-1995	Senior Investigator, Clinical Decision Support Systems, IBM (PI: Paul Clayton)

1991-1994	Principal Investigator, Unified Medical Language System (UMLS) Development, National Library of Medicine ($517,951)
1992-2000	Director, Medical Informatics Training Program, National Library of Medicine ($1,218,479)
1994-1997	Principal Investigator, Biomedical Applications of High-Performance Computing and Communications, National Library of Medicine ($1,030,610)
1994-1997	Principal Investigator, Applied Research Relevant to an Electronic Medical Record, National Library of Medicine ($1,011,716)
1995-1996	Principal Investigator, Unified Medical Language System, National Library of Medicine ($24,980)
1997-1998	Principal Investigator, Center for Advanced Technology (New York State), Knowledge Structures to Support Medical Decision-Making ($80,000)
1996-2000	Principal Investigator, Health Applications for the National Information Infrastructure, National Library of Medicine ($2,307,664)
1998-1999	Principal Investigator, National Heart Attack Alert Program planning grant ($100,000)
1999-2002	Principal Investigator, National Heart Attack Alert Program implementation grant ($5,002,375)
2001-2003	Senior Investigator, National Evaluation AIDS Education and Training Center, HRSA (PI: Peter Messeri)
2002-2008	Principal Investigator, Infobuttons to Improve Clinicians' Access to Information, National Library of Medicine ($2,391,989)
2006-2008	Co-Principal Investigator, Informatics for Diabetes Education and Telemedicine (IDEATel), Center for Medicare and Medicaid Services, (PI: Steven Shea; $28,000,000)
2007-2009	Principal Investigator, Semantic and Machine Learning Methods for Mining Connections in the UMLS, National Library of Medicine ($402,300)
2007-2010	Principal Investigator, Librarian Infobutton Tailoring Environment (LITE), National Library of Medicine ($337,295)

Conference Committees:

1991	Fifteenth Annual Symposium on Computer Applications in Medical Care Program Committee, Area Track Chair for Concepts, Issues and Standards
1992	American Medical Informatics Association, 1992 Spring Congress Program Committee - Decision Support Systems Track
1992	Sixteenth Annual Symposium on Computer Applications in Medical Care Program Committee, Area Track Chair for Institutional Systems
1992-1994	American Medical Informatics Association Student Paper Competition, Chairman
1993	CANON Retreat on Methods for Developing Controlled Medical Vocabularies, Chairman
1993	Seventeenth Annual Symposium on Computer Applications in Medical Care Program Committee, Area Track Chair for Demonstrations and Poster Presentations
1994	Eighteenth Annual Symposium on Computer Applications in Medical Care Program Committee, Area Track Chair for Nomenclature and Coding
1994	International Medical Informatics Association, Workshop on Natural Language Processing, Mont Pelerin, Switzerland, Steering Committee
1995	Nineteenth Annual Symposium on Computer Applications in Medical Care Program Committee, Area Track Chair for Demonstrations and Workshops
1996	AMIA Fall Symposium (Formerly SCAMC) - Program Chair
1997	AMIA Fall Symposium - Program Committee
1997	International Medical Informatics Association, Workshop on Codes and Structures, Jacksonville, Florida, Steering Committee
1998	International Medical Informatics Association, Workshop on Electronic Patient Records in Medical Practice, Rotterdam, The Netherlands, Steering Committee
1999	International Medical Informatics Association, Workshop on Codes and Structures, Phoenix, Arizona, Steering Committee
1999	National Library of Medicine Training Directors Meeting (Conference Organizer), Arden, NY
2002	Information Technology Enabling Clinical Research, National Science Foundation and Association of American Medical Colleges, Landsdowne, VA
2003	National Health Information Infrastructure Planning Committee - Consumer Health Track,

	Washington, DC
2004	9th International Conference on the Principles of Knowledge Representation and Reasoning, Whistler, Canada
2004	Medinfo 2004 Organizing Committee, San Francisco, CA
2005	International Medical Informatics Association, Workshop on Ontologies and Biomedical Informatics, Rome, Italy
2008	American Medical Informatics Association Spring Congress, Scientific Program Committee, Phoenix, AZ
2010	American College of Medical Informatics Winter Symposium, Chair, Scientific Program Committee, Tucson, AZ
2010	American Medical Informatics Association Summit on Translational Bioinformatics, Scientific Program Committee, San Francisco, CA
2010	Third International Conference on Health Informatics (HEALTINF/BIOSTEC 2010), Valencia, Spain
2010	International Conference on Data Mining Workshop on Biological Data Mining and its Applications in Healthcare, Sydney, Australia
2011	International Conference on Biomedical Ontology (ICBO2011), Buffalo, NY
2011	Fourth International Conference on Health Informatics (HEALTINF/BIOSTEC 2011), Rome, Italy
2011	Workshop on Interactive Systems in Healthcare (WISH 2011), Association of Computing and Machinery (ACM), Washington, DC
2011	AMIA 2011 Invitational Policy Meeting Steering Committee, Washingon, DC
2012	Fifth International Conference on Health Informatics (HEALTINF/BIOSTEC 2012), Vilamoura, Portugal
2012	International Conference on Telehealth (Telehealth 2012), Innsbruck, Austria
2012	International Conference on Biomedical Ontology (ICBO2012), Graz, Austria
2012	8th International Conference on Data Integration in the Life Sciences (DILS), College Park, MD
2012	Workshop on Ontology-based Biomedical Data Capture, Graz, Austria
2012	AMIA 2012 Invitational Policy Meeting Steering Committee, Washingon, DC
2012	Workshop on Interactive Systems in Healthcare (WISH 2012), Association of Computing and Machinery (ACM), Chicago, IL
2013	6th International Conference on Health Informatics (HEALTINF/BIOSTEC 2013), Barcelona, Spain
2013	AMIA 2013 Clinical Research Informatics Summit (Track Chair), San Francisco, CA
2013	Medinfo 2013 Scientific Program Committee (Track Chair), Copenhagen, Denmark
2013	International Conference on Biomedical Ontology (ICBO2013), Montreal, Canada
2013	9th International Conference on Data Integration in the Life Sciences (DILS), Montreal, Canada
2013	ACM-BCB Health Informatics Symposium, Washington, DC
2013	Workshop on Interactive Systems in Healthcare (WISH 2013), Association of Computing and Machinery (ACM), Washington, DC
2013	IOM/PCORI Workshop on Data Harmonization, Washington, DC
2014	7th International Conference on Health Informatics (HEALTINF/BIOSTEC 2014), Eseo, France
2014	10th International Conference on Data Integration in the Life Sciences (DILS), Lisbon, Portugal
2014	International Conference on Biomedical Ontology (ICBO2014), Houston, Texas
2014	Workshop on Interactive Systems in Healthcare (WISH 2014), Association of Computing and Machinery (ACM), Washington, DC
2015	8th International Conference on Health Informatics (HEALTINF/BIOSTEC 2015), Lisbon, Portugal
2015	AMIA 2015 Clinical Research Informatics Summit (Track Chair), San Francisco, CA
2015	Information Technology and Communications in Health (ITCH), Victoria, BC, Canada
2015	AMIA Fall Symposium - Program Committee

Conference Refereeing:

1987-1995	Annual Symposium on Computer Applications in Medical Care

1995-2013	Medinfo
1996-Present	AMIA Annual Fall Symposium
2005-Present	Medical Informatics Europe (MIE)
2007-Present	Information Technology and Communications in Health (ITCH)
2014	SNOMED CT Implementation Showcase

Journal Reviewing:

1992-1993	*Computer*
1993	*Bulletin of the Medical Library Association*
1993-Present	*Journal of the American Medical Informatics Association*
1994-Present	*Methods of Information in Medicine*
1997-Present	*Artificial Intelligence in Medicine*
1997	*IEEE Expert*
1999-Present	*JAMA*
2000-Present	*Journal of Biomedical Informatics*
2001	*Journal of Public Health Management and Practice*
2002-Present	*BioMed Central*
2008-Present	*The Lancet*
2008-Present	*The Annals of Internal Medicine* (top 30% of reviewers in 2008)
2010-Present	*Pediatrics*
2012-Present	*Computer Programs and Methods in Biomedicine*
2012-Present	*IMIA Yearbook of Medicine*
2013-Present	*Chest*
2013-Present	*Genetics in Medicine*
2014	*Journal of Comparative Effectiveness Research*
2014	*Health Affairs*
2014	*Journal of Biomedical Semantics*

Institutional Committees:

1995-2007	Columbia University Health Sciences Faculty Council
2000-2007	Department of Biomedical Informatics Executive Committee
2000-2007	Department of Biomedical Informatics Training Committee
2000-2007	Department of Biomedical Informatics Admissions Committee
2001-2004	Columbia University School of Public Health, Infectious Disease Training Steering Committee
2002-2007	Chair, Department of Biomedical Informatics Committee on Appointments and Promotions
2007	Columbia University Health Sciences Executive Committee of the Faculty Council
2008-2010	Clinical Center Executive Committee
2009-2010	Chair, Search committee for NLM Deputy Director of Extramural Programs
2009-Present	Clinical Center Information Technology Advisory Group
2010-2011	Search Committee for NLM Chief of Cognitive Science Branch
2011-2013	Advisory Committee to the NIH Director – IT Assessment Team, subcommittee chair: Phenomics
2011-Present	Health and Human Services Domain IT Steering Committee, Dept of Health and Human Services
2011-Present	Fellowship Program Selection Committee, Lister Hill National Ctr for Biomed Communications
2012-Present	Federal Research Domain IT Steering Committee, Dept of Health and Human Services
2012-2013	Data and Informatics Pre-Implementation Group, Office of the Deputy Director of NIH
2013-2014	Comparative Effectiveness Research Coordinating Committee
2013-Present	Big Data to Knowledge (BD2K) Committee on Facilitating Broad Use of Data ("Group 1")
2013-Present	Big Data to Knowledge (BD2K) Committee on Centers of Excellence ("Group 4")
2014-Present	NIH Information Technology Budget Advisory Council
2014-Present	Big Data to Knowledge (BD2K) Executive Committee
2014-Present	Trans-NIH Outcomes Effectiveness Research Interest Group

Students and Trainees Supervised:

Justin Starren, MD - Postdoctoral training program, thesis committee member; 1992-1996, Ph.D. 1996; "From Multimodal Sublanguages to Medical Data Presentations

Gai Elhanan, MD - Postdoctoral training program, advisor; 1995-1998, M.A. 1998; "Integrating DXplain into a Clinical Information System using the World Wide Web"

Qing Zeng - PhD thesis advisor; 1994-1999, Ph.D. 1999; "Using Knowledge to Dynamically Generate Views of an Electronic Medical Record"

Eneida Mendonça, MD - PhD thesis advisor; 1994-2002; "Extracting medical information from an electronic medical record in order to improve information retrieval and decision making"

Ying Chen - Masters thesis advisor; 1998-1999, M.A. 1999; "Linking guidelines for mammography to an electronic medical record for use by patients"

Rita Kukafka, DrPH - Postdoctoral training program, advisor; 1998-2001; "Modeling patient response to acute myocardial infarction: implications for a tailored technology-based program to reduce patient delay"

Yves Lussier, MD PhD - Postdoctoral training program, advisor; 1998-2001; "Overcoming the barriers of Web-based interventions for elder patients: enabling strategies for the MI HEART clinical trial"

David Wajngurt, MD - Masters program, 1997-1999; Supervisor, 1999-2001; Medical Entities Dictionary maintenance

David Baorto, MD - Masters program, 2001-2002; "An Infobutton" for enabling patients to interpret on-line Pap smear reports"

Martin Pusic, MD - Masters thesis advisor; 2000-2001; "The Influence of an Infobutton on the Management of Fever Without Source"

Lawrence McKnight, MD - Postdoctoral training program, advisor; 2000-2003; "Virtual White Board"

Peter Stetson, MD - Postdoctoral training program, advisor; 2000-2003; "Patient Care Team Coordination"

Elizabeth Chen - PhD thesis advisor; 2000-2004; "Knowledge discovery in clinical information system log files and the implications for wireless handheld clinical applications"

Yoon-Ho Seol - PhD, committee member; 2000-2003; "Scenario-based assessment of physicians' information needs"

Mona Chang - PhD, committee member; 2001-2002; "Determining Patient Classifications Using Machine Learning"

Jan Horsky - PhD, committee member; 2001-2006; "Distributed Cognitive Resources: The analysis of human interaction with a complex clinical information system"

Mureen Allen, MD - Postdoctoral training program, advisor; 2002-2005; "Responding to clinician's information needs"

Leanne Currie - PhD, committee member, 2000-2005; "Development and Testing of an Automated Fall-Injury Risk Assessment Instrument"

Alex Yu, MD - PhD, advisor; 2001-2007; "Application of Formal Ontological Methods to Terminology Maintenance"

Guilherme Del Fiol, MD – PhD, committee member, 2007-2008; "Classification Models for the Prediction of Clinicians' Information Needs"

Chintan Patel - PhD, advisor; 2005-2009; "Using Automated Methods to Identify Connections across Biomedical Terminologies"

Xinxin Zhu, MD – PhD, advisor; 2006-2009; "Representing Uncertain Multi-source Medication History with Temporal Information and Drug Classification to Improve Medication Summarization"

Krystl Haerian, MD – postdoctoral fellow, 2008-2009, "Use of Clinical Alerting to Improve the Collection of Clinical Research Data"

Sevgin Hunt, RN – masters degree candidate, University of Maryland, "An Analysis of Infobutton Log Files to Determine Whether Clinicians' Role and Clinical Context Predict Preferences for Online Information Resources"

Lu Wang, MD – postdoctoral fellow, 2010, "Service Oriented Architecture and User Interface for a Controlled Terminology Server for Clinical Research"; visiting postdoctoral fellow, 2010, "A Research Terminology Server"

Xia Jing, MD, PhD – postdoctoral fellow, 2010-2013, "Librarian Infobutton Tailoring Environment", "Graphical Methods for Reducing, Visualizing and Analyzing Large Data Sets Using Hierarchical Terminologies

Jonathan Joe – rotating medical student, 2011, "Automated Detection of Discrepant Patient Data"

John Manning – rotating medical student, 2012, "Visualizing the Data – Using Lifelines2 to Perform Rapid Pairwise Analyses on Laboratory Data Drawn from the Biomedical Translational Research Information System (BTRIS)"

Xuequin Pan, MD, PhD – postdoctoral fellow, 2013-present, project title TBD

Nina M. Nguyuen May – summer IRTA fellow, 2012, "Cognitive Pattern Recognition and Data Visualization as a Joint Method for Enhancing Longitudinal Medical Research"; summer IRTA fellow, 2013, "Longitudinal Patterns of Biomarkers and Radiographic Findins in Hypoparathyroidism: Medical Applications of Temporal Visualization and Data Mining"

Gillian Takamaru – summer IRTA fellow, 2013, "Improving the Delivery of Health Knowledge to the Bedside"

John Kimbrough, MD – postdoctoral fellow, 2013, "Analysis of MIMIC-II Data to Detect Associations between Cardiac Drugs and Outcomes"

Amos Cahan, MD – postdoctoral fellow, 2013-present, project title TBD

Nirupa Parmhans – summer IRTA fellow, 2014, "Predictive Nature of Isolated Vitamin B12 Elevation"

Fabricio Kury, MD – postdoctoral fellow, 2014-present, project title TBD

Kyungsook Gattrell, MS, RN, PhD – postdoctoral fellow, 2014-present, project title TBD

Consulting:

1984	Hewlett-Packard Corporation, Emergency Room Information Needs
1990	St. Luke's Medical Center (Milwaukee), Integrated Academic Information Management Systems
1992	Vanderbilt University, Controlled Medical Vocabularies for Clinical Information Systems
1992	National Research Counsel, Controlled Medical Vocabularies for Healthcare
1993-1995	Louisiana State University, Integrated Advanced Information Systems
1995-1999	New Jersey Institute of Technology, Department of Computer and Information Science
1995-1996	Strategic Medical Information, Inc., Nesconset, New York
1998-2004	University of Pittsburgh, Integrated Advanced Information Management Systems
2001-2004	CMTC Corporation, New York
2002-2004	University of Rochester, Dermatology Terminology Project
2002-2003	Express Scripts International; Physician Advisory Council
2003-2004	University of Iowa, Nursing Interventions Classification and Nursing Outcomes Classification
2004-2006	Children's Hospital of Philadelphia, IAIMS Advisory Committee
2004-2006	Phase Forward, Waltham, MA
2006	University of Iowa Medical Center
2006-2007	National Cancer Institute (caBIG), Bethesda, MD
2006-Present	Elsevier, iConsult Advisory Board, London
2006-2007	Logical Images, Rochester, New York
2006-2007	New Jersey Institute of Technology, Department of Computer and Information Science
2006-2007	University of California at Davis, Center for Translational Science

Research Interests: I am currently pursuing several lines of research in biomedical informatics. Research in biomedical concept representation is a foundational subject area that is I leverage to support applied informatics research in other domains. Key topics include: knowledge-based vocabulary representation, intelligent vocabulary maintenance tools, and collaborative vocabulary building and sharing. A second area of research is clinical decision support, which is primarily focused on integration of clinical systems and information resources as a method for anticipating and addressing clinician information needs through the provision of intelligent access to "just in time" medical knowledge. Infobuttons, which are heavily dependent on high-quality terminology and ontology resources, are the archetype for this mode of decision support. A third area of research relates to informatics research to support clinical and translational research. This area also depends on foundational terminologies and ontologies to support the creation of integrated and federated data resources, as well as research on researcher information needs to identify the tasks in this domain and the build tools that can bring the data resources to bear on these tasks.

Publications:

Original Peer-Reviewed Articles:

Barnett GO, Cimino JJ, Hupp JA, Hoffer EP: DXplain. An evolving diagnostic decision-support system, *Journal of the American Medical Association*; July 3, 1987; 258(1):67-74.

Cimino JJ, Barnett GO: Automated Translation Between Medical Terminologies Using Semantic Definitions, *Proceedings of the American Association for Medical Systems and Informatics Congress 1989*, May 10, 1989: 113-117. **Selected for reprint in *MD Computing*, March-April, 1990; 7(2):104-109.**

Cimino JJ, Sengupta, S: IAIMS and UMLS at the Columbia-Presbyterian Medical Center. Medical Decision Making, 1991; 11(suppl):S89-93.

Cimino JJ, Sideli RV: Using the UMLS to Bring the Library to the Bedside. Medical Decision Making, 1991; 11(suppl):S116-S120.

Hendrickson G, Anderson RK, Clayton PD, Cimino JJ, Hripcsak G, Johnson SB, McCormack M, Sengupta S, Shea S, Sideli R, Roderer N. The Integrated Academic Information Management System At Columbia Presbyterian Medical Center. MD Computing 1992; 9(1):35-42.

Cimino JJ, Elkin PL, Barnett GO. As We May Think: The Concept Space and Medical Hypertext. *Computers and Biomedical Research*, 1992; 25(3):238-263.

Cimino JJ, Aguirre A, Johnson SB, Peng P: Generic Queries for Meeting Clinical Information Needs. *Bulletin of the Medical Library Association*, 1993; 81(2): 195-206.

Cimino JJ: Saying What You Mean and Meaning What You Say: Coupling Biomedical Terminology and Knowledge. *Academic Medicine*, 1993; 68(4): 257-260.

Cimino JJ, Barnett GO: Automatic Knowledge Acquisition from MEDLINE. *Methods of Information in Medicine*, 1993; 32(2): 120-130. **Selected for reprint in van Bemmel JH, McCray AT, eds.: *Yearbook of Medical Informatics*, International Medical Informatics Association, Rotterdam, 1994: 384-394.**

Warner HR, Barnett GO, Greenes RG, Cimino JJ: A View of Medical Informatics as an Academic Discipline (editorial). Computers and *B*iomedical Research, 1993; 26(4):319-326.

Cimino JJ, Clayton PD, Hripcsak G, Johnson SB: Knowledge-based Approaches to the Maintenance of a Large Controlled Medical Terminology. *Journal of the American Medical Informatics Association*, 1994; 1(1):35-50.

Cimino JJ: Data Storage and Knowledge Representation for Clinical Workstations. *International Journal of Bio-Medical Computing*, 1994; 34:185-194. **Selected for reprint in van Bemmel JH, McCray AT, eds.: *Yearbook of Medical Informatics*, International Medical Informatics Association, Rotterdam, 1995:289-298.**

Sengupta S, Clayton PD, Molholt P, Sideli RV, Cimino JJ, Hripcsak G, Johnson SB, Allen B, McCormack M, Hill C: IAIMS and Sharing. *International Journal of Bio-Medical Computing*, 1994; 34:339-348.

Friedman C, Alderson PO, Austin JHM, Cimino JJ, and Johnson SB: A general natural language text processor for clinical. *Journal of the American Medical Informatics Association*, 1994; 1(2): 161-174.

Evans DA, Cimino JJ, Hersh WR, Huff SM, Bell DS. Toward a Medical Concept Representation Language. *Journal of the American Medical Informatics Association*; 1994;1(3): 207-217.

Friedman C, Cimino JJ, Johnson SB. A Schema for Representing Medical Language Applied to Clinical Radiology. *Journal of the American Medical Informatics Association*; 1994;1(3): 233-248.

Cimino JJ. Controlled Medical Vocabulary Construction: Methods from the Canon Group. *Journal of the American Medical Informatics Association*; 1994;1(3): 296-297.

Cimino JJ, ed. Reports from the Canon Group. *Journal of the American Medical Informatics Association*; 1994;1(3): 207-262.

Friedman C, Huff SM, Hersh WR, Pattison-Gordon E, Cimino JJ. The Canon effort: working toward a merged model. *Journal of the American Medical Informatics Association*; 1995: 4-18.

Cimino JJ, Johnson SB. Use of the Unified Medical Language System in Patient Care; *Methods of Information in Medicine*; 1995;34(1/2):158-164.

Cimino JJ. Coding systems in health care. In van Bemmel JH, McCray AT, eds.: *Yearbook of Medical Informatics*, International Medical Informatics Association, Rotterdam, 1995:71-85. **Reprinted in *Methods of Information in Medicine*; 1996;35(4):273-284.**

Cimino JJ, Allen BA, Clayton PD. Medical informatics training at Columbia University and the Columbia-Presbyterian Medical Center. In van Bemmel JH, McCray AT, eds.: *Yearbook of Medical Informatics*, International Medical Informatics Association, Rotterdam, 1995:125-129.

Cimino JJ. Vocabulary and health care information technology: state of the art. *Journal of the American Society for Information Science*; 1995;46(10):777-782.

Cimino JJ, Socratous SA, Clayton PD. Internet as clinical information system: application development using the World Wide Web. *Journal of the American Medical Informatics Association*; 1995;2(5):273-284.

Cimino JJ. Linking patient information systems to bibliographic resources. *Methods of Information in Medicine*; 1996;35(2):122-126.

Cimino JJ. Formal descriptions and adaptive mechanisms for changes in controlled medical vocabularies. *Methods of Information in Medicine*; 1996;35(3):202-210.

Hripcsak G, Clayton PD, Jenders RA, Cimino JJ, Johnson SB. Design of a clinical event monitor. *Computers in Biomedical Research*; 1996;29(3):194-221.

Hripcsak G, Allen B, Cimino JJ, Lee R. Access to Data: Comparing AccessMed to Query by Review. *Journal of the American Medical Informatics Association*; 1996;3(4):288-299.

Cimino JJ. Review paper: coding systems in health care. *Methods of Information in Medicine*; 1996;35(4-5):273-84.

Cimino JJ. Beyond the Superhighway: Exploiting the Internet with Medical Informatics. *Journal of the American Medical Informatics Association*; 1997;4:279-284.

Cimino JJ. Intranet technology in hospital information systems. *Studies in Health Technology and Informatics*. 1997;45:102-9.

Cimino JJ. Auditing the Unified Medical Language System with semantic methods. *Journal of the American Medical Informatics Association*; 1998;5:41-51.

Cimino JJ. Distributed cognition and knowledge-based controlled medical terminologies. *Artificial Intelligence in Medicine*; 1998;12(2):155-170.

Baorto DM, Cimino JJ, Parvin CA, Kahn MG. Combining laboratory data sets from multiple institutions using the logical observation identifier names and codes (LOINC). *International Journal of Medical Informatics.* 1998;51(1):29-37.

Shortliffe EH, Patel VL, Cimino JJ, Barnett GO, Greenes RA. A study of collaboration among medical informatics research laboratories. *Artificial Intelligence in Medicine*; 1998;12(2):97-123.

Cimino JJ. Editorial: The concepts of language and the language of concepts. *Methods of Information in Medicine*; 1998;37(4-5):311.

Cimino JJ. Desiderata for controlled medical vocabularies in the Twenty-First Century. *Methods of Information in Medicine*; 1998;37(4-5):394-403.

Cimino JJ. The Columbia medical informatics story: from clinical system to major department. *MD Computing*. 1999;16(2):31-4.

Patel VL, Kaufman DR, Allen VG, Shortliffe EH, Cimino JJ, Greenes RA. Toward a framework for computer-mediated collaborative design in medical informatics. *Methods of Information in Medicine*. 1999;38(3):158-76.

Gu H, Perl Y, Geller J, Halper M, Liu LM, Cimino JJ. Representing the UMLS as an object-oriented database: modeling issues and advantages. *Journal of the American Medical Informatics Association*; 2000 ;7(1):66-80. **Selected for reprint in Haux R, Kulikowski C, eds.:** *Yearbook of Medical Informatics***, International Medical Informatics Association, Rotterdam, 2001: 271-285.**

Cimino JJ. From data to knowledge through concept-oriented terminologies: experience with the Medical Entities Dictionary. *Journal of the American Medical Informatics Association*; 2000;7(3):288-297.

Bakken S, Campbell KE, Cimino JJ, Huff SM, Hammond WE. Toward vocabulary domain specifications for health level 7-coded data elements. *Journal of the American Medical Informatics Association*; 2000;7(4):333-42.

Bakken S, Cimino JJ, Haskell R, Kukafka R, Matsumoto C, Chan GK, Huff SM. Evaluation of the clinical LOINC (Logical observation identifiers, names, and codes) semantic structure as a terminology model for standardized assessment measures.   *Journal of the American Medical Informatics Association*; 2000;7(6):529-38.

Kushniruk AW, Patel C, Patel VL, Cimino JJ. 'Televaluation' of clinical information systems: an integrative approach to assessing Web-based systems. *International Journal of Medical Informatics*. 2001;61(1):45-70.

Cimino JJ, Patel VL, Kushniruk AW. Studying the human-computer-terminology interface. *Journal of the American Medical Informatics Association*; 2001;8(2):163-173.

Mendonça EA, Cimino JJ, Johnson SB, Seol YH. Accessing heterogeneous sources of evidence to answer clinical questions. *Journal of Biomedical Informatics*; 2001;34(2): 85-98.

Zeng Q, Cimino J. A knowledge-based, concept-oriented view generation system for clinical data. Journal of Biomedical Informatics. *Journal of Biomedical Informatics*; 2001;34(2): 112-122.

Cimino JJ. Terminology tools: state of the art and practical lessons. *Methods of Information in Medicine*. 2001;39: 298-306.

Cimino J. Review of Wyatt JC: Clinical Knowledge and Practice in the Information Age: a Handbook for Health Professionals. *Journal of Biomedical Informatics*; 2001;34(3):144.

Gu H. Perl Y. Halper M. Geller J. Kuo F. Cimino JJ. Partitioning an object-oriented terminology schema. *Methods of Information in Medicine*.; 2001;40(3):204-12.

Zeng Q, Cimino JJ, Zou KH. Providing concept-oriented views for clinical data using a knowledge-based system: an evaluation. *Journal of the American Medical Informatics Association*; 2002;9(3):294-305.

Stetson PD, McKnight LK, Bakken S, Curran C, Cimino JJ. Development of an Ontology to Model Medical Errors, Information Needs, and the Clinical Communication Space. *Journal of the American Medical Informatics Association*. 2002;9:S86-S91.

McKnight LK, Stetson PD, Bakken S, Curran C, Cimino JJ. Perceived Information Needs and Communication Difficulties of Inpatient Physicians and Nurses. *Journal of the American Medical Informatics Association*. 2002; 9:S64-S69.

Chen ES, Cimino JJ. Use of Wireless Technology for Reducing Medical Errors. *Journal of the American Medical Informatics Association*. 2002;9:S54-S55.

Cimino JJ, Patel VL, Kushniruk AW. The Patient Clinical Information System (PatCIS): technical solutions for and experience with giving patients access to their electronic medical records. *International Journal of Medical Informatics*; 2002; 68:111-127.

Hwang JI, Cimino JJ, Bakken S. Integrating Nursing Diagnostic Concepts into the Medical Entities Dictionary Using the ISO Reference Terminology Model for Nursing Diagnosis. *J Am Med Inform Assoc*. 2003;10(4): 382-388.

Dykes P, Currie LM, Cimino JJ. Adequacy of Evolving National Standardized Terminologies for Interdisciplinary Coded Concepts in an Automated Clinical Pathway. *Journal of Biomedical Informatics*; 2003;36:313-325.

Cimino JJ, Min H, Perl Y. Consistency across the hierarchies of the UMLS Semantic Network and Metathesaurus. *Journal of Biomedical Informatics*; 2003:450-61.

Chen ES, Mendonca EA, McKnight LK, Stetson PD, Lei J, Cimino JJ. PalmCIS: A Wireless Handheld Application for Satisfying Clinician Information Needs *J Am Med Inform Assoc*. 2004;11(1): 19-28.

Bakken, S., Cimino, J.J., Hripcsak, G. Promoting patient safety and enabling evidence-based practice through informatics Medical Care 2004; 42(2)bv: S49-56.

Zhang L, Perl Y, Halper M, Geller J, Cimino JJ. An Enriched UMLS Semantic Network with a Multiple Subsumption Hierarchy. *J Am Med Inform Assoc*. 2004 May-Jun;11(3):195-206.

Caviedes JE, Cimino JJ. Towards the development of a conceptual distance metric for the UMLS. *J Biomed Inform*. 2004 Apr;37(2):77-85.

Mendonca EA, Chen ES, Stetson PD, McKnight LK, Lei J, Cimino JJ. Approach to mobile information and communication for health care. *Int J Med Inf*. 2004 Aug;73(7-8):631-8.

Chiang MF, Casper DS, Cimino JJ, Starren J. Representation of ophthalmology concepts by electronic systems; adequacy of controlled medical terminologies. *Ophthalmology* 2005;112:175–183.

Cimino JJ, Bakken S. The personal digital educator. *New England Journal of Medicine*. 2005;352(9):860-2.

Patel VL, Branch T, Cimino A, Norton C, Cimino JJ. Participant Perceptions of the Influences of the NLM-Sponsored Woods Hole Medical Informatics Course. *J Am Med Inform Assoc*. 2005 May-Jun;12(3):256-62 .

Zhang L, Halper M, Perl Y, Geller J, Cimino JJ. Relationship structures and semantic type assignments of the UMLS Enriched Semantic Network. *J Am Med Inform Assoc*. 2005;12(6):657-666.

Choi J, Jenkins ML, Cimino JJ, White TM, Bakken S. Toward semantic interoperability in home health care: formally representing OASIS items for integration into a concept-oriented terminology. *J Am Med Inform Assoc*. 2005;12(4):410-7 .

Cimino JJ. In Defense of the Desiderata. *Journal of Biomedical Informatics*. 2006;39(3):299-306.

Hwang JC, Yu AC, Casper DS, Starren J, Cimino JJ, Chiang MF. Representation of Ophthalmology Concepts by Electronic Systems Intercoder Agreement among Physicians Using Controlled Terminologies. *Ophthalmology*. 2006;;113(4):511-9.

Cimino JJ, Smith B. Introduction: International Medical Informatics Association Working Group 6 and the 2005 Rome Conference. *Journal of Biomedical Informatics*. 2006;39(3):249-251.

Allen M, Currie LM, Bakken S, Patel VL, Cimino JJ. Heuristic Evaluation of Paper-Based Web Pages: A Simplified Inspection Usability Methodology. *Journal of Biomedical Informatics*. 2006;39(4):412-423.

Cimino JJ, Zhu X. The practical impact of ontologies on biomedical informatics. *Methods Inf Med*. 2006;45 Suppl 1:124-35.

Currie LM, Mellino LV, Cimino JJ, Li J, Bakken S. Requirements specification for automated fall and injury risk assessment. *Stud Health Technol Inform*. 2006;122:134-8.

Chen ES, Bakken S, Currie LM, Patel VL, Cimino JJ. An automated approach to studying health resource and infobutton use. *Stud Health Technol Inform*. 2006;122:273-8.

Shim E, Silfen E, Patel C, Chiu J, Zhu X, Kelly S, Park N, Allen M, Cimino JJ. Towards a reference model for representing nursing information needs. *Stud Health Technol Inform*. 2006;122:490-5.

Zhou L, Tao Y, Cimino JJ, Chen ES, Liu H, Lussier YA, Hripcsak G, Friedman C. Terminology model discovery using natural language processing and visualization techniques. *J Biomed Inform*. 2006 Dec;39(6):626-36.

Cimino J. Collect once, use many - Enabling the reuse of clinical data through controlled terminologies. *JAHIMA*. 2007;78 (2):24-9.

Chen Y, Perl Y, Geller J, Cimino JJ. Analysis of a study of the users, uses, and future agenda of the UMLS. *J Am Med Inform Assoc*. 2007 Mar-Apr;14(2):221-31.

Yu H, Lee M, Kaufman D, Ely J, Osheroff JA, Hripcsak G, Cimino J.   Development, implementation, and a cognitive evaluation of a definitional question answering system for physicians. *J Biomed Inform*. 2007 Jun;40(3):236-51.

Cimino JJ, Bright TJ, Li J. Medication reconciliation using natural language processing and controlled terminologies. *Stud Health Technol Inform*. 2007;129(Pt 1):679-83.

Patel CO, Cimino JJ. A scale-free network view of the UMLS to learn terminology translations. *Stud Health Technol Inform*. 2007;129(Pt 1):689-93.

Collins S, Currie L, Patel V, Bakken S, Cimino JJ. Multitasking by clinicians in the context of CPOE and CIS use. *Stud Health Technol Inform*. 2007;129(Pt 2):958-62.

Cimino JJ. An integrated approach to computer-based decision support at the point of care. *Transactions of the American Clinical and Climatological Association*. 2007;118:273-88.

Bakken S, Currie LM, Lee NJ, Roberts WD, Collins SA, Cimino JJ. Integrating evidence into clinical information systems for nursing decision support. *Int J Med Inform*. 2008;77:413-420.

Cytryn KC, Yoskowitz NA, Cimino JJ, Patel VL. Lay public's knowledge and decisions in response to symptoms of acute myocardial infarction. *Advances in Health Sciences Education Theory and Practice*. 2009 Mar(1):43-59.

Del Fiol G, Haug PJ, Cimino JJ, Narus SP, Norlion C, Mitchell J. Effectiveness of topic-specific infobuttons: a randomized controlled trial. *Journal of the American Medical Informatics Association*, 2008; Nov-Dec;15(6):752-9.

Collins SA, Currie LM, Bakken S, Cimino JJ. Information needs, Infobutton Manager use, and satisfaction by clinician type: a case study. *Journal of the American Medical Informatics Association*; 2009 Jan-Feb;16(1):140-2.

Gardner RM, Overhage JM, Steen EB, Munger BS, Holmes JH, Williamson JJ, Detmer DE, Ash JS, Cimino JJ, Covvey D, Gardner RM, Holmes JH, Nelson NC, Overhage JM, Safran C, Shiffman RN, Spallek H; AMIA Board of Directors. Core content for the subspecialty of clinical informatics. *J Am Med Inform Assoc*. 2009 Mar-Apr;16(2):153-7.

Hilliman CA, Cimino JJ, Lai AM, Kaufman DR, Starren JB, Shea S. The effects of redesigning the IDEATel architecture on glucose uploads. *Telemed J E Health*. 2009 Apr;15(3):248-54.

Patel CO, Cimino JJ. Using Semantic and Structural Properties of the UMLS to Discover Potential Terminological Relationships. *Journal of the American Medical Informatics Association*; 2009 May-Jun;16(3):346-53..

Cimino JJ, Hayamizu TF, Bodenreider O, Davis B, Stafford GA, Ringwald M. The caBIG Terminology Review Process. *Journal of Biomedical Informatics;* 2009 Jun;42(3):571-80.

Baorto D, Li L, Cimino JJ. Practical Experience with the Maintenance of a Large Ontology for an Academic Medical Center. *Journal of Biomedical Informatics*; 2009 Jun;42(3):494-503).

Zhu X, Fan JW, Baorto D, Weng C, Cimino JJ. A Review of Auditing Methods Applied to Controlled Biomedical Terminologies. *Journal of Biomedical Informatics*; 2009 Jun;42(3):413-25.

Kaufman DR, Pevzner J, Rodriguez M, Cimino JJ, Ebner S, Fields L, Moreno V, McGuiness C, Weinstock RS, Shea S, Starren J. Understanding workflow in telehealth video visits: Observations from the IDEATel project. *Journal of Biomedical Informatics*. 2009;42(4):581-592.

Shea S, Weinstock RS, Teresi JA, Palmas W, Starren J, Cimino JJ, Lai AM, Field L, Morin PC, Goland R, Izquierdo RE, Ebner S, Silver S, Petkova E, Kong J, Eimicke JP; for the IDEATel Consortium. A Randomized Trial Comparing Telemedicine Case Management with Usual Care in Older, Ethnically Diverse, Medically Underserved Patients with Diabetes Mellitus: 5 Year Results of the IDEATel Study. *Journal of the American Medical Informatics Association*. 2009;16(4):446-56.

Patel CO, Cimino JJ. A network-theoretic approach for decompositional translation across Open Biological Ontologies. *Journal of Biomedical Informatics*. 2010 Aug;43(4):608-12.

Cimino JJ, Ayres EJ. The clinical research data repository of the US National Institutes of Health. *Stud Health Technol Inform*. 2010;160(Pt 2):1299-303.

Cao YG, Cimino JJ, Ely J, Yu H. Automatically extracting information needs from complex clinical questions. *Journal of Biomedical Informatics*. 2010;43(6):962-971.

Yu A, Cimino JJ. A comparison of two methods for retrieving ICD-9-CM data: the effect of using an ontology-based method for handling terminology changes. *Journal of Biomedical Informatics*. 2011;44(2):289-98.

Cao YG, Liu F, Simpson P, Antieau L, Bennett A, Cimino JJ, Ely J, Yu H. AskHERMES: an online question answering system for complex clinical questions. *Journal of Biomedical Informatics*. 2011;43(6):962-71.

Schnall R, Cimino JJ, Currie LM, Bakken S. Information needs of case managers caring for persons living with HIV. *J Am Med Inform Assoc*. 2011;18(3):305-308.

Cimino JJ. High-quality, Standard, Controlled Healthcare Terminologies Come of Age. *Methods of Information in Medicine*; 2011;50,2:101-104.

Jing X, Kay S, Marley T, Hardiker NR, Cimino JJ. Incorporating personalized gene sequence variants, molecular genetics knowledge, and health knowledge into an EHR prototype based on the Continuity of Care Record standard. *Journal of Biomedical Informatics*. 2012 Feb;45(1):82-92.

Bright TJ, Yoko Furuya E, Kuperman GJ, Cimino JJ, Bakken S. Development and evaluation of an ontology for guiding appropriate antibiotic prescribing. *Journal of Biomedical Informatics.* 2012;45(1):120-8.

Del Fiol G, Huser V, Strasberg HR, Maviglia SM, Curtis C, Cimino JJ. Implementations of the HL7 Context-Aware Knowledge Retrieval ("Infobutton") Standard: challenges, strengths, limitations, and uptake. *Journal of Biomedical Informatics*. 2012 Aug;45(4):726-35.

Schnall R, Cimino JJ, Bakken S. Development of a Prototype Continuity of Care Record with Context-Specific Links to Meet the Information Needs of Case Managers for Persons Living with HIV. *International Journal of Medical Informatics*. 2012; 81(8):549-55.

Gu H, Elhanan G, Perl Y, Hripcsak G, Cimino JJ, Xu J, Chen Y, Geller J, Morrey CP. A Study of Terminology Auditors' Performance for UMLS Semantic Type Assignments Corresponding. *Journal of Biomedical Informatics*. 2012;45(6): 1042-1048.

Cimino JJ. The False Security of Blind Dates: Chrononymization's Lack of Impact on Data Privacy of Laboratory Data. *Applied Clinical Informatics*. 2012;3(4):392-403.

Strasberg HR, Del Fiol G, Cimino JJ. Terminology Challenges Implementing the HL7 Context-Aware Knowledge Retrieval ("Infobutton") Standard. *J Am Med Inform Assoc*. 2013 Mar 1;20(2):218-23.

Hunt S, Cimino JJ, Koziol DE. A comparison of clinicians' access to online knowledge resources using two types of information retrieval applications in an academic hospital setting. *J Med Libr Assoc*. 2013 Jan;101(1):26-31.

Cimino JJ. Improving the electronic health record--are clinicians getting what they wished for? *JAMA*. 2013 Mar 13;309(10):991-2.

Huser V, Cimino JJ. Linking ClinicalTrials.gov and PubMed to Track Results of Interventional Human Clinical Trials. *PLoS ONE* 2013;8(7): e68409.

Huser V, Cimino JJ. Evaluating adherence to timely clinical trial registration. *J Am Med Inform Assoc*. 2013: Jun;20(e1):e169-74. doi: 10.1136/amiajnl-2012-001501.

Huser V, Cimino JJ. Don't take your EHR to heaven, donate it to science: legal and research policies for EHR post mortem. *J Am Med Inform Assoc*. 2013: Aug 21. doi: 10.1136/amiajnl-2013-002061.

Cimino JJ, Ayres EJ, Beri A, Freedman R, Oberholtzer E, Rath S. Developing a self-service query interface for re-using de-identified electronic health record data. *Stud Health Technol Inform*. 2013;192:632-6.

Del Fiol G, Curtis C, Cimino JJ, Iskander A, Kalluri AS, Jing X, Hulse NC, Long J, Overby CL, Schardt C, Douglas DM. Disseminating Context-Specific Access to Online Knowledge Resources within Electronic Health Record Systems. *Stud Health Technol Inform*. 2013;192:672-6.

Hersh WR, Weiner MG, Embi PJ, Logan JR, Payne PR, Bernstam EV, Lehmann HP, Hripcsak G, Hartzog TH, Cimino JJ, Saltz JH. Caveats for the use of operational electronic health record data in comparative effectiveness research. *Med Care*. 2013 Aug;51(8 Suppl 3):S30-7.

Hersh WR, Cimino JJ, Payne PR, Embi PJ, Logan JR, Weiner MG, Bernstam EV, Lehmann HP, Hripcsak G, Hartzog TH, Saltz JH, Recommendations for the use of operational electronic health record data in comparative effectiveness research, *eGEMs (Generating Evidence & Methods to improve patient outcomes)*, 2013, 1:14. http://repository.academyhealth.org/egems/vol1/iss1/14/

Hripcsak G, Bloomrosen M, Flatelybrennan P, Chute CG, Cimino J, Detmer DE, Edmunds M, Embi PJ, Goldstein MM, Hammond WE, Keenan GM, Labkoff S, Murphy S, Safran C, Speedie S, Strasberg H, Temple F, Wilcox AB. Health data use, stewardship, and governance: ongoing gaps and challenges: a report from AMIA's 2012 Health Policy Meeting. *J Am Med Inform Assoc*. 2013 Oct 29. doi: 10.1136/amiajnl-2013-002117. [Epub ahead of print]

Hersh WR, Cimino JJ, Payne PR, Embi PJ, Logan JR, Weiner MG, Bernstam EV, Lehmann HP, Hripcsak G, Hartzog TH, Salz JH. Recommendations for the Use of Operational Electronic Health Record Data in Comparative Effectiveness Research. *Med Care*. 2013: (*in press)*.

Cimino JJ, Ayres EJ, Remennik L, Rath S, Freedman R, Beri A, Chen Y, Huser V. The National Institutes of Health's Biomedical Translational Research Information System (BTRIS): Design, Contents, Functionality and Experience to Date. *Journal of Biomedical Informatics*, 2013: 3 Nov 19. doi:pii: S1532-0464(13)00181-0. 10.1016/j.jbi.2013.11.004.

Zhu X, Cimino JJ. Clinicians' Evaluation of Computer-Assisted Medication Summarization of Electronic Medical Records*. Computers in Biology and Medicine*. 2013: (*in press*).

Jing X, Cimino JJ. A complementary graphical method for reducing and analyzing large data sets: case studies demonstrating thresholds setting and selection. *Methods of Information in Medicine*; 2014; 53(3):173-185.

Cimino JJ, Frisse ME, Halamka JD, Sweeney L, Yasnoff WA. Consumer-Mediated Health Information Exchanges: The 2012 ACMI Debate. *Journal of Biomedical Informatics*. 2014; 48:5-15.

Lau A, Wang H, Weingarten R, Drake S, Suffredini A, Garfield M, Yong C, Gucek M, Youn J, Stock F, Tso H, DeLeo J, Cimino JJ, Frank F, and Dekker J. A Rapid MALDI-TOF Mass Spectrometry-Based Method for Single Plasmid Tracking in an Outbreak of Carbapenem-Resistant Enterobacteriaceae. *Journal of Clinical Microbiology*. 2014:(*in press*).

Huser V, Murat S, Cimino JJ. Developing genomic knowledge bases and databases to support clinical management: current perspectives. *Pharmacogenomics and Personalized Medicine*. 2014:(*in press*).

Peer-Reviewed Proceedings Articles:

Cimino JJ, Munson PJ, Lewis T, Rodbard D: Graphical Display of Patient Data Using a Desk-Top Computer, in Heffernan HG, ed.: *Proceedings of the Fifth Annual Symposium on Computer Applications in Medical Care*; Washington, D.C.; October, 1981:1085-1088.

Hupp JA, Cimino JJ, Hoffer EP, Lowe HJ, Barnett GO: DXplain - A Computer Based Diagnostic Knowledge Base, in Salamon R, Blum B, Jorgensen M, eds.: *MEDINFO 86*; Washington, D.C.; October, 1986:117-121.

Cimino JJ, Hupp JA, Hoffer EP, Famiglietti KT, Barnett GO: DXplain - An Interactive Diagnostic Knowledge Base for Assistance in Medical Diagnostic Decisions, *Proceedings of the IEEE Engineering in Medicine and Biology Society, Ninth Annual Conference*; Boston, Massachusetts; November, 1987; 1528-9.

Cimino JJ, Barnett GO: The Physician's Workstation: Recording a Physical Examination Using a Controlled Vocabulary, in Stead WW, ed.: *Proceedings of the Eleventh Annual Symposium on Computer Applications in Medical Care*; Washington, D.C.; November, 1987; 287-290.

Barnett GO, Cimino JJ, Hupp JA, Hoffer EP: DXplain: Experience with Knowledge Acquisition and Program Evaluation, in Stead WW, ed.: *Proceedings of the Eleventh Annual Symposium on Computer Applications in Medical Care*; Washington, D.C.; November, 1987; 150-154.

Cimino JJ, Mallon LJ, Barnett GO: Automated Extraction of Medical Knowledge from Medline Citations, in Greenes RA, ed.: *Proceedings of the Twelfth Annual Symposium on Computer Applications in Medical Care*; Washington, D.C.; November, 1988: 180-184.

Packer MS, Cimino JJ, Barnett GO, Kim R, Hoffer EP, Zatz S: Updating the DXplain Database, in Greenes RA, ed.: *Proceedings of the Twelfth Annual Symposium on Computer Applications in Medical Care*; Washington, D.C.; November, 1988: 96-100.

Elkin PL, Cimino JJ, Aronow DB, Payne TH, Pincetl SP, Lowe HJ and Barnett GO: Mapping to MeSH: the Art of Trapping MeSH Equivalence from within Narrative Text, in Greenes RA, ed.: *Proceedings of the Twelfth Annual Symposium on Computer Applications in Medical Care*; Washington, D.C.; November, 1988: 185-190.

Cimino JJ, Hripcsak G, Johnson SB, Clayton PD: Designing an Introspective, Controlled Medical Vocabulary, in Kingsland LW, ed.: *Proceedings of the Thirteenth Annual Symposium on Computer Applications in Medical Care*; Washington, D.C.; November, 1989: 513-518.

Cimino JJ, Hripcsak G, Johnson SB, Friedman C, Clayton PD: Prototyping a Vocabulary Management System in an Object-Oriented Environment. In Timmers T, Blum BI, eds.: *Proceedings of the International Medical Informatics Association Working Conference on Software Engineering in Medical Informatics*, North-Holland Press, Amsterdam, October, 1990: 429-439.

Hripcsak G, Clayton PD, Cimino JJ, Johnson SB, Friedman C: Medical Decision Support at Columbia-Presbyterian Medical Center. In Timmers T, ed.: *Proceedings of the International Medical Informatics Association Working Conference on Software Engineering in Medical Informatics*, North-Holland Press, Amsterdam, October, 1990: 471-479.

Cimino JJ, Hripcsak G, Johnson SB, Friedman C, Fink DJ, Clayton PD: UMLS as Knowledge Base - A Rule-Based Expert System Approach to Controlled Medical Vocabulary Management. In Miller RA, ed.: Proceedings of the Fourteenth Annual Symposium on Computer Applications in Medical Care; Washington, D.C.; November, 1990:175-180.

Friedman C, Hripcsak G, Johnson SB, Cimino JJ, Clayton PD: A Generalized Relational Schema for an Integrated Clinical Patient Database. In Miller RA, ed.: Proceedings of the Fourteenth Annual Symposium on Computer Applications in Medical Care; Washington, D.C.; November, 1990:335-339.

Johnson SB, Cimino JJ, Friedman C, Hripcsak G, Clayton PD: Using Metadata to Integrate Medical Knowledge in a Clinical Information System. In Miller RA, ed.: Proceedings of the Fourteenth Annual Symposium on Computer Applications in Medical Care; Washington, D.C.; November, 1990:340-344.

Cimino JJ: Representation of Clinical Laboratory Terminology in the Unified Medical Language System. In Clayton PD, ed.: Proceedings of the Fifteenth Annual Symposium on Computer Applications in Medical Care; Washington, D.C.; November, 1991:199-203.

Hripcsak G, Cimino JJ, Johnson SB, Clayton PD: The Columbia-Presbyterian Medical Center Decision-Support System as a Model for Implementing the Arden Syntax. In Clayton PD, ed.: Proceedings of the Fifteenth Annual Symposium on Computer Applications in Medical Care; Washington, D.C.; November, 1991:248-252.

Tuttle MS, Sherertz DD, Erlbaum MS, Sperzel WD, Fuller LF, Olson NE, Nelson SJ, Cimino JJ, Chute CG: Adding Your Terms and Relationships to the UMLS Metathesaurus. In Clayton PD, ed.: Proceedings of the Fifteenth Annual Symposium on Computer Applications in Medical Care; Washington, D.C.; November, 1991:219-223.

Johnson SB, Friedman C, Cimino JJ, Clark T, Hripcsak G, Clayton PD. Conceptual Data Model for a Central Patient Database. In Clayton PD, ed.: Proceedings of the Fifteenth Annual Symposium on Computer Applications in Medical Care; Washington, D.C.; November, 1991:381-385.

Cimino JJ, Johnson SB, Hripcsak G, Sideli RV, Fink DJ, Friedman C, Clayton PD: One Year's Experience with the Unified Medical Language System (UMLS) in Academia and Patient Care. In Lun KC, Degoulet P, Piemme TE, Rienhoff, eds.: MEDINFO 92, Elsevier, North-Holland Press, Amsterdam; September, 1992: 1501-1505.

Johnson SB, Clayton PD, Fink DJ, Sengupta S, Shea S, Bourne P, Sideli RV, Aguirre A, Cimino JJ, Hripcsak G, McCormack M, Hill C: Achievements in Phase III of an Integrated Academic Information Management System. In Lun KC, Degoulet P, Piemme TE, Rienhoff, eds.: MEDINFO 92, Elsevier, North-Holland Press, Amsterdam; September, 1992: 117-123.

Walker DC, Walters RF, Cimino JJ, Dujols P, Li Ensheng, Giere W, Kiuchi T, Lamberts H, Moore WG, Roger FH, Satomura Y, Sitt FW: Internationalization of Health Care Terminology. In Lun KC, Degoulet P, Piemme TE, Rienhoff, eds.: MEDINFO 92, Elsevier, North-Holland Press, Amsterdam; September, 1992: 1444-51.

Cimino JJ, Johnson SB, Aguirre A, Roderer N, Clayton PD: The Medline Button. In Frisse ME, ed.: Proceedings of the Sixteenth Annual Symposium on Computer Applications in Medical Care; Baltimore, MD; November, McGraw-Hill, New York, 1992: 81-85.

Cimino JJ, Johnson SB, Peng P, Aguirre A: From ICD9-CM to MeSH using the UMLS: A How-to Guide. In Safran, C, ed.: Proceedings of the Seventeenth Annual Symposium on Computer Applications in Medical Care; Washington, DC; November, McGraw-Hill, New York, 1993:730-734.

Johnson SB, Aguirre A, Peng P, Cimino JJ: Interpreting Natural Language Queries Using the UMLS. In Safran, C, ed.: Proceedings of the Seventeenth Annual Symposium on Computer Applications in Medical Care; Washington, DC; November, McGraw-Hill, New York, 1993:294-298.

Peng P, Aguirre A, Johnson SB, Cimino JJ: Generating MEDLINE Strategies Using a Librarian Knowledge-Based System. In Safran, C, ed.: Proceedings of the Seventeenth Annual Symposium on Computer Applications in Medical Care; Washington, DC; November, McGraw-Hill, New York, 1993:596-600.

Friedman C, Cimino JJ, Johnson SB: A Conceptual Model for Clinical Radiology Reports. In Safran, C, ed.: Proceedings of the Seventeenth Annual Symposium on Computer Applications in Medical Care; Washington, DC; November, McGraw-Hill, New York, 1993:829-833.

Cimino JJ. Integrating clinical systems by integrating controlled vocabularies. P*roceedings of the Brazilian Conference on Medical Informatics* (CBIS94); Porto Alegre, Brazil, October, 1994: 249-252.

Cimino JJ, Clayton PD. Coping with changing controlled vocabularies. In Ozbolt JG, ed.: Proceedings of the Eighteenth Annual Symposium on Computer Applications in Medical Care; Washington, DC; November, Hanley & Belfus, Philadelphia, 1994:135-139.

Barrows Jr. RC, Cimino JJ, Clayton PD. Mapping clinically useful terminology to a controlled medical vocabulary. In Ozbolt JG, ed.: Proceedings of the Eighteenth Annual Symposium on Computer Applications in Medical Care; Washington, DC; November, Hanley & Belfus, Philadelphia, McGraw-Hill, New York, 1994:211-215.

Cimino JJ, Johnson SB, Hripcsak G, Hill CL, Clayton PD. Managing Vocabulary for a Centralized Clinical System. In Kaihara S, Greenes RA, eds. Proceedings of the World Congress on Medical Informatics - Medinfo '95; Vancouver, Canada; Healthcare Computing and Communications Canada, Edmonton, Alberta, 1995: 117-120.

Cimino JJ, Socratous SA, Grewal R. The Informatics Superhighway: Prototyping on the World Wide Web. In Gardner RM, ed.: Proceedings of the Nineteenth Annual Symposium on Computer Applications in Medical Care; New Orleans, LA; October-November, Hanley & Belfus, Philadelphia, 1995: 111-115. (**Winner of Priscilla Mayden Award**)

Jenders RA, Hripcsak G, Sideli RV, Sherman EH, DuMouchel W, Zhang H, Cimino JJ, Johnson SB, Clayton PD. Medical decision support: experience with implementing the Arden Syntax at the Columbia-Presbyterian Medical Center. In Gardner RM, ed.: Proceedings of the Nineteenth Annual Symposium on Computer Applications in Medical Care; New Orleans, LA; October-November, Hanley & Belfus, Philadelphia, 1995: 169-173.

Forman BH, Cimino JJ, Johnson JB, Sengupta S, Sideli RV, Allen B, Clayton PD. Applying a controlled terminology to a distributed, production clinical information system. In Gardner RM, ed.: Proceedings of the Nineteenth Annual Symposium on Computer Applications in Medical Care; New Orleans, LA; October-November, Hanley & Belfus, Philadelphia, 1995: 421-425.

Cimino JJ, Socratous S. Just Tell Me What You Want!: The Promise and Perils of Rapid Prototyping with the World Wide Web. In Cimino JJ, ed.: Proceedings of the American Medical Informatics Association Annual Fall Symposium (formerly SCAMC); Washington, DC; October, Hanley & Belfus, Philadelphia, 1996:719-723.

Elhanan G, Socratous SA, Cimino JJ. Integrating DXplain into a Clinical Information System using the World Wide Web. In Cimino JJ, ed.: Proceedings of the American Medical Informatics Association Annual Fall Symposium (formerly SCAMC); Washington, DC; October, Hanley & Belfus, Philadelphia, 1996:348-352.

Gu H, Halper M, Geller J, Cimino JJ, Perl Y. Utilizing OODB Schema Modeling for Vocabulary Management. In Cimino JJ, ed.: Proceedings of the American Medical Informatics Association Annual Fall Symposium (formerly SCAMC); Washington, DC; October, Hanley & Belfus, Philadelphia, 1996:274-278.

Kushniruk AW, Patel VL, Cimino JJ, Barrows RA. Cognitive Evaluation of the User Interface and Vocabulary of an Outpatient Information System. In Cimino JJ, ed.: Proceedings of the American Medical Informatics Association Annual Fall Symposium (formerly SCAMC); Washington, DC; October, Hanley & Belfus, Philadelphia, 1996:22-26.

Shortliffe EH, Patel VL, Greenes RA, Huff SM, Cimino JJ, Barnett GO. Collaborative Medical Informatics Research Using the Internet and the World Wide Web. In Cimino JJ, ed.: Proceedings of the American Medical Informatics Association Annual Fall Symposium (formerly SCAMC); Washington, DC; October, Hanley & Belfus, Philadelphia, 1996:125-129.

Zeng Q, Cimino JJ. Mapping Medical Vocabularies to the Unified Medical Language System. In Cimino JJ, ed.: Proceedings of the American Medical Informatics Association Annual Fall Symposium (formerly SCAMC); Washington, DC; October, Hanley & Belfus, Philadelphia, 1996:105-109.

Cimino JJ. Intranet Technology in Hospital Information Systems. In, Dudeck B, Blobel B, Lordieck W, Bürkle T, eds: New Technologies in Hospital Information Systems, Ulm Germany, September, 1997, IOS Press, Netherlands, 1997:102-109.

Cimino JJ, Elhanan G, Zeng Q. Supporting Infobuttons with Terminological Knowledge. *Journal of the American Medical Informatics Association*; 1997;4 (Suppl):528-532.

Zeng Q, Cimino JJ. Linking a Clinical System to Heterogeneous Information Resources. *Journal of the American Medical Informatics Association*; 1997;4 (Suppl):553-557.

Kushniruk AW, Patel VL, Cimino JJ. Usability Testing in Medical Informatics: Cognitive Approaches to Evaluation of Information Systems and User Interfaces. *Journal of the American Medical Informatics Association*; 1997;4 (Suppl):218-222.

Gu H, Geller J, Perl Y, Halper M, Cimino JJ, Singh M. Partitioning a vocabulary's is-a hierarchy into trees. *Journal of the American Medical Informatics Association*; 1997;4 (Suppl):630-634.

Elhanan G, Cimino JJ. Controlled Vocabulary and Design of Laboratory Results Displays. *Journal of the American Medical Informatics Association*; 1997;4 (Suppl):719-723.

Baorto DM, Cimino JJ, Parvin CA, Kahn MG. Using Logical Observation Identifier Names and Codes (LOINC) to exchange laboratory data among three academic hospitals. *Journal of the American Medical Informatics Association*; 1997;4 (Suppl):96-100.

Cimino JJ, Sengupta A, Clayton PD, Patel VL, Kushniruk AW, Huang X. Architecture for a Web-based clinical information system that keeps the design open and the access closed. *Journal of the American Medical Informatics Association*; 1998;5 (Suppl):121-125.

Huff SM, Bidgood WD, Cimino JJ, Hammond WE. A Proposal for Incorporting Health Level Seven (HL7) Vocabulary in the UMLS Metathesaurus. *Journal of the American Medical Informatics Association*; 1998;5 (Suppl):800-804.

Mendonça EA, Cimino JJ, Campbell KE, Spackman KA. Reproductibility of Interpreting "And" and "Or" in Terminology Systems. *Journal of the American Medical Informatics Association.* 1998;5 (Suppl):790-794.

Zeng Q, Cimino JJ. Automated Knowledge Extraction from the UMLS. *Journal of the American Medical Informatics Association*. 1998;5 (Suppl):568-572.

Cimino JJ, Sengupta S, Mendonça E, Patel VL, Kushniruk A. Personal health information: the last frontier on the World Wide Web. Interactive Consumer Health: An International Conference, London, Ontario, Canada, Sept. 10-11, 1999.

Cimino JJ, McNamara TJ, Meredith T, Broverman CA, Eckert KC, Moore M, Tyree DJ. Evaluation of a proposed method for representing drug terminology. *Journal of the American Medical Informatics Association*. 1999;6 (suppl.):47-51.

Gu H, Perl Y, Geller J, Halper M, Liu LM, Cimino JJ. Modeling the UMLS using an OODB. *Journal of the American Medical Informatics Association*. 1999;6 (suppl.):82-6.

Kukafka R, Lussier YA, Patel VL, Cimino JJ. Modeling patient response to acute myocardial infarction: implications for a tailored technology-based program to reduce patient delay. *Journal of the American Medical Informatics Association*. 1999;6 (suppl.):570-4.

Zeng Q, Cimino JJ. Evaluation of a system to identify relevant patient information and its impact on clinical information retrieval. *Journal of the American Medical Informatics Association*. 1999;6 (suppl.):642-6.

Hripcsak G, Cimino JJ, Sengupta S. WebCIS: large scale deployment of a Web-based clinical information system. *Journal of the American Medical Informatics Association*. 1999;6 (suppl.):804-8.

Mendonça EA, Cimino JJ. Evaluation of the Information Sources Map. *Journal of the American Medical Informatics Association*. 1999;6 (suppl.):873-7.

Cimino JJ, Li J, Mendonça EA, Sengupta S, Patel VL, Kushniruk AW. An evaluation of patient access to their electronic medical records via the World Wide Web. *Journal of the American Medical Informatics Association*. 2000;7 (suppl.):151-155.

Baorto D, Cimino JJ. An "Infobutton" for enabling patients to interpret on-line Pap smear reports. *Journal of the American Medical Informatics Association*. 2000;7 (suppl.):47-50.

Patel VL, Kushniruk AW, Cimino JJ. Evaluation of Web-based patient information resources: application in the assessment of patient clinical information systems. *Journal of the American Medical Informatics Association*. 2000;7 (suppl.):443-447.

Lussier YA, Kukafka R, Patel VL, Cimino JJ. Formal combinations of guidelines: a requirement for self-administered personalized health education. *Journal of the American Medical Informatics Association*. 2000;7 (suppl.):522-526.

Mendonça EA, Cimino JJ. Automated knowledge extraction from MEDLINE citations. *Journal of the American Medical Informatics Association*. 2000;7 (suppl.):575-579.

Cimino JJ, Patel VL, Kushniruk AW. What Do Patients Do with their Medical Records? In: Patel VL, Rogers R, Haux R, eds.: Proceedings of the 10th World Congress on Medical Informatics (Medinfo 2001), London, UK, September 2-5, 2001. IOS Press, London, 2001:1440-1444.

Mendonça EA, Cimino JJ. Building a Knowledge Base to Support a Digital Library. In: Patel VL, Rogers R, Haux R, eds.: Proceedings of the 10th World Congress on Medical Informatics (Medinfo 2001), London, UK, September 2-5, 2001. IOS Press, London, 2001:221-225.

Kukafka R, Lussier YA, Patel VL, Cimino JJ. Developing Tailored Theory-based Educational Content for Web Applications: Illustrations from the MI-HEART Project. In: Patel VL, Rogers R, Haux R, eds.: Proceedings of the 10th World Congress on Medical Informatics (Medinfo 2001), London, UK, September 2-5, 2001. IOS Press, London, 2001:1474-1478.

Cimino JJ. Battling Scylla and Charybdis: the Search for Redundancy and Ambiguity in the 2001 UMLS Metathesaurus. *Journal of the American Medical Informatics Association*. 2001;8 (suppl.):120-124.

Cieslowski BJ, Wajngurt D, Cimino JJ, Bakken S. Integration of Nursing Assessment Concepts into the Medical Entities Dictionary Using the LOINC Semantic Structure as a Terminology Model. *Journal of the American Medical Informatics Association*. 2001;8 (suppl.):115-119.

McKnight LK, Stetson PD, Bakken S, Curran C, Cimino JJ. Perceived Information Needs and Communication Difficulties of Inpatient Physicians and Nurses. *Journal of the American Medical Informatics Association*. 2001;8 (suppl.):453-457.

Mendonça EA, Cimino JJ. Using Narrative Reports to Support a Digital Library. *Journal of the American Medical Informatics Association*. 2001;8 (suppl.):458-462.

Stetson PD, McKnight LK, Bakken S, Curran C, Cimino JJ. Development of an Ontology to Model Medical Errors, Information Needs, and the Clinical Communication Space. *Journal of the American Medical Informatics Association*. 2001;8 (suppl.):672-676.

Wroe CJ, Cimino JJ, Rector AL. Integrating Existing Drug Formulation Terminologies Into an HL7 Standard Classification using *Open*GALEN. *Journal of the American Medical Informatics Association*. 2001;8 (suppl.):766-770.

Mendonça EA, Johnson SB, Seol YH, Cimino JJ. Analyzing the semantics of patient data to rank records of literature retrieval. Johnson SB, ed. Proceedings of the Workshop on Natural Language Processing in the Biomedical Domain - Association of Computational Linguistics' 02. 2002 July 6-13; Philadelphia, PA. Madison, WI: Omnipress, Inc.; p. 69-76.

Cimino JJ, Li J, Bakken S, Patel VL. Theoretical, empirical and practical approaches to resolving the unmet information needs of clinical information system users. *Journal of the American Medical Informatics Association*. 2002;9 (suppl.):170-174.

Kukafka R, Lussier YA, Patel VL, Cimino JJ. Web-based tailoring and its effect on self-efficacy: results from the MI-HEART randomized controlled trial. *Journal of the American Medical Informatics Association*. 2002;9 (suppl.):410-414.

Wang D, Kaufman DR, Mendonça EA, Seol YH, Johnson SB, Cimino JJ. The cognitive demands of an innovative query user interface. *Journal of the American Medical Informatics Association*. 2002;9 (suppl.):850-854.

Zhang L, Perl Y, Halper M, Geller J, Cimino JJ. Enriching the Structure of the UMLS Semantic Network. *Journal of the American Medical Informatics Association*. 2002;9 (suppl.):939-943.

Tulipano PK, Millar WS, Cimino JJ. Linking molecular imaging terminology to the gene ontology (GO). *Pac Symp Biocomput*. 2003;:613-23.

Cimino JJ, Chen ES, McKnight LK, Stetson PD, Lei J, Mendonca EA. Mobile information and coordination for healthcare. In: Marin HF, Marques EP, Hovenga E, Goossen W, edts. NI 2003 Proceedings 8th International Congress in Nursing Informatics - e-Health for all: designing nursing agenda for the future. Rio de Janeiro, RJ, Brazil: 285-28

Cimino JJ, Li J, Graham M, Currie LM, Allen M, Bakken S, Patel V. Use of Online Resources While Using a Clinical Information System. In, Musen MA (ed): *Proceedings of the AMIA Fall Symposium*, 2003:175-9.

Allen M, Currie LM, Graham M, Bakken S, Patel V, Cimino JJ. The Classification of Clinicians' Information Needs While Using a Clinical Information System. In, Musen MA (ed): *Proceedings of the AMIA Fall Symposium*, 2003:26-30.

Chen ES, Cimino JJ. Automated Discovery of Patient-specific Clinician Information Needs Using Clinical Information System Log Files. In, Musen MA (ed): *Proceedings of the AMIA Fall Symposium*, 2003:145-9.

Currie LM, Graham M, Allen M, Bakken S, Patel V, Cimino JJ. Clinical Information Needs in Context: An Observational Study of Clinicians While Using a Clinical Information System. In, Musen MA (ed): *Proceedings of the AMIA Fall Symposium*, 2003:190-4.

Cimino JJ, Li J, Allen M, Currie LM, Graham M, Janetzki V, Lee N, Bakken S, Patel VL. Practical Considerations for Exploiting the World Wide Web to Create Infobuttons. *Proceedings of Medinfo 2004*:277-281.

Chen ES, Cimino JJ. Patterns of usage for a Web-based clinical information system. *Proceedings of Medinfo 2004*:18-22.

Currie LM, Mellino LV, Cimino JJ, Bakken S. Development and representation of a fall-injury risk assessment instrument in a clinical information system. *Proceedings of Medinfo 2004*:721-725.

Seol Y, Kaufman DR, Mendonça EA, Cimino JJ, Johnson SB. Scenario-based assessment of physicians' information needs. *Proceedings of Medinfo 2004*:306-310.

Zhu X, Lee KP, Cimino JJ. Knowledge representation of traditional Chinese acupuncture points using the UMLS and a terminology model. In: *Proceedings of the IEEE Computer Society IDEAS Workshop on Medical Information Systems: The Digital Hospital*, 2004. IDEAS '04-DH. Sept. 2004, Beijing, China:40- 48.

Cimino JJ, Meyer M, Lee NJ, Bakken S. Using Patient Data to Retrieve Health Knowledge. In, Friedman CP (ed): *Proceedings of the AMIA Fall Symposium*, 2005:136-140.

Shim E, Silfen E, Patel C, Chiu J, Zhu X, Kelly S, Park N, Allen M, Cimino J. Toward a reference model for representing nursing information needs. *9th International Congress on Nursing Informatics*, Seoul, Korea; 2006:490-495.

Chiang MF, Hwang JC, Yu AC, Casper DS, Cimino JJ, Starren J. Reliability of SNOMED-CT Coding by Three Physicians Using Two Terminology Browsers. In, Bates DM (ed): *Proceedings of the AMIA Fall Symposium*, 2006: 131-135.

Cimino JJ. Use, Usability, Usefulness, and Impact of an Infobutton Manager. In, Bates DM (ed): *Proceedings of the AMIA Fall Symposium*, 2006: 151-155.

Lee M, Cimino JJ, Zhu HR, Sable C, Shanker V, Ely J, Yu H. Beyond Information Retrieval – Medical Question Answering. In, Bates DM (ed): *Proceedings of the AMIA Fall Symposium*, 2006: 469-473.

Patel CO, Cimino JJ. Mining Cross-Terminology Links in the UMLS. In, Bates DM (ed): *Proceedings of the AMIA Fall Symposium*, 2006: 624-628.

Cimino JJ, Bright TJ, Li J. Medication Reconciliation Using Natural Language. *Proceedings of Medinfo 2007*:679-683.

Patel CO, Cimino JJ. A Scale-Free Network View of the UMLS to Learn Terminology Translations. *Proceedings of Medinfo 2007*:689-693.

Collins S, Currie LM, Patel VL. Multitasking by Clinicians in the Context of CPOE and CIS Use. *Proceedings of Medinfo 2007*: 958-962 (**Nominated for Best Paper**).

Cimino JJ, Friedmann B, Jackson K, Li J, Pevzner J, Wrenn J.   Redesign of the Columbia University Infobutton Manager. *Proceedings of the 2007 AMIA Fall Symposium*, Chicago, IL, 2007:135-139.

Collins S, Bakken S, Cimino JJ, Currie L. A Methodology for Meeting Context-Specific Information Needs Related to Nursing Orders. *Proceedings of the 2007 AMIA Fall Symposium*, Chicago, IL, 2007:155-159.

Gu H, Hripksak G, Chen Y, Morrey CP, Elhanan G, Cimino JJ, Geller J, Perl Y. Evaluation of a UMLS Auditing Process of Semantic Type Assignments. *Proceedings of the 2007 AMIA Fall Symposium*, Chicago, IL, 2007:294-298.

Huang K, Geller J, Halper M, Cimino JJ. Piecewise Synonyms for Enhanced UMLS Source Terminology Integration. *Proceedings of the 2007 AMIA Fall Symposium*, Chicago, IL, 2007:339-343.

Li J, Cimino JJ. Auditing Dynamic Links to Online Information Resources. *Proceedings of the 2007 AMIA Fall Symposium*, Chicago, IL, 2007:448-452.

Patel C, Cimino JJ. Decompositional Terminology Translation Using Network Analysis. *Proceedings of the 2007 AMIA Fall Symposium*, Chicago, IL, 2007:588-592.

Yu A, Cimino JJ. A Comparison of Two Methods for Retrieving ICD-9-CM data: The Effect of Using an Ontology-based Method for Handling Terminology Changes. *Proceedings of the 2007 AMIA Fall Symposium*, Chicago, IL, 2007:841-845.

Cimino JJ, Borotsov D. Leading a Horse to Water: Using Automated Reminders to Increase Use of Online Decision Support. Proceedings of the AMIA 2008 Fall Symposium, Washington, DC, 2008:116-120.

Collins S, Bakken S, Cimino JJ, Currie LM. Identifying Logical Clinical Context Clusters in Nursing Orders for the Purpose of Information Retrieval. Proceedings of the AMIA 2008 Fall Symposium, Washington, DC, 2008:131-135.

Gold S, Elhadad N, Zhu X, Cimino JJ, Hripcsak G. Extracting Structured Medication Event Information from Narrative Clinical Note. Proceedings of the AMIA 2008 Fall Symposium, Washington, DC, 2008:237-241.

Cimino JJ. The Contribution of Observational Studies and Clinical Context Information for Guiding the Integration of Infobuttons into Clinical Information Systems. In: Ohno-Machado L, ed. Proceedings of the 2009 AMIA Fall Symposium, San Francisco, CA, 2009:109-113.

Patel CO, Cimino JJ. A Network-Theoretic Approach for Translation across Open Biological Ontologies. In: Ohno-Machado L, ed. Proceedings of the 2009 AMIA Fall Symposium, San Francisco, CA, 2009:514-518.

Del Fiol G, Cimino JJ, Maviglia SM, Strasberg HR, Jackson BR, Hulse NC. Analysis of the Use of Knowledge Resources to Support Knowledge Management Processes. In: Ohno-Machado L, ed. Proceedings of the 2009 AMIA Fall Symposium, San Francisco, CA, 2009:134-138.

Haerian K, McKeeby J, DiPatrizio G, Cimino JJ. Use of Clinical Alerting to Improve the Collection of Clinical Research Data. In: Ohno-Machado L, ed. Proceedings of the 2009 AMIA Fall Symposium, San Francisco, CA, 2009: 218-222.

Zhu X, Gold S, Lai A, Hripcsak G, Cimino J J. Using Timeline Displays to Improve Medication Reconciliation. In Proceedings of the 2009 international Conference on Ehealth, Telemedicine, and Social Medicine (Cancun, Mexico, February 01 - 07, 2009). ETELEMED. IEEE Computer Society, Washington, DC, 1-6. http://dx.doi.org/10.1109/eTELEMED.2009.20

Cimino JJ, Ayres EA. The Clinical Research Data Repository of the US National Institutes of Health. Proceedings of Medinfo 2010:1299-1303. (**Nominated for Best Paper Award**)

Cimino JJ, Farnum L, Cochran K, Moore S, Sengstack PP, McKeeby JW. Interpreting Nurses' Responses to Clinical Documentation Alerts. In: Kuperman G, ed. Proceedings of the 2010 AMIA Fall Symposium, Washington, DC, 2010:116-120.

Del Fiol G, Cimino JJ, Maviglia SM, Strasberg HR, Jackson BR, Hulse NC. A Large-Scale Knowledge Management Method Based on the Analysis of the Use of Online Knowledge Resources. In: Kuperman G, ed. Proceedings of the 2010 AMIA Fall Symposium, Washington, DC, 2010:142-146.

Kawamoto K, Del Fiol G, Strasberg HR, Hulse N, Curtis C, Cimino JJ, et al. Multi-National, Multi-Institutional Analysis of Clinical Decision Support Data Needs to Inform Development of the HL7 Virtual Medical Record Standard. In: Kuperman G, ed. Proceedings of the 2010 AMIA Fall Symposium, Washington, DC, 2010:377-381.

Cimino JJ, Farnum L, DiPatrizio GE, Goldspiel BR. Improving Adherence to Research Protocol Drug Exclusions using a Clinical Alerting System. Evans, RS, ed. Proceedings of the 2011 AMIA Fall Symposium, Washingon, DC. 2011:257-66.

Jing X, Cimino JJ. Graphical Methods for Reducing, Visualizing and Analyzing Large Data Sets Using Hierarchical Terminologies. Evans, RS, ed. Proceedings of the 2011 AMIA Fall Symposium, Washington, DC. 2011:635-43.

Miller T, Cimino JJ, Ravvaz K, Yu H. An investigation into the feasibility of spoken clinical question answering. Evans, RS, ed. Proceedings of the 2011 AMIA Fall Symposium, Washingon, DC. 2011:954-9.

DeLeo J, Cimino JJ. Clinical Applications of Star Glyphs and Ideas about Crowdsourcing Data Visualization Software. Proceedings of VisWeek, IEEE Computer Society Conference on Data Visualization, Providence, RI, 2011:29-31.

Huser V, Cimino JJ. IDR Snapshot: Quantitative Assessment Methodology Evaluating Size and Comprehensiveness of an Integrated Data Repository. Shah N, ed. 2012 AMIA Translational Bioinformatics Summit, San Francisco, CA:153.

Cimino JJ, Jing X, Del Fiol G. Meeting the Electronic Health Record "Meaningful Use" Criterion for the HL7 Infobutton Standard Using OpenInfobutton and the Librarian Infobutton Tailoring Environment (LITE). Hersh WR, ed. Proceedings of the 2012 AMIA Fall Symposium, Chicago, IL. 2012:112-120.

Huser V, Cimino JJ. Precision and Negative Predictive Value of Links between ClinicalTrials.gov and PubMed. Hersh WR, ed. Proceedings of the 2012 AMIA Fall Symposium, Chicago, IL. 2012:400-408.

Manning J, Marciano B, Cimino J. Visualizing the Data – Using Lifelines2 to Gain Insights from Data Drawn from a Clinical Data Repository. Bernstam E, ed. 2013 AMIA Clinical Research Informatics Summit, San Francisco, CA:168-172.

Hruby G, Boland M, Cimino JJ, Gao J, Wilcox A, Hirschberg J, Weng C. Characterization of the Biomedical Query Mediation Process. Bernstam E, ed. 2013 AMIA Clinical Research Informatics Summit, San Francisco, CA:89-93.

Cimino JJ, Overby CL, Devine EB, Hulse NC, Jing X, Maviglia SM, Del Fiol G. Practical Choices for Infobutton Customization: Experience from Four Sites. Holmes JH, ed. Proceedings of the 2013 AMIA Fall Symposium, Washington, DC. 2013:236-245.

Huser V, Cimino JJ. Desiderata for Healthcare Integrated Data Repositories Based on Architectural Comparison of Three Public Repositories. Holmes JH, ed. Proceedings of the 2013 AMIA Fall Symposium, Washington, DC. 2013:648-656 (**Nominated for Best Paper**).

Vawdrey DK, Weng C, Herion D, Cimino JJ. Enhancing Electronic Health Records to Support Clinical Research. Richesson R, ed. 2014 AMIA Clinical Research Informatics Summit, San Francisco, CA:103-109.

Hruby GW, Cimino JJ, Patel VL, Weng C. Toward a Cognitive Task Analysis for Biomedical Query Mediation. Richesson R, ed. 2014 AMIA Clinical Research Informatics Summit, San Francisco, CA:219-223.

Cimino JJ, Remennick L. Adapting a Clinical Data Repository to ICD-10-CM. Westra BL, ed. Proceedings of the 2014 AMIA Fall Symposium, Washington, DC. 2014:405-413 (**Nominated for Distinguished Paper Award**).

Huser V, Kayaalp M, Dodd Z, Cimino JJ. Piloting a Deceased Subject Integrated Data Repository and Protecting Privacy of Relatives. Westra BL, ed. Proceedings of the 2014 AMIA Fall Symposium, Washington, DC. 2014:719-728 (**Nominated for Distinguished Paper Award**).

Pan X, Cimino JJ. Locating Relevant Patient Information in Electronic Health Record Data Using Representations of Clinical Concepts and Database Structures. Westra BL, ed. Proceedings of the 2014 AMIA Fall Symposium, Washington, DC. 2014:969-975.

Swartz JL, Cimino JJ, Fred MR, Green RA, Vawdrey DK. Designing a Clinical Dashboard to Fill Information Gaps in the Emergency Department. Westra BL, ed. Proceedings of the 2014 AMIA Fall Symposium, Washington, DC. 2014:1098-1104.

Abstracts, Posters, and Demonstrations:

Cimino JJ, Hupp JA, Hoffer EP, Lowe HJ, Barnett GO: Demonstration of DXplain - A Computer Based Diagnostic Knowledge Base, (abstract) in Salamon R, Blum B, Jorgensen M, editors: *MEDINFO 86*; Washington, D.C.; October, 1986:1138.

Cimino JJ, Hupp JA, Hoffer EP, Barnett GO: Demonstration: DXplain - An Interactive Diagnostic Knowledge Base, (abstract) in Stead WW, ed.: *Proceedings of the Eleventh Annual Symposium on Computer Applications in Medical Care*; Washington, D.C.; November, 1987; Supplement page 17.

Cimino JJ, Barnett GO, Hoffer EP, Packer MS, Hupp JA: Building the DXplain Knowledge Base, (abstract) *Proceedings of the Association for the Advancement of Medical Instrumentation, Twenty-Third Annual Meeting and Exposition*; Washington, D.C.; May, 1988; 24.

Cimino JJ, Elkin PL, Barnett GO: The Medical Concept Space as a Model for Hypertext, (abstract) in Mitchell JA, Ed.: *Proceedings of the First Annual Educational and Research Conference of the American Medical Informatics Association*; Snowbird, Utah; June, 1990:41.

Elkin PL, Cimino JJ, Barnett GO: The Hypertext Medical Workstation, (abstract) in Mitchell JA, ed.: *Proceedings of the First Annual Educational and Research Conference of the American Medical Informatics Association*; Snowbird, Utah; June, 1990:33.

Cimino JJ, Sengupta S. IAIMS and UMLS at Columbia-Presbyterian Medical Center, (abstract) in Beck JR, Ed.: Proceedings of the Second Annual Educational and Research Conference of the American Medical Informatics Association; San Francisco, CA; June, 1991:56.

Cimino JJ, Barrows RC, Allen B: Adapting ICD9-CM for Clinical Decision Support, (abstract) in Musen MA, ed.: *Proceedings of the 1992 Spring Congress of the American Medical Informatics Association*; Portland, Oregon; May, 1992:34.

Cimino JJ: Linking a Clinical Information System to Knowledge Retrieval, (abstract) in *Proceedings of the Medical Library Association 92nd Annual Meeting*; Washington, D.C.; May, 1992: 26a.

Sideli RV, Johnson SB, Hripcsak G, Sengupta S, Cimino JJ, Allen B, Clayton PD. Accessing the Electronic Medical Record Using HL7, (abstract) in Kahn MG, ed.: *Proceedings of the 1993 Spring Congress of the American Medical Informatics Association*; St. Louis, MO; May, 1993: 49.

Evans DA, Chute CG, Cimino JJ, Greenes RA, Hersh WR, Huff SM, Musen MA: CANON: Towards a Medical-Concept Representation Language for Electronic Medical Records, (abstract) in Kahn MG, ed.: *Proceedings of the 1993 Spring Congress of the American Medical Informatics Association*; St. Louis, MO; May, 1993: 26.

Kuperman G, Cimino JJ, Payne T, Pryor TA, Rind D, Teich J: Issues in Creating On-Line Medical Problem Lists, (abstract) in Kahn MG, ed.: *Proceedings of the 1993 Spring Congress of the American Medical Informatics Association*; St. Louis, MO; May, 1993: 28-29.

Cimino JJ, Hripcsak G, Johnson SB, Sideli RV, Clayton PD: Integrating Systems by Integrating Vocabularies, (abstract) in Rindfleisch TC, ed.: *Proceedings of the 1994 Spring Congress of the American Medical Informatics Association*; San Francisco, CA; May, 1994: 75.

Hripcsak G, Johnson SB, Sideli RV, Cimino JJ, Clayton PD: Using Data Access Modules for Legacy Databases, (abstract) in Rindfleisch TC, ed.: *Proceedings of the 1994 Spring Congress of the American Medical Informatics Association*; San Francisco, CA; May, 1994: 107.

Barnett GO, Shortliffe E, Chueh H, Piggins J, Greenes R, Cimino J, Musen M, Clayton P, Humphreys B, Kingsland L, Rodgers RPC. Demonstration: Patient care medical applications on the Internet. In Ozbolt JG, ed.: Proceedings of the Eighteenth Annual Symposium on Computer Applications in Medical Care; Washington, DC; November, Hanley & Belfus, Philadelphia, 1994:1060.

Cimino JJ. Controlled vocabularies for capturing clinical encounters. In: Hripcsak G, ed. Proceedings of the 1995 Spring Congress of the American Medical Informatics Association; Boston, MA; May, 1995:72.

Socratous SA, Cimino JJ, Clayton PD. Access to the clinical encounter via the World Wide Web. In: Hripcsak G, ed. Proceedings of the 1995 Spring Congress of the American Medical Informatics Association; Boston, MA; May, 1995:85.

Barrows RC Jr, Allen B, Clayton P, Cimino J, Sherman E, Jenders R. A GUI to a controlled medical vocabulary to support coded data capture during ambulatory patient encounters. In: Hripcsak G, ed. Proceedings of the 1995 Spring Congress of the American Medical Informatics Association; Boston, MA; May, 1995:69.

Cimino JJ, Socratous SA, Clayton PD. Automated Guidelines Implemented via the World Wide Web (Poster). In Gardner RM, ed.: Proceedings of the Nineteenth Annual Symposium on Computer Applications in Medical Care; New Orleans, LA; October-November, Hanley & Belfus, Philadelphia, 1995: 941.

Oliver DE, Barnett GO, Chueh HC, Cimino JJ, Clayton PD, Detmer WM, Gennari JH, Greenes RA, Huff SM, Musen MA, Pattison-Gordon E, Shortliffe EH, Socratous SA. Demonstration: InterMed: An Internet-based medical collaboratory. In Gardner RM, ed.: Proceedings of the Nineteenth Annual Symposium on Computer Applications in Medical Care; New Orleans, LA; October-November, Hanley & Belfus, Philadelphia, 1995: 1023.

Cimino JJ, Patel VL. Cognitive Evaluation of a Knowledge-based Vocabulary (Poster). Workshop on Evaluation of Knowledge-Based Systems, December 7-8, 1995, National Library of Medicine, Bethesda, Maryland.

Cimino JJ, Zeng Q, Elhanan G, Socratous SA. From Coded Patient Data to World Wide Web Information via the UMLS. In: Humphreys BL, ed. Proceedings of the 1996 Spring Congress of the American Medical Informatics Association; Kansas City, MO; June, 1996:92.

Patel VL, Cimino JJ, Shortliffe EH. Explorations in Internet-Based Collaborative Informatics Research - A Cognitive Evaluation. In: Humphreys BL, ed. Proceedings of the 1996 Spring Congress of the American Medical Informatics Association; Kansas City, MO; June, 1996:78.

Cimino JJ. Access to information sources through controlled medical vocabulary. In: Brennan PF, ed. Proceedings of the 1997 Spring Congress of the American Medical Informatics Association; San Jose, CA; May, 1997:59.

Cimino JJ, Patel VL, Moehr JR, Barnett GO, Cimino C. Panel: Designing a student clinical workstation: challenges and opportunities. *Journal of the American Medical Informatics Association*; 1997;4 (Suppl).

Patel VL, Kushniruk AW, Cimino JJ. Cognitive issues in the evaluation of patient-based information systems. In: Campbell JR, ed. Proceedings of the 1998 Spring Congress of the American Medical Informatics Association; Philadelphia, PA; May, 1998:33.

Cimino JJ, Patel VL, Sengupta S, Clayton PD, Kushniruk AW, Huang X. PatCIS: support for informed patient decision-making. In: Campbell JR, ed. Proceedings of the 1998 Spring Congress of the American Medical Informatics Association; Philadelphia, PA; May, 1998:47.

Zeng Q, Cimino JJ. Supporting diagnostic hypothesis validation by providing a knowledge based view of EMR. In: Campbell JR, ed. Proceedings of the 1998 Spring Congress of the American Medical Informatics Association; Philadelphia, PA; May, 1998:89.

Cimino JJ, Huff SM, Broverman CA, McNamara T, Nelson SJ. Panel: Development of a Standard Terminology to Support Medication Messages. *Journal of the American Medical Informatics Association*; 1998;5 (Suppl):

Elhanan G, Cimino JJ. Automated Integration of a Diagnostic Decision Support System with a Large Scale Clinical Information System-Aspects of Feasibility (Poster). *Journal of the American Medical Informatics Association*; 1998;5 (Suppl):997.

Kushniruk AW, Patel VL, Cimino JJ. Designing evaluation of Web-based information resources: "televaluation" of patient clinical information systems (Poster). *Journal of the American Medical Informatics Association*; 1998;5 (Suppl):1032.

Lussier YA, Kukafka MA, Cimino JJ. Overcoming the barriers of Web-based interentions for elder patients: enabling strategies for the MI HEART clinical trial. *Journal of the American Medical Informatics Association*; 1999;6 (Suppl):1110.

Chen Y, Wang SS, Cimino JJ. Linking guidelines for mammography to an electronic medical record for use by patients. *Journal of the American Medical Informatics Association*; 1999;6 (Suppl):1041.

Cytryn KL, Patel VL, Cimino JJ. Influence of lay conceptions of health and illness on healthcare decision-making: implications for the development of technological support. *Journal of the American Medical Informatics Association*; 1999;6 (Suppl):1043.

Campbell DA, Harrington DP, Cimino JJ. Exploring the semantic relations of radiological terms UMLS resources. *Journal of the American Medical Informatics Association*. 2000;7 (suppl.):976.

Chuang J, Kukafka R, Lussier YA, Jenders RA, Cimino JJ. A Web-based system for prediction of coronary heart disease risk using the Framingham algorithm. *Journal of the American Medical Informatics Association*. 2000;7 (suppl.):983.

Gu H, Perl Y, Halper M, Geller J, Kuo F, Cimino JJ. How to partition a complex schema of a medical terminology. *Journal of the American Medical Informatics Association*. 2000;7 (suppl.):1022.

Kukafka R, Lussier YA, Cimino JJ, Eng P. Developing and evaluating theory-based educational content for Web applications. *Journal of the American Medical Informatics Association*. 2000;7 (suppl.):1056.

Lussier YA, Wang D, Kukafka R, Cimino JJ. Improving the development of composite educational guidelines using decomposition of concept lattices. *Journal of the American Medical Informatics Association*. 2000;7 (suppl.):1073.

Chen ES, Cimino JJ. Use of Wireless Technology for Reducing Medical Errors. *Journal of the American Medical Informatics Association*. 2001;8 (suppl.):877.

Kubose TT, Cimino JJ, Patel VL. Assessment of Information Needs for Informed, Coordinated Activities in the Clinical Environment. *Journal of the American Medical Informatics Association*. 2001;8 (suppl.):948.

Kukafka R, Lussier YA, Patel VL, Cimino JJ. The MI-HEART Project: Information Technology (IT) for One-to-One Tailored Patient Communication. *Journal of the American Medical Informatics Association*. 2001;8 (suppl.):949.

Li J, Lussier YA, Kukafka R, Cimino JJ. Harnessing Web Information Technologies for Secure and Adaptive Health Communications. *Journal of the American Medical Informatics Association*. 2001;8 (suppl.):956.

Lussier YA, Kukafka R, Li J, Patel VL, Cimino JJ. MI-HEART: a comprehensive management system to deliver, monitor and measure efficacy of individualized Web-based education. *Journal of the American Medical Informatics Association*. 2001;8 (suppl.):1076.

Lussier YA, Kukafka R, Cimino JJ. Lessons learned in the early phase of the MI-HEART clinical trial. *Journal of the American Medical Informatics Association*. 2001;8 (suppl.):825.

Mendonça EA, Cimino JJ. Content Evaluation of a Knowledge Base. *Journal of the American Medical Informatics Association*. 2001;8 (suppl.):974.

Pusic MV, MacDonald WA, Cimino JJ. Just-in-time-learning in the emergency department. *Journal of the American Medical Informatics Association*. 2001;8 (suppl.):1005.

Seol YH, Johnson SB, Cimino JJ. Conceptual Guidance in Information Retrieval. *Journal of the American Medical Informatics Association*. 2001;8 (suppl.):1026.

Chen ES, Cimino JJ. Issues in developing clinical applications for the wireless environment. *Journal of the American Medical Informatics Association*. 2002;9 (suppl.):995.

McKnight LK, Stetson PD, Chen ES, Cimino JJ. Improving clinical communication with a virtual whiteboard. *Journal of the American Medical Informatics Association*. 2002;9 (suppl.):1102.

Mendonça EA, Cimino JJ, Johnson SB. Using patient data to rank records of literature retrieval. *Journal of the American Medical Informatics Association*. 2002;9 (suppl.):1103.

Seol YH, Johnson SB, Cimino JJ. Knowledge acquisition of generic queries for information retrieval. *Journal of the American Medical Informatics Association*. 2002;9 (suppl.):1160.

Stetson PD, McKnight LK, Chen ES, Cimino JJ. Design of a Web-based care team scheduler for PalmCIS. *Journal of the American Medical Informatics Association*. 2002;9 (suppl.):1172.

Cimino JJ, Li J. Sharing Infobuttons to Resolve Clinicians' Information Needs. In, Musen MA (ed): *Proceedings of the AMIA Fall Symposium*, 2003:815.

Chen ES, Hripcsak G, Patel VL, Sengupta S, Gallagher RJ, Cimino JJ. Automated Identification of Shortcuts to Patient Data for a Wireless Handheld Clinical Information System. In, Musen MA (ed): *Proceedings of the AMIA Fall Symposium*, 2003:809.

Graham M, Currie LM, Allen M, Bakken S, Patel V, Cimino JJ. Characterizing Information Needs and Cognitive Processes During CIS Use. In, Musen MA (ed): *Proceedings of the AMIA Fall Symposium*, 2003:852.

Lei J, Chen L, Stetson P, McKnight L, Mendonca EA, Cimino JJ. Development of Infobuttons in a Wireless Environment. In, Musen MA (ed): *Proceedings of the AMIA Fall Symposium*, 2003:906.

Lei J, Stetson PD, Chen ES, McKnight LK, Mendonça EA, Cimino JJ. Structured data entry of cross-coverage notes using a PDA. *Proceedings of Medinfo 2004*:1712.

Janetzki V, Allen M, Cimino JJ. Using natural language processing to link from medical text to on-line information resources. *Proceedings of Medinfo 2004*:1665.

Allen M, Currie LM, Graham M, Janetzki V, Lee N, Bakken S, Patel VL, Cimino JJ. Responding to clinician's information needs: designing a context-specific calculator. *Proceedings of Medinfo 2004*:1503.

Cao H, Chiang MF, Cimino JJ, Friedman C, Hripcsak G. Automatic summarization of patient discharge summaries to create problem lists using medical language processing. *Proceedings of Medinfo 2004*:1540.

Collins S, Currie L, Bakken S, Cimino JJ. Interruptions During Use of a CPOE System for MICU Rounds. In, Bates DM (ed): *Proceedings of the AMIA Fall Symposium*, 2006: 895.

Gutnik L, Collins S, Currie LM, Cimino JJ, Patel VL. Infobuttons: A study of usability. *Proceedings of Medinfo* 2007: 1481.

Collins S, Bakken S, Cimino JJ, Currie L. Information Needs Related to Antibiotic Prescribing While Using CPOE. *Proceedings of the 2007 AMIA Fall Symposium*, Chicago, IL, 2007:916 (**Nominated for Best Poster**).

Del Fiol G, Cimino JJ, Maviglia S. Integration of Health Information Resources into Electronic Health Records Using the "Infobutton" HL7 Standard (Demonstration). *Proceedings of the 2007 AMIA Fall Symposium*, Chicago, IL, 2007:1195.

Kaufman D, Pevzner J, Rodriguez M, McGuinness C, Moreno V, Cimino JJ, Weinstock R, Shea S, Starren J. Understanding Dimensions of Complexity in Nurse Case Managers" Workflow in a Telemedicine Program. *Proceedings of the 2007 AMIA Fall Symposium*, Chicago, IL, 2007:1006 (**Nominated for Best Poster**).

Patel C, Cimino JJ. Semantic Query Generation from Eligibility Criteria in Clinical Trials. *Proceedings of the2007 AMIA Fall Symposium*, Chicago, IL, 2007:1070.

Patel C, Weng C, Cimino JJ, Schonberg E, Srinivas K. A scalable infrastructure for eligibility determination in clinical trials using Semantic Web technologies. *2007 AMIA Fall Symposium – Clinical Research Informatics Expo*, Chicago, IL, 2007:17.

Cimino JJ. Infobuttons: Anticipatory Passive Decision Support. Proceedings of the AMIA 2008 Fall Symposium, Washington, DC, 2008:1203-1204.

Patel CO, Cimino JJ, Using Semantic and Structural Properties of the UMLS to Discover Potential Terminological Relationships. Proceedings of the AMIA 2008 Fall Symposium, Washington, DC, 2008:555.

Tachinardi U, Cimino JJ, Starren J, Sideli R. Panel: The challenges of bridging HIS/EMRs and Research Information Systems. Proceedings of the AMIA 2008 Fall Symposium, Washington, DC, 2008.

Cimino JJ, Ayres EJ, Remennik L. Resolving Terminology Issues for a Clinical Research Data Warehouse (Poster). Payne PR, ed. *2009 AMIA Clinical Research Informatics Summit*, San Francisco, CA:115.

Tenenbaum JD, Barry W, Beck D, Blach C, Cimino J, Cole C, Ferris T, Gai X, Haynes C, Hendrickson RC, Hill CB, Italia M, Kawamoto K, Kurc T, Osborne JD, Mackenzie S, Morris T, Pennington J, Perry MT, Peters M, Ray S, Saltz J, Tirado-Ramos A, Wheelan S, Wyatt M, Wynden R, Zhang G. CTSA Task Force on Omics Data Standards., CTSA Informatics Key Function Committee All-Hands Meeting, October 2009.

Patel CO, Cimino JJ. TermLink: A Web-based Service to Translate, Map and Link Multiple Biomedical Terminologies. In: Ohno-Machado L, ed. Proceedings of the 2009 AMIA Fall Symposium, San Francisco, CA, 2009:995.

Cimino JJ, Ayres EJ, Kamerick M, Murphy SN, Wilcox A. Access Policies for Clinical Data Repositories. In: Ohno-Machado L, ed. Proceedings of the 2009 AMIA Fall Symposium, San Francisco, CA, 2009: 514.

Del Fiol G, Cimino JJ, Maviglia SM. A Large-Scale Knowledge Management Method Based on the Analysis of the Use of Online Knowledge Resources. In: Ohno-Machado L, ed. Proceedings of the 2009 AMIA Fall Symposium, San Francisco, CA, 2009:134.

Cao Y, Ely J, Cimino JJ, Gaudioso C, Yu H. AskHERMES: An Online Clinical Question Answering System. In: Ohno-Machado L, ed. Proceedings of the 2009 AMIA Fall Symposium, San Francisco, CA, 2009:785.

Del Fiol G, Kawamoto K, Cimino JJ. Open-Source, Standards-Based Software to Enable Decision Support (poster). Evans, RS, ed. Proceedings of the 2011 AMIA Fall Symposium, Washington, DC. 2011:2127.

Cimino JJ, Ayres EJ, Rath S. Bridging the Data-Terminology-Researcher Gap: User Interface Design for Terminology Browsing in the NIH's Biomedical Translational Research Information System (Poster). Kahn MG, ed. *2012 AMIA Clinical Research Informatics Summit*, San Francisco, CA:109.

Fort D, Cimino J, Wilcox A. Every Needle in a Haystack: Finding Fingerprints in a Safe Harbor Dataset Using a Single Common Lab Test (Poster). Kahn MG, ed. *2012 AMIA Clinical Research Informatics Summit*, San Francisco, CA: 116.

Huser V, Taft L, Cimino JJ. Suitability of LOINC Document Ontology as a reference terminology for clinical document types: A case report of a research-oriented EHR (Poster). Kahn MG, ed. *2012 AMIA Clinical Research Informatics Summit*, San Francisco, CA: 124.

Cimino JJ, Ayres EJ. Informatics Research to Support Clinical Research: The NIH Biomedical Translational Research Information System (BTRIS). NIH Research Festival, 2012.

May NMN, Cimino JJ. Cognitive Pattern Recognition and Data Visualization as a Joint Method for Enhancing Longitudinal Medical Research. NIH Research Festival, 2012.

Cimino JJ, Yasnoff W, Sweeney L, Halamka J, Frisse M. ACMI Debate. Hersh WR, ed. Proceedings of the 2012 AMIA Fall Symposium, Chicago, IL. 2012:1493.

Huser V, Cimino JJ. Translational Science on Trialome: Retrolective Study of Publishing Results of Clinical Trials. Hersh WR, ed. Proceedings of the 2012 AMIA Fall Symposium, Chicago, IL. 2012:1619.

Cimino JJ, Ayres EJ, Rath S, Freedman R. Automated Submission of Clinical Trials Results to ClinicalTrials.gov (Poster). Bernstam E, ed. 2013 AMIA Clinical Research Informatics Summit, San Francisco, CA:41.

Huser V, Cimino JJ. Providing Pharmacogenomics Clinical Decision Support Using Whole Genome Sequencing Data As Input. Tenenbaum J, ed. 2013 AMIA Translational Bioinformatics Summit, San Francisco, CA:81.

Huser V, Cimino JJ. Don't take your EHR to heaven, donate it to science: legal and research policies for EHR post mortem. Bernstam E, ed. 2013 AMIA Clinical Research Informatics Summit, San Francisco, CA:95.

Huser V, Cimino JJ. Providing Pharmacogenomics Clinical Decision Support Using Whole Genome Sequencing Data as Input. AMIA Summits Transl Sci Proc. 2013 Mar 18;2013:81.

Huser V, Cimno JJ. Architectural Comparison of Three Healthcare Integrated Data Repositories (Poster). Bernstam E, ed. 2013 AMIA Clinical Research Informatics Summit, San Francisco, CA:96.

Jing X, Cimino JJ. Building a framework for describing the concepts in clinical research informatics research (poster). Holmes JH, ed. Proceedings of the 2013 AMIA Fall Symposium, Washington, DC. 2013:720.

Cimino JJ, Ayres EJ. National Institutes of Health's Biomedical Translational Research Information System (BTRIS) Data Query Tool (podium presentation). Richesson R, ed. 2014 AMIA Clinical Research Informatics Summit, San Francisco, CA:128.

Huser V, Fung KW, Cimino JJ. Natural Language Processing of Free-text Problem List Sections in Structured Clinical Documents: a Case Study at NIH Clinical Center. Richesson R, ed. 2014 AMIA Clinical Research Informatics Summit, San Francisco, CA:140.

Ayres EJ, Cimino JJ. Automating Data Re-Use Policies for NIH Intramural Clinical Research Data (poster). Richesson R, ed. 2014 AMIA Clinical Research Informatics Summit, San Francisco, CA:170.

Lau AF, Wang H, Weingarten RA, Drake SK, Suffredini AF, Garfield MK, Chen Y, Gucek M, Stock F, Tso H, DeLeo J, Cimino JJ, Frank KM, Dekker JP. A Rapid MALDI-TOF Mass Spectrometry-Based Method for Single Plasmid Tracking in an Outbreak of Carbapenem-Resistant Enterobacteriaceae (poster). Casadevall A, Dubilier N, eds. 2014 American Society for Microbiology 114th General Meeting, Boston, MA:(*in press*).

Cahan A, Cimino JJ. Prior Probability Assessment Wizard (poster). Westra BL, ed. Proceedings of the 2014 AMIA Fall Symposium, Washington, DC. 2014:1330.

Ellsworth MA, Homan JM, Cimino JJ, Peters SG, Pickering BW, Herasevich V. Point-of-Care Knowledge-Based Resource Needs of Clinicians: A Survey from a Large Academic Medical Center (poster). Westra BL, ed. Proceedings of the 2014 AMIA Fall Symposium, Washington, DC. 2014:1377.

Jing X, Del Fiol Guilherme, Cimino JJ. Evaluation studies of the Librarian Infobutton Tailoring Environment (LITE): An open access online knowledge capture, management, and configuration tool for OpenInfobutton (podium presentation). Westra BL, ed. Proceedings of the 2014 AMIA Fall Symposium, Washington, DC. 2014:51-52.

Kimbrough J, Huser V, Cimino JJ. Automated Phenotype Detection Facilitates Data Warehouse Analysis; an Example Using Structure Query Language and Exudative Pleural Effusion (poster). Westra BL, ed. Proceedings of the 2014 AMIA Fall Symposium, Washington, DC. 2014:1462.

Rodriguez L, Huser V, Bodenreider O, Cimino JJ. Automatic coding of Free-Text Medication Data recorded by Research Coordinators (poster). Westra BL, ed. Proceedings of the 2014 AMIA Fall Symposium, Washington, DC. 2014:1565.

Schleyer TK, Vreeman DJ, Tuttle M, Cimino JJ,. Squaring the circle: Managing local healthcare terminologies in the age of standardization (panel). Westra BL, ed. Proceedings of the 2014 AMIA Fall Symposium, Washington, DC. 2014:189-191.

Books and Proceedings:

Cimino JJ, ed. *Proceedings of the American Medical Informatics Association Annual Symposium*. AMIA, Bethesda, MD, 1996.

Shortliffe EH, Cimino JJ, Eds. *Biomedical Informatics: Computer Applications in Health Care and Biomedicine, Third Edition*. Springer, New York, 2006.

Shortliffe EH, Cimino JJ, Eds. 生物医学信息学（第三版）(*Biomedical Informatics: Computer Applications in Health Care and Biomedicine, Third Edition,* Chinese Translation). Science Press, Beijing, 2011.

Shortliffe EH, Cimino JJ, Eds. *Biomedical Informatics: Computer Applications in Health Care and Biomedicine, Fourth Edition*. Springer, New York, 2014.

Book Chapters:

Cimino JJ. Cancer Screening. In Shea S, ed. *Division of General Internal Medicine Ambulatory Care Syllabus*. Columbia-Presbyterian Medical Center, New York; 1994.

Huff SM, Cimino JJ. Medical Data Dictionaries and their Use in Medical Information System Development. In: Prokosch HU, Dudeck J, eds. Hospital Information Systems: Current Status and Future Trends, Elsevier Science B.V., North-Holland, Amsterdam, 1995; 53-75.

Clayton PD, Cimino JJ, Anderson RK, Roderer NK, McCormack M. Integrated Advanced Information Management Systems (IAIMS): Accomplishments from a global and local perspective. In: Prokosch HU, Dudeck J, eds. Hospital Information Systems: Current Status and Future Trends, Elsevier Science B.V., North-Holland, Amsterdam, 1995; 287-311.

Pablos-Mendez A, Cimino JJ. Screening. In Rabkin M, Shea S, ed. *Ambulatory Care Syllabus.* Division of General Internal Medicine Ambulatory Care Syllabus. Columbia-Presbyterian Medical Center, New York; 1997.

Ceusters WM, Rector AL, Cimino JJ. Chap 23: Lenguajes y Terminologías Médica (Medical Languages and Terminologies). In: *Internet, Telemática y Salud (Internet in the Health Sciences)*. Oliveri N, Sosa-Iudicissa M, Gamboa C, eds. Editorial Médica Panamerica, Buenos Aires, 1997.

Cimino JJ. Development of Expertise in Medical Practice. In, Sternberg RJ, Horvath JA, eds. *Tacit Knowledge in Professional Practice*. Hillsdale, NJ: Lawrence Erlbaum Associates, 1998.

Hammond WE, Cimino JJ. Standards in Medical Informatics. Chapter 6 in: EH Shortliffe, LE Perreault, G Wiederhold, LM Fagan, eds. *Medical Informatics: Computer Applications in Health Care and Biomedicine*. New York: Springer, 2000:212-256.

Cimino JJ. Knowledge-based terminology in medicine. In: Bourigault D, Jacquemin C, L'Homme M-C, eds. Recent Advances in Computational Terminology.John Benjamins, Amsterdam. 2001:111-126.

Kukafka R, Lussier YA, Cimino JJ. The MI-HEART Project. Chapter 19, in: Lewis D, Eyesnbach G, Kukafka R, Stavri P, Jimison H, eds. C*onsumer Health Informatics: Informing Consumers and Improving Health Care*. New York: Springer, 2005:227-238.

Hammond WE, Cimino JJ. Standards in Biomedical Informatics. Chapter 7 in: Shortliffe EH, Cimino JJ, eds. *Biomedical Informatics: Computer Applications in Health Care and Biomedicine*. Springer, New York, 2006:265-311.

Cimino JJ, Del Fiol G. Infobuttons and point of care access to knowledge. In: Greenes RA, ed. *Clinical Decision Support: The Road Ahead*. Amsterdam: Elsevier, 2007:345-371.

Cimino JJ. Clinical Research Data: Characteristics, Representation, Storage, and Retrieval. In: Gallin JI, Ognibene FP. *Principles and Practice of Clinical Research*. Elsevier Inc.: Academic Press; 2012. p. 501–508.

Cimino JJ, Rigolosi RS, Cimino JE. James Ernest (Jack) Cimmino: Inventor of the arteriovenous fistula. Chapter 2B in: Ing TS, Rahman MA, Kjellstrand CM, eds. Dialysis: Hisotry, Deelopment and Promis. World Scientific, 2012:125-134.

Hammond EH, Jaffe C, Cimino JJ. Standards in Biomedical Informatics. Chapter 7 in: Shortliffe EH, Cimino JJ, eds. *Biomedical Informatics: Computer Applications in Health Care and Biomedicine*. Springer, New York, (in press).

Payne P, Embi P, Cimino JJ. Clinical Research Informatics. Chapter 16 in: Shortliffe EH, Cimino JJ, eds. *Biomedical Informatics: Computer Applications in Health Care and Biomedicine*. Springer, New York, (in press).

Del Fiol G, Yu H, Cimino JJ. Infobuttons and point of care access to knowledge. In: Greenes RA, ed. *Clinical Decision Support: The Road to Braod Adoption*. Amsterdam: Elsevier, 2014:515-549.

Letters:

Cimino JJ: Hematologic Data In The Case Records, *The New England Journal of Medicine*; December 4, 1986; 315(23):1488-1489.

Cimino JJ: Prolactin Levels After Pregnancy, *The New England Journal of Medicine*; Aug 6, 1987; 317(6):384-386.

Barnett GO, Cimino JJ, Hoffer EP: Computer Programs to Support Clinical Decision Making, *Journal of the American Medical Association*; November 6, 1987; 258(17):2376.

Cimino JJ: Nosocomial *Clostridium difficile* Infection, *The New England Journal of Medicine*; July 20, 1989; 321(3):190.

Cimino JJ. Letter to the Editor: An approach to coping with the annual changes in ICD9-CM. Methods of Information in Medicine; 1996;35(3):220.

Cimino JJ. Correction: The concepts of language and the language of concepts. *Methods of Information in Medicine*; 1999;38(1):74.

Cimino JJ. Unusual Ocular Anatomy. *The Placebo Journal*; 2004; 4(2):14.

Other Publications:

Cimino JJ: DXplain provides possible diagnoses in response to physician entry of signs and symptoms, *Healthcare Online*; February, 1988; 3(5):1-4.

Photography credit: "Folgefonna National Park, Norway," *New England Journal of Medicine*, March 4, 2010:822.

A list of 16 reports on the Unified Medical Language System to the National Library of Medicine, from 1987 to 1993, is available on request.

Invited Lectures, International:

1988   "Building the DXplain Knowledge Base"
         Pfizer Lecture, Institut de Recherches Cliniques de Montréal, Montréal, Quebéc

1991   "Decision Support at Columbia-Presbyterian Medical Center"
         Electronic Computing Health Oriented (ECHO) Conference, Marco Island, Florida; and
         IBM Health Executive Conference, Brussels, Belgium

1991   "Current Developments and Future Trends in Technology in Healthcare Computing"
         IBM Health Executive Conference, Brussels, Belgium

1992   "Management of Controlled Medical Vocabularies at Columbia-Presbyterian Medical Center" and
         "Structure and Applications of the Unified Medical Language System (UMLS)"
         Workshop on Advanced Concepts in Hospital Information Systems, Giessen, Germany

1994   "Medical Uses of the Unified Medical Language System", Berlin Heart Institute, Berlin, Germany

1994   "Use of the Unified Medical Language System in Patient Care", International Medical Informatics
         Association (Working Group 6), Geneva, Switzerland

1994   "Development of a Medical Vocabulary: Knowledge-Based Extensions", Department of Cognitive
         Science, McGill University, Montreal, Canada

1994   "Integrating Clinical Systems by Integrating Controlled Vocabularies", Keynote Speaker, Brazilian
         Conference on Medical Informatics, Porto Alegre, Brazil

1995   "Managing Vocabulary for a Centralized Clinical System", Plenary Speaker, Medinfo '95, Vancouver

1996   "Web-Based Clinical Information Systems: Architecture, Perils and Promises", Scientific Keynote
         presentation, COACH, Toronto, Canada

1996   "Managing Vocabulary for a Centralized Clinical System", CRISTAL'S (Contribuer à la Recherche et à
         l'Innovation au Service du Traitemet et de l'Analyse des Langages utilisés dans les systèmes de
         Sois) Annual Conference, Rennes, France

1997   "Intranet technology in Hospital Information Systems", New Technologies in Hospital Information
         Systems, Ulm, Germany

1998   "Keynote: Bringing the Web to the Bed(side)", Electronic Patient Records in Medical Practice, Rotterdam

1998   "Electronic Patient Records in the New York Presbyterian Hospital", Electronic Patient Records in
         Medical Practice, Rotterdam

1998   "Desiderata for Controlled Medical Terminologies", Seminar on Controlled Terminology in Sweden,
         Stockholm

1999   "Keynote: Personal Health Information: The Last Frontier on the World Wide Web", Interactive Health
         Conference, University of Western Ontario, London, Ontario, Canada

1999   "Controlled Medical Terminologies: What can they do for me?", Interactive Health Conference, University
         of Western Ontario, London, Ontario, Canada

2000   "Keynote: Harnessing World Wide Web Technology and Standardized Terminology to Improve Decision
         Making for Patients and Providers", The 7th International Congress of Nursing Informatics,
         Auckland, New Zealand

2000   "Introduction to Controlled Vocabulary", HL7 Conference

2002   "The Challenge of Reuse of Information", Medical Informatics Europe (MIE), Budapest, Hungary

2005   "New Desiderata of Biomedical Terminologies", IMIA Working Group 6, Rome, Italy

2005   "US Standards for Health Records Systems", PEP'2005, Sao Paulo, Brazil

2005   "Software Certification for Electronic Health Records: The Certification Commission for Healthcare
         Information Technology", PEP'2005, Sao Paulo, Brazil

2006   "Anticipating the Information Needs of Clinicians", GMDS, Leipzig, Germany

2007   "Reuse of Data Coded with High-Quality Terminologies: Practical Examples from Patient Care Settings",
         Electronic Health Record Observatory, Nybørg, Denmark

2007   "Determining the Quality of a Terminology", Electronic Health Record Observatory, Nybørg, Denmark

2009   "Point of Care Information Support, or How do we Get the Answers to Clinicians Where and When They
         Need Them?", Department of Clinical Epidemiology and Biostatistics, McMaster University,
         Hamilton, Ontario, Canada

2009	"Clinical Research Data Repositories and Clinical Research", Department of Clinical Epidemiology and Biostatistics, McMaster University, Hamilton, Ontario, Canada
2010	"BTRIS: The NIH Biomedical Translational Research Information System", University of São Paulo, São Paulo, Brazil
2010	"Electronic Health Records and Translational Research Informatics", Brazilian Telemedicine University Network (RUTE), São Paulo, Brazil
2011	"The Role of Terminology and eHealth: A Report from the US National Institutes of Health", Greater China eHealth Forum, Kowloon, Hong Kong
2012	"Challenges in Constructing and Using a Clinical Research Data Warehouse", Catalan Forum for eHealth (Fòrum CIS), Barcelona, Spain
2013	"Informatics Research toward the Solution-Oriented Medical Record", Information Technology in Health Care, Victoria, British Columbia, Canada
2013	"New Generation Health Professional Decision-Support Tools to Enable Individualized Care", eHealth Innovations Priority-Setting Workshop, Montreal, Canada

Invited Lectures, National:

1986	"DXplain, a program which offers a broad differential diagnosis for internal medicine" Center for Clinical Computing, Harvard Medical School, Boston, MA
1990	"Medical Informatics: An Emerging Medical Specialty" Medical Grand Rounds, St. Luke's Medical Center, Milwaukee, Wisconsin
1991	"IAIMS at Columbia University College of Physicians and Surgeons", American Association of Medical Colleges, Northeast Regional Group on Business Affairs, Newport, Rhode Island
1991	"Developing a Clinical Information System with the UMLS" Maryland Society of Healthcare Information Systems Management, Timonium, Maryland
1992	"Building the Medical Entities Dictionary at Columbia-Presbyterian Medical Center" Center for Biomedical Informatics Vanderbilt University, Nashville, Tennessee
1992	"One Stop Information Shopping: IAIMS at Columbia-Presbyterian Medical Center" Association of American Medical Colleges, Snowmass, Colorado
1992	"Clinical Information Systems at Columbia-Presbyterian Medical Center" Electronic Computing Health Oriented (ECHO) Conference, Palm Desert, California
1993	"Integrating Computer Environments to Support Clinical Decision Making" (Workshop) American College of Physicians, Annual Session
1993	"Data Storage and Knowledge Representation for Clinical Workstations", The Healthcare Professional Workstation (Working Conference), International Medical Informatics Association, Washington
1993	"An Outside Perspective to Clinical Computing" Workshop, Group Health Cooperative of Puget Sound, Seattle, Washington
1993	"IAIMS at Columbia-Presbyterian Medical Center", Valley Hospital, Ridgewood, New Jersey
1993	"Vocabulary Management at the Columbia Presbyterian Medical Center: Lessons for Healthcare Information Architecture", Agency for Healthcare Policy and Research, Bethesda, Maryland
1994	"Using Computers to Support Clinical Information Management in Academic Medical Center" Workshop, American College of Physicians, Annual Session, Miami Beach, Florida
1994	"Bringing Medical Databases to the Bedside", Soc. for Clinical Data Management Systems, New Orleans
1994	"One Stop Information Shopping: IAIMS at Columbia-Presbyterian Medical Center" Association of American Medical Colleges, Snowmass, Colorado
1994	"Integrating Computer Environments to Support Clinical Decision Making" (Workshop) American College of Physicians, Annual Session
1995	"Sharing Healthcare Knowledge on the Information Superhighway", Information Management for Integrated Healthcare Delivery, Chicago, Illinois
1996	"Using the Web for Research, Education and Patient Care: What Works, What's Broken, What needs to be Built", American College of Medical Informatics, Annual Symposium, Orlando, Florida
1996	"High Performance Computing and Communication in Research and Education", Panel discussant, American Educational Research Association, New York
1997	"Accessing Clinical Information over the Internet and World Wide Web", American College of Surgeons, Clinical Congress, Chicago, IL.

1997	"Terminology to Support Merging Data Sets", Computer-based Patient Record Institute Terminology Workshop, Alexandria, VA.
1998	"Use of the Internet for Database Access", National Hear Attack Alert Program Conference on Informatics, Bethesda, Maryland
1998	"Desiderata for Controlled Medical Terminologies", Computer-based Patient Record Institute/HL7 Joint Meeting, Alexandria, VA.
1999	"Electronic Reporting of Laboratory Data", Centers for Disease Control, Atlanta, Georgia
1999	"HL7 Drug Name Coordination Efforts", Computer-based Patient Record Institute, Tysons Corner, Virginia
1999	"Introduction to Controlled Vocabulary", HL7 Conference
1999	"Principles of Controlled Medical Terminologies", NLM Biomedical Informatics Course, Woods Hole, MA
1999	"Practical Considerations for Choosing Terminologies in Health Care Applications", AMIA Symposium
1999	"Keynote: The Promise of Pathology Informatics", National Cancer Institute, Annapolis, Maryland
1999	"Clinical Vocabularies", National Committee on Vital and Health Statistics, Rockville, Maryland
1999	"Trends towards Concept-Based Language Systems: Desiderata for Terminologies to Capture Clinical Data", American Nursing Association Vocabulary Summit, Nashville, Tennessee
1999	"Medical Informatics Training at Columbia University: Perceived Needs for and Goals of Training", American Medical Informatics Association, Chicago, Illinois
1999	"Clinical Terminology", National Library of Medicine, Marine Biological Laboratory, Woods Hole, MA
1999	"Attacking the Hard Problems of IAIMS", University of Pittsburgh, Pittsburgh, Pennsylvania
1999	"Bringing Clinical Information to the Bedside with the World Wide Web", Grand Rounds, Holy Name Hospital, Teaneck, New Jersey
1999	"Keynote: Controlled Terminology in Clinical Practice", Rocky Mountain Regional Medical Informatics Fair, Denver, Colorado
1999	"Cornerstone Lecture: From Data to Knowledge Through Concept-Oriented Terminologies", AMIA Annual Symposium, Washington, DC
1999	"Panel: What's Wrong with the EMR?", AMIA Annual Symposium, Washington, DC
1999	"Integration of Information Resources at the Point of Need", Integrated Health Enterprise Symposium, Radiology Society of North America, Chicago, Illinois
1999	"Terminology Tools: State of the Art and Practical Lessons", IMIA Working Group 6, Phoenix, Arizona
2000	"Introduction to Controlled Vocabulary", HL7 Conference
2000-05	"What is Medical Informatics", NLM Biomedical Informatics Course, Woods Hole, MA (biannual 6 years)
2000-05	"Principles of Controlled Medical Terminologies", NLM Biomedical Informatics Course, Woods Hole, MA (biannual 6 years)
2000-03	"Practical Considerations for Choosing Terminologies in Health Care Applications", AMIA Symposium
2000	"Supporting Medical Decision-Making with Electronic Medical Records", Healthtech 2000, National Network of Libraries of Medicine, Springfield, Massachusetts
2000	"The Internet - How Will It Transform the Practice of Medicine?", Academic and Managed Care Forum, Washington, DC
2001	"Introduction to Controlled Vocabulary", HL7 Conference
2001	"Controlled Medical Language: The Columbia Experience", University of Michigan
2001	"Web as Medium for Patient Access to Electronic Health Information", National Information Infrastructure Conference, National Library of Medicine
2001	"Technology and the Future of Medicine", New York Medical College
2001	"Patients' Access to Medical Records: Experience with PatCIS", Columbia University, Division of General Internal Medicine
2001	"Drug Terminology (Testimony)", NCVHS Subcommittee on Standards and Security
2001	"Practical Considerations for Choosing Terminologies in Health Care Applications", AMIA Symposium
2003	"The Columbia University Experience: Infobuttons and the Infobutton Manager", AMIA Symposium
2003	"Advanced Controlled Medical Terminology", University of Iowa
2003	"Wireless Palm-based Access to Health Information", University of Iowa
2004	"Standardized Clinical Terminologies", Loyola University
2004	"Supporting Informatics with Intelligent Terminology", University of Illinois, Chicago
2004	"Just in Time Education", National Library of Medicine Board of Regents
2004	"Understanding Clinician Information Needs", National Cancer Institute

2004	"PalmCIS: Palm-based Wireless Computing to Improve Access to Health Information and Coordination of Care", Mobile@Hopkins, Johns Hopkins University

2004   "PalmCIS: Palm-based Wireless Computing to Improve Access to Health Information and Coordination of Care", Mobile@Hopkins, Johns Hopkins University

2004   "Information Needs, Infobuttons, and the Infobutton Manager", LDS Hospital, Salt Lake City, UT

2004   "Practical Considerations for Choosing Terminologies in Health Care Applications", Medinfo 2004

2004   "InfoButtons: A Clinical Decision Support Intervention to improve care safety and quality", HIMSS Winter Audio Conference

2005   "Resolving Clinicians On-Line Information Needs - A Brief History of Buttons", Stanford University

2005   "Twenty Years of IAIMS-The Columbia University-New York Presbyterian Hospital Clinical Data Repository", IAIMS Consortium, Boston, MA

2005   "Experience with Using the UMLS Semantic Network to Coordinate Controlled Terminologies for a Large Clinical Data Repository", National Library of Medicine

2005-10 "Clinical Classifications and Biomedical Ontologies: Terminology Evolution, Principles, and Practicalities", AMIA Symposium tutorial

2006   "Standard and Non-Standard Terminology Solutions for the Columbia University Medical Center and New York Presbyterian Hospital", University of Iowa Medical Center

2006   "Good Terminology Practices", National Academy of Sciences NIH Roadmap Conference, Washington

2006   "Multiple Terminologies Working in Parallel: An Application Use Case", AHIMA Clinical Terminology Institute, Chicago

2006   "An Integrated Approach to Computer-Based Decision Support at the Point of Care", American Clinical and Climatological Society, Charleston, SC

2006   "The Practical Impact of Ontologies on Biomedical Informatics", Frontiers in Biological Systems Symposium, New York State Center of Excellence in Bioinformatics and Life Sciences, Buffalo

2006   "Personalized Prediction and Resolution of Clinician Information Needs", IBM Watson Research Center, Hawthorne, NY

2007   "Controlled Terminologies in Patient Care and Research: An Informatics Perspective", University of Arizona

2007   "Infobuttons: Linking Clinical Information Systems to On-Line Information Resources to Resolve Clinician Information Needs", Sarasota Memorial Hospital

2007   "Controlled Terminologies in Patient Care and Research: An Informatics Perspective", Marine Biological Laboratory, Woods Hole, Massachusetts

2007   "Infobuttons: Linking Clinical Information Systems to On-Line Information Resources to Resolve Clinician Information Needs", Lehigh Valley Hospital

2007   "Controlled Terminologies in Patient Care and Research: An Informatics Perspective", University of Vermont School of Medicine

2007   "Unified Vocabulary Review Process", Cancer Biomedical Informatics Grid (caBIG), Washington, DC

2008   "LITE: The Librarian Infobutton Tailoring Environment", Northern California / Nevada Medical Library Group, Las Vegas, Nevada

2008   "The Future of Biomedical Informatics in Healthcare Education", Technologic Innovations in Nursing Education, Hilton Head, South Carolina

2008   "Publishing for the EHR", Webinar, sponsored by Association of American Publishers

2008   "Lessons from Biomedical Informatics for Nutrition Informatics", NIH Nutrition Day

2008   "Infobuttons: Context-specific Links from Clinical Systems to On-Line Knowledge Resources to Anticipate and Address Clinician Information Needs at the Point of Care", University of Maryland, School of Nursing

2008   "Computer-based Support for Improving Patient Medication Management", Informatics Grand Rounds, Dartmouth-Hitchcock Medical Center

2008   "National Issues", AMIA Spring Congress Plenary Panel

2008   "The NIH Biomedical Translational Research Information System (BTRIS)", The University of Chicago Cancer Research Center and the Initiative for Biomedical Informatics

2008   "The NIH Biomedical Translational Research Information System (BTRIS)", National Library of Medicine Training Directors Meeting

2008   "Infobuttons: Anticipatory Passive Decision Support", AMIA Fall Symposium ACMIA Senior Member Presentation

2008   "The NIH Biomedical Translational Research Information System (BTRIS)", Johns Hopkins University Informatics Grand Rounds

2008	"LITE: The Librarian Infobutton Tailoring Environment", Mid-Atlantic Chapter of the Medical Library Association, Morgantown, WV
2008	"Standards in Biomedical Informatics", Uniformed Services University of the Health Sciences, Bethesda, MD
2008	"The NIH Biomedical Translational Research Information System (BTRIS)", Biomedical Informatics Seminar, Georgetown University, Washington, DC
2009	"Informatics as the Bridge to Knowledge at the Bedside", Summer Institute of Nursing Informatics, University of Maryland, Baltimore, MD
2009	"Implementing Health Informatics Solutions in the Life Sciences Industry: Terminology/Ontology Issues in Creating Searchable Data Repositories", Drug Information Association Annual Meeting, San Diego, CA
2009	"Principles of Controlled Terminologies", Uniformed Services University of the Health Sciences, Bethesda, MD
2009	"Clinician Information Needs", Uniformed Services University of the Health Sciences, Bethesda, MD
2010	"Understanding and Resolving Clinician Information Needs with Infobuttons", University of Buffalo School of Medicine, City-Wide Grand Rounds, Buffalo, NY)
2010	"BTRIS: The NIH Biomedical Translational Research Information System", DIA/FDA CDER/CBER Computational Science Annual Meeting, Bethesda, MD
2010	"Personal Health Records: Past as Prologue", AMA-IEEE Medical Technology Conference on Individualized Healthcare, Washington, DC
2010	"BTRIS: The NIH Biomedical Translational Research Information System", University of Chicago Comprehensive Cancer Center, Chicago, IL
2010	"BTRIS: The NIH Biomedical Translational Research Information System", Duke University, Duke Translational Medicine Institute, Durham, NC
2010	"Addressing Clinicians' Needs for Translational Medicine Information", Upstate New York and Ontario Medical Library Association, Syracuse, NY
2010	"What is Translational about the Biomedical Translational Information System: Data Repurposing at the NIH", NIH Translational Research Interest Group, Bethesda, MD
2010	"BTRIS: The NIH Biomedical Translational Research Information System – A Progress Report", Research Seminar, Columbia University Department of Biomedical Informatics, New York, NY
2010	"The NIH Biomedical Translational Research Information System", Health Informatics Pulse Interest Group, Bethesda, MD
2010	"Translational Informatics", Institute for e-Health Policy, Washington, DC
2011	"What is Translational about the Biomedical Translational Information System (BTRIS): Data Repurposing at the NIH"; Biomedical Informatics Seminar, University of Utah, Salt Lake City, Utah
2011	"The NIH Biomedical Translational Information System (BTRIS)", NIH Rare Disease Day, Bethesda, MD
2011	"American College of Medical Informatics Invited Panel: Integrating Genomic and Clinical Data in Electronic Health Records and Biomedical Repositories: Challenges, Solutions and Opportunities", AMIA Summit on Translational Bioinformatics, San Francisco, CA
2011	"Meaningful Use and Personalized Patient Education: Consumer Health Information Activities at the National Library of Medicine", AMIA Summit on Clinical Research Informatics, San Francisco, CA
2011	"The Shortest Distance Between Two Points May Not Be a Straight Line", NLM 175th Anniversary \ Informatics Career Panel, NLM, Bethesda, MD
2011	"The Electronic Health Record as a Tool for Improving Outcomes in Pulmonary Vascular Disease Opportunities, Challenges and Solutions", NHLBI Conference on Improving Outcomes for Pulmonary Vascular Disease, Bethesda, MD
2011	"What is Biomedical Informatics", NLM Biomedical Informatics Course, Woods Hole, MA
2011	"Databases and Terminologies: Principles", NLM Biomedical Informatics Course, Woods Hole, MA
2011	"Standard Terminologies", NLM Biomedical Informatics Course, Woods Hole, MA
2011	"Infobuttons", NLM Biomedical Informatics Course, Woods Hole, MA
2011	"Clinical Classifications and Biomedical Ontologies: Terminology Evolution, Principles, and Practicalities", AMIA Fall Symposium Tutorial, Washington DC

2011	"Customizing Infobuttons within EHRs - Contributions to Meaningful Use", Central Pennsylvania Health Sciences Library Association, Hershey, PA
2011	"Customizing Infobuttons within EHRs - Contributions to Meaningful Use", North Atlantic Health Sciences Libraries Association, Uncasville, CT
2011	"The Future is Here: Infobuttons", 6th Annual AMIA Invitational Health Policy Meeting, Washingon, DC
2012	"NIH Investments in 'Big' Behavioral and Social Science Data", Opportunities in Data Visualization and Visual Analytics for Behavioral and Social Sciences Research, NIH
2012	"Case Studies of the Use of Lifelines2 to Support Clinical Research at the National Institutes of Health", Eventflow User's Group, University of Maryland, College Park, MD
2012	"The Biomedical Translational Research Information System: Clinical Data Integration at the National Institutes of Health", Data Integration in the Life Sciences, College Park, MD
2012	"The NIH Biomedical Translational Research Information System", Institute of Medicine, Washington, DC
2013	"Silver Medallion Poster Preview: Ontologic Mapping between What Researchers Think the Data Are and What the Data Really Are", 2013 AMIA Translational Bioinformatics Summit, San Francisco, CA
2013	"Informatics Research toward the Solution-Oriented Medical Record", Cornell University Informatics Seminar, New York, NY
2013	"Silver Medallion Poster Framing", AMIA Clinical Research Informatics Summit, San Francisco, CA
2013	"The NIH Biomedical Translational Research Information System (BTRIS)", Society for Clinical and Translational Science, Washington, DC
2013	"The NIH Biomedical Translational Research Information System (BTRIS): Properties, Policies and Problems with the EHR as a Research Resource", Health Leadership Council, Washington, DC
2013	"The Biomedical Translational Research Information System (BTRIS) and the Landscape of the Intramural NIH Research Databases", CTSA Informatics Key Functions Committee webinar
2013	"Current EHRs and Opportunities for the Next Generation of Systems to Support Clinicians across the Spectrum of Health", DoD/VA iEHR and HIE Summit, Alexandria, VA
2013	"Improving Electronic Health Record (EHR) Functionality: Toward the Solution-Oriented Medical Record", National Institute of Standards and Technology, Gaithersburg, MD
2013	"High-Quality, Standardized, Controlled Healthcare Terminologies Come of Age", American Medical Informatics Association Nursing Working Group Webinar, Bethesda MD
2013	"Experiences with Cohort Lists for Re-Identification and Recruitment across Networks", Institute of Medicine, Washington, DC
2014	"Addressing Informatics Challenges by Solving the 'Terminology Problem'", American Medical Informatics Association, Mid-Atlantic Chapter Webinar, Bethesda MD
2014	"Expanding the Workforce and Training Future Leaders", National Library of Medicine Board of Regents Conference, Bethesda, MD
2014	Keynote: "The NIH Clinical Research Data Repository: Structure, Sources and Access", Informatics Technology for Cancer Research (ITCR) Initiative Annual Principal Investigator Meeting, Rockville, MD
2014	Panel: "Technology Innovation in Health Care",4th Annual Cross-Agency Emerging Technologies Summit, Washington, DC
2014	Keynote: "A Truly Meaningful Use of Electronic Health Records Freely Available to All: Automated Anticipation and Resolution of Clinical Information Needs at the Point of Care through Infobuttons", Health Informatics and Technology Conference, Baltimore, MD
2014	"Querying Four Decades of Clinical Research Data at the National Institutes of Health", Health Informatics and Technology Conference, Baltimore, MD
2014	"Addressing Informatics Challenges by Solving the 'Terminology Problem'", American College of Cardiology and American Heart Association Task Force on Clinical Data Standards, Washington, DC