BIOGRAPHICAL SKETCH

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NAME Henry Lowe	POSITION TITLE Associate Professor of Pediatrics Senior Associate Dean Information Resources & Technology Director, Stanford Center for Clinical Informatics Stanford University School of Medicine
eRA COMMONS USER NAME (credential, e.g., agency login)	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	MM/YY	FIELD OF STUDY
University College Dublin, Ireland	MD	1980	Medicine
Harvard Medical School	Fellowship	1984-89	Biomedical Informatics

A. Personal Statement

I have worked in the field of academic Biomedical Informatics for almost 30 years, am an elected Fellow of the American College of Medical Informatics and a board-certified internist. My research interests include secondary uses of health information, aggregation and linkage of large clinical data sets to create clinical data warehouses, standards-based data representation models, natural language processing of narrative clinical text, the electronic health record, Internet-based health systems and, recently, the role of social networking technologies in biomedicine. I direct the Stanford Center for Clinical Informatics and Stanford University's CTSA Translational Informatics Program. In both roles, my primary focus over the past five years has been implementation of the STRIDE Clinical Data Warehouse, a standards-based informatics platform that aggregates and links almost 15 years of pediatric and adult clinical data from Stanford University Medical Center. The STRIDE system is used heavily at Stanford as a source of clinical data for a wide variety of research projects in both the pediatric and adult clinical research domains.

B. Positions and Honors

1981-1982 Internship in Medicine and Surgery, Mater Misericordiae University Hospital, Dublin, Ireland
1982-1983 Internal Medicine Residency, St. Elizabeth's Hospital, Tufts University, Boston MA
1983-1984 Resident in Neurology, Tufts New England Medical Center, Boston, MA
1984-1989 Fellow in Medicine and Medical Informatics, Harvard Medical School, Boston MA
1989-1992 Instructor in Medicine, Harvard Medical School, Boston MA
1990-1992 Director, Laboratory of Medical Informatics, University College Dublin, Ireland
1992-1997 Assistant Professor of Medicine (Informatics), Department of Medicine, University of Pittsburgh
1994-1996 Co-Director, Section of Medical Informatics, University of Pittsburgh
1996-2001 Director, Clinical Multimedia Laboratory, University of Pittsburgh
1997-2001 Associate Professor of Medicine & Intelligent Systems, University of Pittsburgh
1998-2001 Director of Cancer Informatics, University of Pittsburgh Cancer Institute
2000-2001 Director, Benedum Oncology Informatics Center, Univ. of Pittsburgh Cancer Institute
2001-present Associate Professor of Medicine (Informatics), Stanford University School of Medicine
2001-2005 Editorial Board, International Journal of Biomedical Informatics
2001-2008 Editorial Board, Journal of Medical Informatics
2002-present Senior Associate Dean for Information Resources & Technology, Stanford School of Medicine
2004-present Editorial Board, Journal of The American Medical Informatics Association
2004-present Director, Stanford Center for Clinical Informatics
2005-2006 National Library of Medicine Long Range Planning Committee
2008-present Director, Stanford CTSA Translational Informatics Program
2010-present Member Advisory Board NYU Center for Health Informatics and Bioinformatics
2010-present Associate Professor of Pediatrics, Stanford University

Selected Honors, Awards, and Professional Recognition

1984	Board Certification, American Board of Internal Medicine
1997	Semi-finalist, Global Information Infrastructure Health Award
1998	Elected Fellow of the American College of Medical Informatics
2001	Awarded Tenure University of Pittsburgh

C. Selected Publications

1. Maslove D, Rizk N, **Lowe HJ**. Computerized Physician Order Entry (CPOE) in the Critical Care Environment: A Review of Current Literature. J Intensive Care Med. 2011 (In Press)

2. Weber SC, **Lowe HJ**, Malunjkar S, Quinn J. Implementing a Real-time Complex Event Stream Processing System to Help Identify Potential Participants in Clinical and Translational Research Studies" *AMIA Annu Symp Proc*. 2010; 472-476

3. Podchiyska T, Hernandez PM, Ferris TA, Weber SC, **Lowe HJ**. Managing Medical Vocabulary Updates in a Clinical Data Warehouse: An RxNorm Case Study" AMIA Annu Symp Proc. 2010; 477-481

4. **Lowe HJ**, Ferris TA, Hernandez PM, Weber SC. STRIDE: An Integrated Standards-Based Translational Research Informatics Platform. AMIA Annu Symp Proc. 2009 Nov 14;2009:391-5.

5. **Lowe HJ**, Huang Y, Regula DP. 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 Annu Symp Proc. 2009 Nov 14;2009:386-90.

6. Hernandez PM, Podchiyska T, Weber SC, Ferris TA**, Lowe HJ**. Automated Mapping of Pharmacy Orders from Two Electronic Health Record Systems to RxNorm within the STRIDE Clinical Data Warehouse. AMIA Annu Symp Proc. 2009 Nov 14;2009:244-8.

7. Chen DP, Weber SC, Constaninou PS, Ferris TA, **Lowe HJ**, Butte AJ. Novel integration of hospital electronic medical records and gene expression measurements to identify genetic markers of maturation. *Pac Symp Biocomput. 2008; 234-54*

8. Chen DP, Weber SC, Constantinou PS, Ferris TA, Lowe HJ, Butte AJ. Clinical Arrays of Laboratory Measures, or “Clinarrays, built from an electronic Health Record Enable Disease Subtyping by Severity. *AMIA Annu Symp Proc (2007) 11:115-9*

9. Huang Y, **Lowe HJ**. A Novel Hybrid Approach to Automated Negation Detection in Clinical Radiology Reports *J Am Med Inform Assoc. 2007 May-June;14(3):304-311*

10. Huang Y**, Lowe HJ**. A grammar-based classification of negations in clinical radiology reports. *AMIA Annu Symp Proc 988 (2005)*

11. Huang Y, **Lowe HJ**, Klein D, Cucina RJ Improved identification of noun phrases in clinical radiology reports using a high-performance statistical natural language parser augmented with the UMLS specialist lexicon. *J Am Med Inform Assoc* 2005 May-Jun; 12: 3: 275-85

12. Huang Y**, Lowe HJ**, Hersh WR A pilot study of contextual UMLS indexing to improve the precision of concept-based representation in XML-structured clinical radiology reports. *J Am Med Inform Assoc* 2003 Nov-Dec; 10: 6: 580-7

13. Moffett SE, Menon AS, Meites EM, Kush S, Lin EY, Grappone T**, Lowe HJ** Preparing doctors for bedside computing. *Lancet* 2003; 362: 9377: 86

14. Ferris TA, Garrison GM, **Lowe HJ** A proposed key escrow system for secure patient information disclosure in biomedical research databases. *Proc AMIA Symp* 2002; 245-9

15. Rollman BL, Hanusa BH, **Lowe HJ**, Gilbert T, Kapoor WN, Schulberg HC A randomized trial using computerized decision support to improve treatment of major depression in primary care. *J Gen Intern Med* 2002; 17: 7: 493-503

16. Mast CG, Caruso MA, Gadd CS, **Lowe HJ** Evaluation of a filmless radiology pilot--a preliminary report. *Proc AMIA Symp* 2001; 443-7

17. Hersh W, Mailhot M, Arnott-Smith C, **Lowe HJ** Selective automated indexing of findings and diagnoses in radiology reports. *J Biomed Inform* 2001; 34: 4: 262-273

18. Rollman BL, Hanusa BH, Gilbert T, **Lowe HJ**, Kapoor WN, Schulberg HC The electronic medical record. A randomized trial of its impact on primary care physicians' initial management of major depression [corrected]. *Arch Intern Med* 2001; 161: 2: 189-97

19. Crowley RS, Gadd CS, Naus G, Becich M**, Lowe HJ** Defining the role of anatomic pathology images in the multimedia electronic medical record--a preliminary report. *Proc AMIA Symp* 2000; 161-5

20. **Lowe HJ**, Transforming the cancer center in the 21st century. *MD Comput* 1999 May-Jun; 16: 3: 40-2

21. **Lowe HJ**, Antipov I, Hersh W, Smith CA, Mailhot M Automated semantic indexing of imaging reports to support retrieval of medical images in the multimedia electronic medical record. *Methods Inf Med* 1999; 38: 4-5: 303-7

22. **Lowe HJ**, Multimedia electronic medical record systems. *Acad Med* 1999; 74: 2: 146-52

23. Rollman BL, Gilbert T, **Lowe HJ**, Kapoor WN, Schulberg HC The electronic medical record: its role in disseminating depression guidelines in primary care practice. *Int J Psychiatry Med* 1999; 29: 3: 267-86

24. **Lowe HJ**, Antipov I, Hersh W, Smith CA Towards knowledge-based retrieval of medical images. The role of semantic indexing, image content representation and knowledge-based retrieval. *Proc AMIA Symp* 1998; 882-6

25. Lomax EC, **Lowe HJ** Information needs research in the era of the digital medical library. *Proc AMIA Symp* 1998; 658-62

26. **Lowe HJ**, Lomax EC, Polonkey SE The World Wide Web: a review of an emerging internet-based technology for the distribution of biomedical information. *J Am Med Inform Assoc* 1996 Jan-Feb; 3:1:1-14

27. **Lowe HJ**, Antipov I, Walker WK, Polonkey SE, Naus GJ WebReport: a World Wide Web based clinical multimedia reporting system. *Proc AMIA Annu Fall Symp* 1996; 314-8

28. **Lowe HJ**, Walker WK, Polonkey SE, Jiang F, Vries JK, McCray A The Image Engine HPCC Project. A Medical Digital Library System using Agent-Based Technology to Create an Integrated View of the Electronic Medical Record. *Advances in Digital Libraries* 1996; 45-56

29. **Lowe HJ**, Walker WK, Vries JK Using agent-based technology to create a cost effective, integrated, multimedia view of the electronic medical record. *Proc Annu Symp Comput Appl Med Care* 1995; 441-4

30. **Lowe HJ**, Buchanan BG, Cooper GF, Vries JK Building a medical multimedia database system to integrate clinical information: an application of high-performance computing and communications technology. *Bull Med Libr Assoc* 1995; 83: 1: 57-64

31. **Lowe HJ**, Buchanan BG, Cooper GF, Kaplan B, Vries JK Image Engine an Integrated Multimedia Clinical Information System *MEDINFO* 1995; 8: 1: 421-5

32. **Lowe HJ**, Barnett GO Understanding and using the medical subject headings (MeSH) vocabulary to perform literature searches. *JAMA* 1994; 271: 14: 1103-8

33. **Lowe HJ**, Image Engine: an object-oriented multimedia database for storing, retrieving and sharing medical images and text. *Proc Annu Symp Comput Appl Med Care* 1993; 839-43

34. **Lowe HJ**, Barnett GO Evaluation of a microcomputer system for searching the MEDLINE Database *Proc Annu Symp Comput Appl Med Care* 1989; 445-447

35. Elkin PL, Cimino JJ**, Lowe HJ** Mapping to MeSH - The art of trapping MeSH Equivalence from within narrative text *Proc Annu Symp Comput Appl Med Care* 1988; 185-190

36. **Lowe HJ**, Barnett GO Remote Access MicroMeSH: A Microcomputer System for Searching MEDLINE *Proc Annu Symp Comput Appl Med Care* 1988; 535-539

37. **Lowe HJ**, Barnett GO 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* 1987; 717-720

38. Hupp JA, Cimino JJ, Hoffer EP, **Lowe HJ** DXPLAIN: A Computer-Based Diagnostic Knowledge Base *MEDINFO* 1986; 8: 1: 117-121

39. **Lowe HJ**, Barnett GO,Scott J Remote Access MicroMeSH: An Enhanced Microcomputer System for Searching the MEDLINE Database *Proc Annu Symp Comput Appl Med Care* 1986; 1009-1011