



Henry J. Lowe, MD

Associate Professor of Medicine (General Medical Disciplines) at the Stanford University Medical Center, Emeritus

Medicine - Primary Care and Population Health

 NIH Biosketch available Online

Bio

ACADEMIC APPOINTMENTS

- Emeritus Faculty - University Medical Line, Medicine - Primary Care and Population Health
- Member, Bio-X

ADMINISTRATIVE APPOINTMENTS

- Director, Stanford Center for Clinical Informatics, (2004-2013)
- Senior Associate Dean for Information Resources and Technology, Stanford University School of Medicine, (2002-2013)
- Chief Information Officer, Stanford University School of Medicine, (2003-2013)
- Director CTSA Translational Informatics Program, Stanford Center for Clinical and Translational Education and Research, (2008-2013)

HONORS AND AWARDS

- Diplomate, American Board of Internal Medicine (1984)
- Elected Fellow, American College of Medical Informatics (ACMI) (1998)

PROFESSIONAL EDUCATION

- MB, BCH, BAO (MD), University College Dublin , Medicine (1980)
- Residency, St. Elizabeth's Hospital Boston , Internal Medicine (1983)
- Residency, New England Medical Center , Neurology (1984)
- Fellowship, MGH, Harvard Medical School , Medicine and Medical Informatics (1989)

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

My research in the field of biomedical informatics over the past 30 years has focused on the development of novel uses of information technology and computer science to improve human health. My current interests include the Electronic Health Record (EHR), biomedical knowledge representation, Internet applications in healthcare, clinical data warehouses, clinical data and text mining, academic social networking and the use of information technology to support clinical and translational research.

Teaching

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biomedical Data Science (Phd Program)

- Biomedical Data Science (Masters Program)

Publications

PUBLICATIONS

- **Discretization of Continuous Features in Clinical Datasets** *J. AM Inform Assoc (In Press)*.
Maslove DM, Podchiyska T, Lowe HJ
2012
- **Genomics in the clinic: ethical and policy challenges in clinical next-generation sequencing programs at early adopter USA institutions** *PERSONALIZED MEDICINE*
Milner, L. C., Garrison, N. A., Cho, M. K., Altman, R. B., Hudgins, L., Galli, S. J., Lowe, H. J., Schrijver, I., Magnus, D. C.
2015; 12 (3): 269-282
- **Transdisciplinary translational science and the case of preterm birth** *JOURNAL OF PERINATOLOGY*
Stevenson, D. K., Shaw, G. M., Wise, P. H., Norton, M. E., Druzin, M. L., Valantine, H. A., McFarland, D. A.
2013; 33 (4): 251-258
- **A Simple Heuristic for Blindfolded Record Linkage** *J AM Med Inform Assoc*
Weber SC, Lowe HJ, Seto T, Olson G, Ferris T, Das AK, Kurian A, Olson C, Pragati K
2012; 19 (e1): e157-e161
- **Computerized physician order entry in the critical care environment: a review of current literature.** *Journal of intensive care medicine*
Maslove, D. M., Rizk, N., Lowe, H. J.
2011; 26 (3): 165-171
- **Managing Medical Vocabulary Updates in a Clinical Data Warehouse: An RxNorm Case Study.** *AMIA ... Annual Symposium proceedings / AMIA Symposium. AMIA Symposium*
Podchiyska, T., Hernandez, P., Ferris, T., Weber, S., Lowe, H. J.
2010; 2010: 477-481
- **Implementing a Real-time Complex Event Stream Processing System to Help Identify Potential Participants in Clinical and Translational Research Studies** *AMIA Annu Symp Proc*
Weber SC, Lowe HJ, Malunjkar S, Quinn J
2010: 472-476
- **Using a statistical natural language Parser augmented with the UMLS specialist lexicon to assign SNOMED CT codes to anatomic sites and pathologic diagnoses in full text pathology reports.** *AMIA ... Annual Symposium proceedings / AMIA Symposium. AMIA Symposium*
Lowe, H. J., Huang, Y., Regula, D. P.
2009; 2009: 386-390
- **Automated mapping of pharmacy orders from two electronic health record systems to RxNorm within the STRIDE clinical data warehouse.** *AMIA ... Annual Symposium proceedings / AMIA Symposium. AMIA Symposium*
Hernandez, P., Podchiyska, T., Weber, S., Ferris, T., Lowe, H.
2009; 2009: 244-248
- **STRIDE--An integrated standards-based translational research informatics platform.** *AMIA ... Annual Symposium proceedings / AMIA Symposium. AMIA Symposium*
Lowe, H. J., Ferris, T. A., Hernandez, P. M., Weber, S. C.
2009; 2009: 391-395
- **Novel integration of hospital electronic medical records and gene expression measurements to identify genetic markers of maturation.** *Pacific Symposium on Biocomputing. Pacific Symposium on Biocomputing*
Chen, D. P., Weber, S. C., Constantinou, P. S., Ferris, T. A., Lowe, H. J., Butte, A. J.
2008: 243-254
- **A novel hybrid approach to automated negation detection in clinical radiology reports** *JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION*
Huang, Y., Lowe, H. J.
2007; 14 (3): 304-311

- **Clinical arrays of laboratory measures, or "clinarrays", built from an electronic health record enable disease subtyping by severity.** *AMIA ... Annual Symposium proceedings / AMIA Symposium. AMIA Symposium*
Chen, D. P., Weber, S. C., Constantinou, P. S., Ferris, T. A., Lowe, H. J., Butte, A. J.
2007; 115-119
- **Improved identification of noun phrases in clinical radiology reports using a high-performance statistical natural language parser augmented with the UMLS Specialist Lexicon** *JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION*
Huang, Y., Lowe, H. J., Klein, D., Cucina, R. J.
2005; 12 (3): 275-285
- **A pilot study of contextual UMLS indexing to improve the precision of concept-based representation in XML-structured clinical radiology reports** *JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION*
Huang, Y., Lowe, H. J., Hersh, W. R.
2003; 10 (6): 580-587
- **Preparing doctors for bedside computing.** *Lancet*
Moffett, S. E., Menon, A. S., Meites, E. M., Kush, S., Lin, E. Y., Grappone, T., Lowe, H. L.
2003; 362 (9377): 86-?
- **A randomized trial using computerized decision support to improve treatment of major depression in primary care** *13th NIMH International Conference on Mental Health Problems in the General Health Care Sector*
Rollman, B. L., Hanusa, B. H., Lowe, H. J., Gilbert, T., Kapoor, W. N., Schulberg, H. C.
SPRINGER.2002: 493-503
- **A proposed key escrow system for secure patient information disclosure in biomedical research databases** *Annual Symposium of the American-Medical-Informatics-Association*
Ferris, T. A., Garrison, G. M., Lowe, H. J.
HANLEY & BELFUS INC MED PUBLISHERS.2002: 245-249
- **The electronic medical record** *13th NIMH International Conference on Mental Health Problems in the General Health Care Sector*
Rollman, B. L., Hanusa, B. H., Gilbert, T., Lowe, H. J., Kapoor, W. N., Schulberg, H. C.
AMER MEDICAL ASSOC.2001: 189-97
- **Selective automated indexing of findings and diagnoses in radiology reports.** *J Biomed Inform*
Hersh W, Mailhot M, Arnott-Smith C, Lowe H
2001; 34 (4): 262-273
- **Evaluation of a filmless radiology pilot - A preliminary report** *Annual Symposium of the American-Medical-Informatics-Association (AMIA 2001)*
Mast, C. G., Caruso, M. A., Gadd, C. S., Lowe, H. J.
BMJ PUBLISHING GROUP.2001: 443-447
- **Defining the role of anatomic pathology images in the multimedia electronic medical record - A preliminary report** *Annual Symposium of the American-Medical-Informatics-Association*
Crowley, R. S., Gadd, C. S., Naus, G., Becich, M., Lowe, H. J.
HANLEY & BELFUS INC.2000: 161-165
- **Automated semantic indexing of imaging reports to support retrieval of medical images in the multimedia electronic medical record** *1st International Working Conference on Electronic Patient Records in Medical Practice (EPRiMP)*
Lowe, H. J., Antipov, I., Hersh, W., Smith, C. A., Mailhot, M.
SCHATTAUER GMBH-VERLAG MEDIZIN NATURWISSENSCHAFTEN.1999: 303-7
- **Transforming the cancer center in the 21st century.** *M.D. computing : computers in medical practice*
Lowe, H. J.
1999; 16 (3): 40-42
- **Multimedia electronic medical record systems** *ACADEMIC MEDICINE*
Lowe, H. J.
1999; 74 (2): 146-152
- **The electronic medical record: Its role in disseminating depression guidelines in primary care practice** *INTERNATIONAL JOURNAL OF PSYCHIATRY IN MEDICINE*

- Rollman, B. L., Gilbert, T., Lowe, H. J., Kapoor, W. N., Schulberg, H. C.
1999; 29 (3): 267-286
- **Towards knowledge-based retrieval of medical images. The role of semantic indexing, image content representation and knowledge-based retrieval.** *JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION*
Lowe, H. J., Antipov, I., Hersh, W., Smith, C. A.
1998: 882-886
 - **Information needs research in the era of the digital medical library** *JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION*
Lomax, E. C., Lowe, H. J.
1998: 658-662
 - **WebReport: a World Wide Web based clinical multimedia reporting system.** *Proceedings : a conference of the American Medical Informatics Association / ... AMIA Annual Fall Symposium. AMIA Fall Symposium*
Lowe, H. J., Antipov, I., Walker, W. K., Polonkey, S. E., Naus, G. J.
1996: 314-318
 - **The Image Engine(TM) HPC project. A medical digital library system using agent-based technology to create an integrated view of the electronic medical record** *3rd Forum on Research and Technology Advances in Digital Libraries (ADL 96)*
Lowe, H. J., Walker, W. K., Polonkey, S. E., Jiang, F. C., VRIES, J. K., McCray, A.
I E E E, COMPUTER SOC PRESS.1996: 45-56
 - **The World Wide Web: A review of an emerging Internet-based technology for the distribution of biomedical information** *JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION*
Lowe, H. J., Lomax, E. C., Polonkey, S. E.
1996; 3 (1): 1-14
 - **Using agent-based technology to create a cost effective, integrated, multimedia view of the electronic medical record.** *Proceedings / the ... Annual Symposium on Computer Application [sic] in Medical Care. Symposium on Computer Applications in Medical Care*
Lowe, H. J., Walker, W. K., VRIES, J. K.
1995: 441-444
 - **Image Engine an Integrated Multimedia Clinical Information System** *MEDINFO*
Lowe HJ, Buchanan BG, Cooper GF, Kaplan B, Vries JK
1995; 8 (1): 421-5
 - **BUILDING A MEDICAL MULTIMEDIA DATABASE SYSTEM TO INTEGRATE CLINICAL INFORMATION - AN APPLICATION OF HIGH-PERFORMANCE COMPUTING AND COMMUNICATIONS TECHNOLOGY** *Conference on Building the National Health Information Infrastructure - The Role of High Performance Computing and Communications*
Lowe, H. J., Buchanan, B. G., Cooper, G. F., VRIES, J. K.
MEDICAL LIBRARY ASSOC.1995: 57-64
 - **UNDERSTANDING AND USING THE MEDICAL SUBJECT-HEADINGS (MESH) VOCABULARY TO PERFORM LITERATURE SEARCHES** *JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*
Lowe, H. J., Barnett, G. O.
1994; 271 (14): 1103-1108
 - **Image Engine: an object-oriented multimedia database for storing, retrieving and sharing medical images and text.** *Proceedings / the ... Annual Symposium on Computer Application [sic] in Medical Care. Symposium on Computer Applications in Medical Care*
Lowe, H. J.
1993: 839-843
 - **Evaluation of a microcomputer system for searching the MEDLINE Database** *Proc Annu Symp Comput Appl Med Care*
Lowe HJ, Barnett GO
1989: 445-447
 - **Remote Access MicroMeSH: A Microcomputer System for Searching MEDLINE** *Proc Annu Symp Comput Appl Med Care*
Lowe HJ, Barnett GO
1988: 535-539
 - **Mapping to MeSH - The art of trapping MeSH Equivalence from within narrative text** *Proc Annu Symp Comput Appl Med Care*

Elkin PL, Cimino JJ, Lowe HJ
1988: 185-190

- **MicroMeSH: A Microcomputer System for Searching and Exploring the National Library Medicine's Medical Subject Headings (MeSH) Vocabulary** *Proc Annu Symp Comput Appl Med Care*
Lowe HJ, Barnett GO
1987: 717-720
- **Remote Access MicroMeSH: An Enhanced Microcomputer System for Searching the MEDLINE Database** *Proc Annu Symp Comput Appl Med Care*
Lowe HJ, Barnett GO, Scott J
1986: 1009-1011
- **DXPLAIN: A Computer-Based Diagnostic Knowledge Base** *MEDINFO*
Hupp JA, Cimino JJ, Hoffer EP, Lowe HJ
1986; 8 (1): 421-5