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## Bibliography

- AAMC Task Force on Information Technology Infrastructure Requirements for Cross-Institutional Research. (2010). *Challenges and opportunities for new collaborative science models*: Association of American Medical Colleges, Washington, DC.
- Abbey, L. M., & Zimmerman, J. (Eds.). (1991). *Dental informatics: Integrating technology into the dental environment*. New York: Springer.
- Aboukhalil, A., Nielsen, L., Saeed, M., Mark, R. G., & Clifford, G. D. (2008). Reducing false alarm rates for critical arrhythmias using the arterial blood pressure waveform. *Journal of Biomedical Informatics*, 41, 442–451. PMID 18440873.
- ACC/ACR/NEMA Ad Hoc Group. (1995). American College of Cardiology, American College of Radiology and industry develop standard for digital transfer of angiographic images. *Journal of the American College of Cardiology*, 25, 800–802.
- ACR-NEMA. (2006). *Digital imaging and communications in medicine (DICOM) part 14: Grayscale standard display function*. Rosslyn: National Electrical Manufacturers Association.
- Adams, K., & Corrigan, J. (Eds.). (2003). *Priority areas for national action: Transforming health care quality. A report of the Institute of Medicine*. Washington, DC: National Academy Press.
- Adams, I. D., Chan, M., Clifford, P. C., Cooke, W. M., Dallos, V., de Dombal, F. T., Edwards, M. H., Hancock, D. M., Hewett, D. J., & McIntyre, N. (1986). Computer aided diagnosis of acute abdominal pain: A multi-center study. *British Medical Journal*, 293(6550), 800–804.
- Adler-Milstein, J., McAfee, A. P., Bates, D. W., & Jha, A. K. (2008). The state of regional health information organizations: Current activities and financing. *Health Affairs*, 27, w60–w69.
- Adler-Milstein, J., Bates, D. W., & Jha, A. K. (2009). U.S. Regional health information organizations: Progress and challenges. *Health Affairs*, 28, 483–492.
- Adler-Milstein, J., Bates, D. W., & Jha, A. K. (2011). A survey of health information exchange organizations in the United States: Implications for meaningful use. *Annals of Internal Medicine*, 154(10), 666–671.
- Advani, A., Goldstein, M.A., Shahar, Y., Musen, M.A. (2003). Developing quality indicators and auditing protocols from formal guideline models: knowledge representation and transformations. *AMIA Annual Symposium Proceedings*, 11–15.
- Afrin, J. N., & Critchfield, A. B. (1997). Low-cost tele-psychiatry for the deaf in South Carolina. *Proceeding of the AMIA Fall Symposium*, 901.
- Agency for Healthcare Research and Quality. (2006). *Costs and benefits of health information technology. Evidence report/technology assessment 132, publication 06-E006*. Available at <http://www.ahrq.gov/clinic/tp/hitsystp.htm>. Accessed 12 Aug 2011.
- Agrawal, M., Harwood, D., et al. (2000). Three-dimensional ultrastructure from transmission electron microscope tilt series. In *Proceedings, Second Indian Conference on Vision, Graphics and Image Processing*, Bangalore.
- Ahern, D. K., Woods, S. S., Lightowler, M. C., Finley, S. W., & Houston, T. K. (2011). Promise of and potential for patient-facing technologies to enable meaningful use. *American Journal of Preventative Medicine*, 40(5 Suppl 2), S162–S172.
- Ahmed, A., Chandra, S., Herasevich, V., Gajic, O., & Pickering, B. W. (2011). The effect of two different electronic health record user interfaces on intensive care provider task load, errors of cognition, and performance. *Critical Care Medicine*, 39, 1626–1634. PMID 21478739.
- AHRQ. (2011). *National strategy for quality improvement in health care*. Agency for Healthcare Research and Quality. Rockville, MD.
- Aine, C. J. (1995). A conceptual overview and critique of functional neuroimaging techniques in humans I. MRI/fMRI and PET. *Critical Reviews in Neurobiology*, 9, 229–309.
- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckmann (Eds.), *Action control: From cognition to behavior*. Berlin/Heidelberg/New York: Springer.
- Akerkar, R. (2009). *Foundations of the semantic Web: XML, RDF & ontology*. Oxford: Alpha Science International Ltd.
- Akin, O. (1982). *The psychology of architecture design*. London: Pion.
- Alberini, J. L., Edeline, V., et al. (2011). Single photon emission tomography/computed tomography (SPET/CT) and positron emission tomography/computed

- tomography (PET/CT) to image cancer. *Journal of Surgical Oncology*, 103(6), 602–606.
- Albert, K. (2006). Open access: Implications for scholarly publishing and medical libraries. *Journal of the Medical Library Association*, 94, 253–262.
- Aldrich, C. (2009). *Learning online with games, simulations and virtual worlds: Strategies for online instruction*. San Francisco: Jossey-Bass.
- Alecu, I., Bousquet, C., Mouglin, F., & Jaulent, M. C. (2006). Mapping of the WHO-ART terminology on Snomed CT to improve grouping of related adverse drug reactions. *Studies in Health Technology and Informatics*, 124, 833–838.
- Allard, F., & Starkes, J. L. (1991). Motor-skill experts in sports, dance, and other domains. In K. A. Ericsson & J. Smith (Eds.), *Toward a general theory of expertise: Prospects and limits* (pp. 126–150). New York: Cambridge University Press.
- Allemann, P., Leroy, J., Asakuma, M., Al Abeidl, F., Dallemagne, B., & Marescaux, J. (2010). *Archives of Surgery*, 145, 267–271.
- Alpert, S. A. (1998). Health care information: Access, confidentiality, and good practice. In K. W. Goodman (Ed.), *Ethics, computing, and medicine: Informatics and the transformation of health care* (pp. 75–101). Cambridge: Cambridge University Press.
- Altman, R. B. (2007). PharmGKB: A logical home for knowledge relating genotype to drug response phenotype. *Nature Genetics*, 39, 426.
- Altman, R. B., Dunker, A. K., Hunter, L., & Klein, T. E. (2003). *Pacific Symposium on Biocomputing '03*. Singapore: World Scientific Publishing.
- Altschul, S. F., Gish, W., Mille, W., Myers, E. W., & Lipman, D. J. (1990). Basic local alignment search tool. *Journal of Molecular Biology*, 215(3), 403–410.
- Altshuler, D. M., Durbin, R. M., & Genomes Project Consortium. (2010a). A map of human genome variation from population-scale sequencing. *Nature*, 467, 1061–1073.
- Altshuler, D. M., Gibbs, R. A., Peltonen, L., et al. (2010b). Integrating common and rare genetic variation in diverse human populations. *Nature*, 467, 52–58.
- Amarasingham, R., Plantinga, L., Diener-West, M., Gaskin, D. J., & Powe, N. R. (2009). Clinical information technologies and inpatient outcomes: A multiple hospital study. *Archives of Internal Medicine*, 169(2), 108–114.
- American Academy of Family Physicians. (2008). Joint principles of the patient-centered medical home. *Delaware Medical Journal*, 80(1), 21–22.
- American College of Pathologists (1982). SNOMED. Skokie, IL: College of American Pathology.
- American Medical Informatics Association. (2011). *AMIA 10 x 10 Courses: Training Health Care Professionals to serve as local informatics leaders and champions*. Retrieved September 1, 2011, from <http://www.amia.org/education/10x10-courses>
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders (DSM-IV)* (4th ed.). Washington, DC: American Psychiatric Association.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders (DSM-IV-TR)*. Washington, DC: American Psychiatric Association.
- American Society for Testing and Materials. (1999). *Standard guide for properties of a universal healthcare identifier (UHID) (E1714-95)*. West Conshohocken: American Society for Testing and Materials.
- American Society of Anesthesiologist (ASA). (2010). *Standards for basic anesthetic monitoring*. Last amended on October 20, 2010.
- Ammenwerth, E., Schnell-Inderst, P., Machan, C., & Siebert, U. (2008). The effect of electronic prescribing on medication errors and adverse drug events: A systematic review. *Journal of the American Medical Informatics Association: JAMIA*, 15(5), 585–600.
- Ancker, J. S., & Kaufman, D. (2007). Rethinking health numeracy: A multidisciplinary literature review. *Journal of the American Medical Informatics Association: JAMIA*, 14(6), 713–721.
- Anderson, J. R. (1983). Acquisition of proof skills in geometry. In R. S. Michalski, J. G. Carbonell, & T. M. Mitchell (Eds.), *Machine learning: An artificial intelligence approach* (pp. 191–219). Palo Alto: Tioga Publishing Company.
- Anderson, J. R. (1985). *Cognitive psychology and its implications* (2nd ed.). New York: Freeman.
- Anderson, J. G., & Aydin, C. E. (1994). Overview: Theoretical perspectives and methodologies for the evaluation of health care information systems. In J. G. Anderson, C. E. Aydin, & S. J. Jay (Eds.), *Evaluating health care information systems: Methods and applications* (pp. 346–354). Thousand Oaks: Sage.
- Anderson, J. G., & Aydin, C. E. (1998). Evaluating medical information systems: Social contexts and ethical challenges. In K. W. Goodman (Ed.), *Ethics, computing, and medicine: Informatics and the transformation of health care* (pp. 57–74). Cambridge: Cambridge University Press.
- Anderson, J. G., Aydin, C. E., & Jay, S. J. (Eds.). (1994). *Evaluating health care information systems*. Thousand Oaks: Sage Publications Inc.
- André, B., Vercauteren, T., et al. (2009). Introducing space and time in local feature-based endomicroscopic image retrieval. Medical content-based retrieval for clinical decision support. In B. Caputo, H. Miller, T. Syeda-Mahmood, et al. (Eds.), *Lecture notes in computer science* (Vol. 5853, pp. 18–30). Berlin/Heidelberg: Springer.
- Andrews, R. D., Gardner, R. M., Metcalf, S. M., & Simmons, D. (1985). Computer charting: An evaluation of a respiratory care computer system. *Respiratory Care*, 30, 695–707. PMID 10315682.
- Angrist, M. (2010). *Here is a human being: At the dawn of personal genomics*. New York: Harper.
- Anonymous. (1879). Practice by Telephone. *Lancet* 2, 819.

- Anonymous. (2007). Stopwords. In Anonymous (Ed.), *PubMed Help*. Bethesda: National Library of Medicine.
- ANSI/ADA Specification No. 1001. (2002). *Guidelines for the design of educational software* (reaffirmed 2006). Accessed at <http://www.ada.org/805.aspx#1001>, 21 Nov 2011.
- Appel, B. (2001). Nomenclature and classification of lumbar disc pathology. *Neuroradiology*, 43(12), 1124–1125.
- Armstrong, R. A. (2010). Review paper. Quantitative methods in neuropathology. *Folia Neuropathologica*, 48(4), 217–230.
- Arocha, J. F., Wang, D. W., & Patel, V. L. (2005). Identifying reasoning strategies in medical decision making: A methodological guide. *Journal of Biomedical Informatics*, 38(2), 154–171. doi:10.1016/j.jbi.2005.02.001.
- Aronow, D.B., Cooley, J.R., & Soderland, S. (1995). Automated identification of episodes of asthma exacerbation for quality measurement in a computer-based medical record. *Proceedings of the Annual Symposium on Computer Applications in Medical Care*, 309–313.
- Aronow, D., Feng, F., & Croft, W. B. (1999). Ad hoc classification of radiology reports. *Journal of the American Medical Informatics Association: JAMIA*, 6(5), 343–411.
- Aronson, A.R. (2001). Effective mapping of biomedical text to the UMLS metathesaurus: the MetaMap program. *Proceedings of AMIA Symposium*, 17–21.
- Aronson, A. R., & Lang, F. M. (2010). An overview of MetaMap: Historical perspective and recent advances. *Journal of the American Medical Informatics Association: JAMIA*, 17, 229–236.
- Aronson, A., Mork, J., Gay, C., Humphrey, S.M., & Rogers, W. (2004). The NLM indexing initiative's medical text indexer. MEDINFO 2004. In *Proceedings of the Eleventh World Congress on Medical Informatics, San Francisco* (pp. 268–272). Retrieved from <http://ii.nlm.nih.gov/resources/aronson-medinfo04.wheader.pdf>
- Aronson, A.R., Mork, J.G., Neveol, V., Shooshan, S.E., & Demner-Fushman, D. (2008). Methodology for creating UMLS content views appropriate for biomedical natural language processing. *AMIA Annual Symposium Proceedings*, 21–25.
- Ash, J. S., Gorman, P. N., Lavelle, M., Payne, T. H., Massaro, T. A., Frantz, G. L., & Lyman, J. A. (2003a). A cross-site qualitative study of physician order entry. *Journal of the American Medical Informatics Association: JAMIA*, 10(2), 188–200. doi:10.1197/jamia.M770
- Ash, J. S., Stavri, P. Z., & Kuperman, G. J. (2003b). A consensus statement on considerations for a successful CPOE implementation. *Journal of the American Medical Informatics Association: JAMIA*, 10(3), 229–234.
- Ash, J. S., Berg, M., & Coiera, E. (2004). Some unintended consequences of information technology in health care: The nature of patient care information system-related errors. *Journal of the American Medical Informatics Association: JAMIA*, 11(2), 104–112.
- Ash, J. S., Sittig, D. F., Poon, E. G., Guappone, K., Campbell, E., & Dykstra, R. H. (2007). The extent and importance of unintended consequences related to computerized provider order entry. *Journal of the American Medical Informatics Association: JAMIA*, 14(4), 415–423.
- Ash, J. S., Anderson, N. R., & Tarczy-Hornoch, P. (2008). People and organizational issues in research systems implementation. *Journal of the American Medical Informatics Association: JAMIA*, 15(3), 283–289.
- Ash, J. S., Sittig, D. F., Dykstra, R. H., Campbell, E., & Guappone, K. (2009). The unintended consequences of computerized provider order entry: Results of a mixed methods exploration. *International Journal of Medical Informatics*, 78(Supplement 1), S69–S76.
- Ashburner, J., & Friston, K. J. (1997). Multimodal image coregistration and partitioning – a unified framework. *NeuroImage*, 6(3), 209–217.
- Ashburner, M., Ball, C. A., Blake, J. A., et al. (2000). Gene ontology: Tool for the unification of biology. The gene ontology consortium. *Nature Genetics*, 25, 25–29.
- Ashley, E. A., Butte, A. J., Wheeler, M. T., et al. (2010). Clinical assessment incorporating a personal genome. *The Lancet*, 375, 1525–1535.
- Ashworth, M., & Millett, C. (2008). Quality improvement in uk primary care: The role of financial incentives. *The Journal of Ambulatory Care Management*, 31(3), 220–225.
- Aspden, P., & Institute of Medicine (U.S.). Committee on Data Standards for Patient Safety. (2004). *Patient safety: Achieving a new standard for care*. Washington, D.C.: National Academies Press.
- Association of American Medical Colleges (1984). Physicians for the twenty-first century (Report of the Project Panel on the General Professional Education of the Physician and College Preparation for Medicine). *J Med Educ* 59(11):(Part 2)1-208.
- Assimacopoulos, A., Alam, R., Arbo, M., et al. (2008). A brief retrospective review of medical records comparing outcomes for inpatients treated via telehealth versus in-person protocols: Is telehealth equally effective as in-person visits for treating neutropenic fever, bacterial pneumonia, and infected bacterial wounds. *Telemedicine Journal of E-Health*, 14, 762–768.
- Atkinson, R. C., & Shiffrin, R. M. (1968). Human memory: A proposed system and its control processes. In K. W. Spence & J. T. Spence (Eds.), *The psychology of learning and motivation* (Vol. 2, pp. 89–195). New York: Academic Press.
- Atkinson, A. J., Colburn, W. A., DeGruttola, V. G., et al. (2001). Biomarkers and surrogate endpoints: Preferred definitions and conceptual framework\*. *Clinical Pharmacology and Therapeutics*, 69, 89–95.
- Atkinson, N. L., Massett, H. A., Mylks, C., McCormack, L. A., Kish-Doto, J., Hesse, B. W., et al. (2011). Assessing the impact of user-centered research on a clinical trial eHealth tool via counterbalanced research design. *Journal of the American Medical Informatics Association: JAMIA*, 18(1), 24–31.
- Atreya, R. V., Smith, J. C., McCoy, A. B., Malin, B., & Miller, R. A. (2013). Reducing patient re-identification

- risk for laboratory results within research datasets. *Journal of the American Medical Informatics Association: JAMIA*, 20, 95–101.
- AvanCHA, S., Baxi, A., & Kotz, D. (2011). Privacy in mobile technology for personal healthcare. *ACM Computing Surveys*, 45(1), 3:1–3:54, to appear.
- Avni. (2009). Addressing the ImageClef 2009 Challenge Using a Patch-based Visual Words Representation %U [http://www.clef-campaign.org/2009/working\\_notes/avni-paperCLEF2009.pdf](http://www.clef-campaign.org/2009/working_notes/avni-paperCLEF2009.pdf). Working Notes CLEF2009.
- Baader, F. E., McGuinness, D. E., et al. (Eds.). (2003). *The description logic handbook: Theory, implementation and applications*. New York: Cambridge University Press.
- Baars, M. J. H., Henneman, L., & Ten Kate, L. P. (2005). Deficiency of knowledge of genetics and genetic tests among general practitioners, gynecologists, and pediatricians: A global problem. *Genetics in Medicine*, 7(9), 605.
- Babior, B. M., & Matzner, Y. (1997). The familial Mediterranean fever gene—cloned at last. *The New England Journal of Medicine*, 337(21), 1548–1549.
- Bada, M., & Hunter, L. (2011). Desiderata for ontologies to be used in semantic annotation of biomedical documents. *Journal of Biomedical Informatics*, 44(1), 94–101.
- Bai, C., & Elledge, S. J. (1997). Gene identification using the yeast two-hybrid system. *Methods in Enzymology*, 283, 141–156.
- Baker, J. A., Kornguth, P. J., et al. (1995). Breast cancer: Prediction with artificial neural network based on BI-RADS standardized lexicon. *Radiology*, 196(3), 817–822.
- Balas, E. A., & Boren, S. A. (2000). Managing clinical knowledge for health care improvement. In *Yearbook of medical informatics 2000: Patient-centered systems* (pp. 65–70). Stuttgart: Schattauer.
- Baldi, P., & Brunak, S. (2001). *Bioinformatics: The machine learning approach*. Cambridge, MA: MIT Press.
- Baldi, P., & Hatfield, G. W. (2002). *DNA microarrays and gene expression*. Cambridge: Cambridge University Press.
- Ball, M., & Gold, J. (2006). Banking on health: Personal records and information exchange. *Journal of Healthcare Information Management*, 20(2), 71–83.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 191–215.
- Bandura, A. (1989). Social cognitive theory. In R. Vasta (Ed.), *Annals of child development* (Six theories of child development, Vol. 6, pp. 1–60). Greenwich: JAI Press.
- Barabasi, A. L., Gulbahce, N., & Loscalzo, J. (2011). Network medicine: A network-based approach to human disease. *Nature Reviews Genetics*, 12, 56–68.
- Barnett, G. O. (1968). Computers in patient care. *The New England Journal of Medicine*, 279, 1321–1327.
- Barnett, G. O. (1984). The application of computer-based medical-record systems in ambulatory practice. *The New England Journal of Medicine*, 310(25), 1643–1650.
- Barnett, G. O., Winickoff, R., Dorsey, J. L., Morgan, M. M., & Lurie, R. S. (1978). Quality assurance through automated monitoring and concurrent feedback using a computer-based medical information system. *Medical Care*, 16(11), 962–970.
- Barnett, G. O., Justice, N. S., Somand, M. E., et al. (1979). COSTAR – a computer-based medical information system for ambulatory care. *Proceedings of the Institute of Electrical and Electronics Engineers (IEEE)*, 67, 1226–1237.
- Barnett, G. O., Cimino, J. J., Hurp, J. A., Hopper, E. P. (1987). DXplain: An evolving diagnostic decision-support system. *Journal of the American Medical Association*, 258(1), 67–74.
- Baron, R. J. (2010). What's keeping us so busy in primary care? A snapshot from one practice. *The New England Journal of Medicine*, 362(17), 1632–1636.
- Barrows, R. C., Jr., & Clayton, P. D. (1996). Privacy, confidentiality, and electronic medical records. *Journal of the American Medical Informatics Association: JAMIA*, 3(2), 139–148.
- Bartlett, J., & Toms, E. (2005). Developing a protocol for bioinformatics analysis: An integrated information and behavior task analysis approach. *Journal of the American Society for Information Science and Technology*, 56, 469–482.
- Bartolomeo, P. (2008). The neural correlates of visual mental imagery: An ongoing debate. *Cortex*, 44(2), 107–108. S0010-9452(07)00016-0 [pii].
- Bashshur, R., Sanders, J., & Shannon, G. (1997). *Telemedicine: Theory and Practice* Charles C. Thomas, Springfield, IL.
- Bashshur, R. L., Shannon, G. W., Krupinski, E. A., Grigsby, J., Kvedar, J. C., Weinstein, R. S., Sanders, J. H., Rheuban, K. S., Nesbitt, T. S., Alverson, D. C., Merrell, R. C., Linkous, J. D., Ferguson, A. S., Waters, R. J., Stachura, M. E., Ellis, D. G., Antoniotti, N. M., Johnston, B., Doarn, C. R., Yellowlees, P., Normandin, S., & Tracy, J. (2009). National telemedicine initiatives: Essential to healthcare reform. *Telemedicine and e-Health*, 15, 600–610.
- Bates, D. W. (2000). Using information technology to reduce rates of medication errors in hospitals. *BMJ*, 320, 788–791.
- Bates, D. W. (2006). Invited commentary: The road to implementation of the electronic health record. *Proceedings (Baylor University. Medical Center)*, 19(4), 311–312.
- Bates, D. W. (2009). The effects of health information technology on inpatient care. *Archives of Internal Medicine*, 169(2), 105–107.
- Bates, D. W., & Bitton, A. (2010). The future of health information technology in the patient-centered medical home. *Health Affairs (Millwood)*, 29(4), 614–621.
- Bates, D. W., & Gawande, A. A. (2003). Improving safety with information technology. *The New England Journal of Medicine*, 348(25), 2526–2534.

- Bates, D. W., Spell, N., Cullen, D. J., et al. (1997). The costs of adverse drug events in hospitalized patients. *Journal of the American Medical Association*, 277(4), 307–311.
- Bates, D. W., Leape, L. L., Cullen, D. J., et al. (1998). Effect of computerized physician order entry and a team intervention on prevention of serious medication errors. *JAMA : The Journal of the American Medical Association*, 280(15), 1311–1316.
- Bates, D. W., Ebell, M., Gotlieb, E., Zapp, J., & Mullins, H. C. (2003a). A proposal for electronic medical records in U.S. primary care. *Journal of the American Medical Informatics Association: JAMIA*, 10(1), 1–10.
- Bates, D. W., Evans, R. S., Murff, H., et al. (2003b). Detecting adverse events using information technology. *Journal of the American Medical Informatics Association: JAMIA*, 10(2), 115–128.
- Baud, R., Rassinoux, A. M., & Sherrer, J. R. (1992). Natural language processing and semantical representation of medical texts. *Methods of Information in Medicine*, 31, 117–125.
- Baud, R., Lovis, C., Rassinoux, A. M., Michel, P. A., & Scherrer, J. R. (1998). Automatic extraction of linguistic knowledge from an international classification. *Studies in Health Technology and Informatics*, 52(Pt 1), 581–585.
- Bauer, D. T., Guerlain, S., & Brown, P. J. (2010). The design and evaluation of a graphical display for laboratory data. *Journal of the American Medical Informatics Association: JAMIA*, 17(4), 416–424.
- Baum, W. M. (2011). What is radical behaviorism? A review of Jay Moore's conceptual foundations of radical behaviorism. *Journal of the Experimental Analysis of Behavior*, 95(1), 119–126. doi:10.1901/jeab.2011.95-119.
- Baumann, B., Gotzinger, E., et al. (2010). Segmentation and quantification of retinal lesions in age-related macular degeneration using polarization-sensitive optical coherence tomography. *Journal of Biomedical Optics*, 15(6), 061704.
- Beccaro, M. A. D., Jeffries, H. E., Eisenberg, M. A., & Harry, E. D. (2006). Computerized provider order entry implementation: no association with increased mortality rates in an intensive care unit. *Pediatrics*, 118(1), 290–295.
- Bechhofer, S., van Harmelen, F., et al. (2004). *OWL Web Ontology Language reference* (Technical Report REC-owl-ref-20040210). The WorldWideWeb Consortium. Available from <http://www.w3.org/TR/2004/REC-owl-ref-20040210/>
- Bechtel, W., Abrahamsen, A., & Graham, G. (1998). Part I: The life of cognitive science. In W. Bechtel & G. Graham (Eds.), *A companion to cognitive science Blackwell companions to philosophy* (Vol. 13, pp. 2–104). Malden: Blackwell.
- Becich, M. J. (2000). The role of the pathologist as tissue refiner and data miner: The impact of functional genomics on the modern pathology laboratory and the critical roles of pathology informatics and bioinformatics. *Molecular Diagnosis*, 5(4), 287–299.
- Beck, J. R., & Pauker, S. G. (1983). The Markov process in medical prognosis. *Medical Decision Making*, 3(4), 419–458.
- Beck, K., Beedle, M., et al. (2001). *Manifesto for Agile software development*. From [www.agilemanifesto.org](http://www.agilemanifesto.org)
- Becker, K. G., Barnes, K. C., Bright, T. J., & Wang, S. A. (2004). The genetic association database. *Nature Genetics*, 36, 431–432.
- Begun, J. W., Zimmerman, B., & Dooley, K. (2003). Health care organizations as complex adaptive systems. In S. M. Mick & M. Wytttenbach (Eds.), *Advances in health care organization theory* (pp. 253–288). San Francisco: Jossey-Bass.
- Bela, K., & Hamel, D. (2010, October 26 2010). *Risky business: survey shows smartphone security concerns running high; yet 81% admit sneaking onto employer networks without permission*. From [http://www.juniper.net/us/en/company/press-center/press-releases/2010/pr\\_2010\\_10\\_26-10\\_02.html](http://www.juniper.net/us/en/company/press-center/press-releases/2010/pr_2010_10_26-10_02.html)
- Benitez, K., & Malin, B. (2010). Evaluating re-identification risks with respect to the HIPAA privacy rule. *Journal of the American Medical Informatics Association: JAMIA*, 17, 169–177.
- Benko, L.B. (2003, January 27). Back to the drawing board; Cedars-Sinai's physician order-entry system suspended. *Modern Healthcare*, 12.
- Bennett, T. J., & Barry, C. J. (2009). Ophthalmic imaging today: An ophthalmic photographer's viewpoint – a review. *Clinical and Experimental Ophthalmology*, 37(1), 2–13.
- Benson, D.A., Karsch-Mizrachi, I., Lipman, D.J., Ostell, J., Wheeler, D.L. (2003) GenBank. *Nucleic Acids Research*, 31(1):23–27. Available at <http://www.ncbi.nlm.nih.gov>
- Berg, M. (1999). Patient care information systems and health care work: A sociotechnical approach. *International Journal of Medical Informatics*, 55(2), 87–101.
- Berg, J. M., Tymoczko, J. L., & Stryer, L. (2010). *Biochemistry*. New York: W.H. Freeman.
- Berners-Lee, T., Cailliau, R., Luotonen, A., Nielsen, H., & Secret, A. (1994). The world-wide web. *Communications of the ACM*, 37, 76–82.
- Bernstam, E. V., Hersh, W. R., Johnson, S. B., et al. (2009). Synergies and distinctions between computational disciplines in biomedical research: Perspective from the Clinical and Translational Science Award programs. *Academic Medicine*, 84(7), 964–970.
- Bernstam, E. V., Smith, J. W., & Johnson, T. R. (2010). What is biomedical informatics? *Journal of Biomedical Informatics*, 43(1), 104–110.
- Berwick, D. M. (2011). Launching accountable care organizations – the proposed rule for the Medicare shared savings program. *The New England Journal of Medicine*, 364, e32.
- Besser, H. (2002). The next stage: moving from isolated digital collections to interoperable digital libraries. *First Monday*, 7(6). Retrieved from [http://www.firstmonday.dk/issues/issue7\\_6/besser/](http://www.firstmonday.dk/issues/issue7_6/besser/)
- Beuscart-Zephir, M. C., Anceaux, F., Menu, H., Guerlinger, S., Watbled, L., & Evrard, F. (2005a).

- User-centred, multidimensional assessment method of clinical information systems: a case study in anaesthesiology. *International Journal of Medical Informatics*, 74(2–4), 179–189. S1386-5056(04)00167-4 [pii].
- Beuscart-Zephir, M. C., Pelayo, S., Anceaux, F., Meaux, J. J., Degroisse, M., & Degoulet, P. (2005b). Impact of CPOE on doctor-nurse cooperation for the medication ordering and administration process. *International Journal of Medical Informatics*, 74(7–8), 629–641.
- Beuscart-Zephir, M.C., Elkin, P., Pelayo, S., & Beuscart, R. (2007). The human factors engineering approach to biomedical informatics projects: state of the art, results, benefits and challenges. *Yearbook of Medical Informatics*, 109–127. me07010109 [pii].
- Bickel, R. G. (1979). The TRIMIS concept. In *Proceedings of the 1979 annual symposium on Computer Applications in Medical Care* (pp. 839–842), Washington, D.C.
- Bidgood, W. D., Jr., & Horii, S. C. (1992). Introduction to the ACR-NEMA DICOM standard. *Radiographics*, 12(2), 345–355.
- Bird, K. T. (1972). Cardiopulmonary frontiers: quality health care via interactive television. *Chest*, 61, 204–205.
- Bird, A. (2002). DNA methylation patterns and epigenetic memory. *Genes & Development*, 16(1), 6–21.
- Bishop, C. M. (1995). *Neural networks for pattern recognition*. New York: Oxford University Press.
- Bishop, C. (2007). *Pattern recognition and machine learning*. New York: Springer.
- Biswal, S., Resnick, D. L., et al. (2007). Molecular imaging: integration of molecular imaging into the musculoskeletal imaging practice. *Radiology*, 244(3), 651–671.
- Bittorf, A., & Bauer, J., et al. (1997). Web-based training modules in dermatology. *MD Comput*, 14(5): 371–376, 381.
- Björk, B., Welling, P., Laakso, M., Majlender, P., Hedlund, T., & Guðnason, C. (2010). Open access to the scientific journal literature: situation 2009. *PLoS ONE*, 5(6), e11273. Retrieved from <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0011273>
- Blake JA, Richardson JE, Bult CJ, Kadin JA, Eppig JT, & the members of the Mouse Genome Database Group. (2003). MGD: The mouse genome database. *Nucleic Acids Research*, 31, 193–195. Available at <http://www.informatics.jax.org/>
- Bleich, H. (1972). Computer-based consultation: Electrolyte and acid–base disorders. *American Journal of Medicine*, 53, 285–291.
- Blois, M. S., (1984). *Information and Medicine: The Nature of Medical Descriptions*. Berkeley: University of California Press.
- Bloom, F. E., & Young, W. G. (1993). *Brain browser*. New York: Academic Press.
- Bloomrosen, M., Starren, J., Lorenzi, N. M., Ash, J. S., Patel, V. L., & Shortliffe, E. H. (2011). Anticipating and addressing the unintended consequences of health IT and policy: A report from the AMIA 2009 Health Policy Meeting. *Journal of the American Medical Informatics Association: JAMIA*, 18(1), 82–90.
- Bloxham, A. (2008, August 10). £13 Billion NHS computer system failures affecting patient care. *The Telegraph*.
- Blum, B.I. (1986b). Clinical Information Systems: A review. *Western Journal of Medicine*, 145(6):791–797.
- Blum, J. M., & Tremper, K. K. (2010). Alarms in the intensive care unit: too much of a good thing is dangerous: Is it time to add some intelligence to alarms? *Critical Care Medicine*, 33, 702–703. PMID 20083933.
- Blumenthal, D. (2009). Stimulating the adoption of health information technology. *The New England Journal of Medicine*, 360(15), 1477–1479.
- Blumenthal, D. (2010). Launching HITECH. *The New England Journal of Medicine*, 362(5), 382–385.
- Blumenthal, D., & Glaser, J. P. (2007). Information technology comes to medicine. *The New England Journal of Medicine*, 356(24), 2527–2534.
- Blumenthal, D., & Tavenner, M. (2010). The “meaningful use” regulation for electronic health records. *The New England Journal of Medicine*, 363(6), 501–504.
- Bodenreider, O. (2004). The unified medical language system (UMLS): integrating biomedical terminology. *Nucleic Acids Research*, 32, D267–D270.
- Bodenreider, O. (2008). Biomedical ontologies in action: role in knowledge management, data integration and decision support. *Yearbook of Medical Informatics*, 67–79.
- Boeckmann, B., Bairoch, A., Apweiler, R., Blatter, M.C., Estreicher, A., Gasteiger, E., Martin, M.J., Michoud, K., O’Donovan, C., Phan, I., Pilbout, S., & Schneider, M. (2003). The SWISS-PROT protein knowledgebase and its supplement TrEMBL. *Nucleic Acids Research*, 31, 365–370. Available at <http://us.expasy.org/sprot/>
- Bogun, F., Anh, D., Kalahasty, G., Wissner, E., Cou Serhal, C., Bazzi, R., Weaver, W. D., & Schuger, C. (2004). Misdiagnosis of atrial fibrillation and its clinical consequences. *American Journal of Medicine*, 117, 636–642. PMID 15501200.
- Booth, R. (2000). *Project failures costly, TechRepublic/Gartner study finds*. Retrieved July 12, 2011, from <http://www.techrepublic.com/article/it-project-failures-costly-techrepublicgartner-study-finds/1062043>
- Borgman, C. (1999). What are digital libraries? Competing visions. *Information Processing and Management*, 35, 227–244.
- Bosch, A., Munoz, X., et al. (2006). Modeling and classifying breast tissue density in mammograms. *Computer Vision and Pattern Recognition, IEEE Computer Society Conference*, 2, 1552–1558.
- Bosworth, K., Gustafson, D. H., Hawkins, R. P., Chewning, B., & Day, T. (1983). Adolescents, health education, and computers: The Body Awareness Resource Network (BARN). *Health Education*, 14(6), 58–60.
- Bowden, D. M., & Martin, R. F. (1995). Neuronames brain hierarchy. *NeuroImage*, 2, 63–83.
- Bowie, J., & Barnett, G. O. (1976). MUMPS: An economical and efficient time-sharing system for information

- management. *Computer Programs in Biomedicine*, 6, 11–22.
- Bowker, G. C., & Starr, S. L. (2000). *Sorting things out: Classification and its consequences*. Cambridge: MIT Press.
- Boyd, L. B., Hunnicke-Smith, S. P., Stafford, G. A., et al. (2011). The caBIG life science business architecture model. *Bioinformatics*, 27(10), 1429–1435.
- Boynton, J., Glanville, J., et al. (1998). Identifying systematic reviews in MEDLINE: developing an objective approach to search strategy design. *Journal of Information Science*, 24, 137–157.
- Bradley, W. G., Golding, S. G., Herold, C. J., et al. (2011, August 27–29). Globalization of P4 medicine: Predictive, personalized, preemptive, and participatory—summary of the proceedings of the Eighth International Symposium of the International Society for Strategic Studies in Radiology. *Radiology*, 258, 571–582.
- Bradshaw, K. E., Gardner, R. M., Clemmer, T. P., Orme, J. F., Thomas, F., & West, B. J. (1984). Physician decision-making: Evaluation of data used in a computerized ICU. *International Journal of Clinical Monitoring and Computing*, 1(2), 81–91.
- Bradshaw, K. E., Sittig, D. F., Gardner, R. M., Pryor, T. A., & Budd, M. (1989). Computer-based data entry for nurses in the ICU. *MD Computing*, 6(5), 274–280. PMID 2486506.
- Brain Innovation, B.V. (2001). *BrainVoyager*. From <http://www.BrainVoyager.de/>
- ‘Brain’ to store medical data. (1956, October 24). *The New York Times*.
- Brannan, S. O., Dewar, C., Taggerty, L., & Clark, S. (2011). The effect of short messaging service text on non-attendance in a general ophthalmology clinic. *Scottish Medical Journal*, 56(3), 148–150.
- Bransford, J., Brown, A. L., Cocking, R. R., & National Research Council (U.S.). Committee on Developments in the Science of Learning. (1999). *How people learn: Brain, mind, experience, and school*. Washington, D.C.: National Academy Press.
- Bransford, J. D., Brown, A. L., & Cocking, R. R. (2000). *How people learn: Brain, mind, experience and school*. Washington, D.C.: The National Academies Press.
- Braunwald, E. (1988). Evolution of the management of acute myocardial infarction: A 20th century saga. *The Lancet*, 352, 1771–1774. PMID 9848369.
- Brechner, R. J., Cowie, C. C., Howie, L. J., Herman, W. H., Will, J. C., & Harris, M. I. (1993). Ophthalmic examination among adults with diagnosed diabetes mellitus. *JAMA: The Journal of the American Medical Association*, 270, 1714–1718.
- Brender, J. (2005). *Handbook of evaluation methods for health informatics*. Burlington: Academic Press.
- Brennan, P.F., Downs, S., Casper, G., & Kenron, D. (2007). Project HealthDesign: stimulating the next generation of personal health records. *AMIA Annual Symposium Proceedings*, 70–74.
- Breslow, M. J. (2007). Remote ICU care programs: Current status. *Journal of Critical Care*, 22(1), 66–76.
- Briggs, B. (2002). Clinical trials getting a hand. *Health Data Management*, 10(2), 56–60, 62.
- Bright, R. A., & Brown, S. L. (2007). *Medical device epidemiology medical device epidemiology and surveillance* (pp. 21–42). Hoboken: Wiley.
- Bright, T. J., Wong, A., Dhurjati, R., Bristow, E., Bastian, L., Coeytaux, R. R., Samsa, G., Hasselblad, V., Williams, J. W., Musty, M. D., Wing, L., Kendrick, A. S., Sanders, G. D., & Lobach, D. (2012). Effect of clinical decision-support systems: A systematic review. *Annals of Internal Medicine*, 157(1), 29–43.
- Brin, S., & Page, L. (1998). The anatomy of a large-scale hypertextual Web search engine. *Computer Networks and ISDN Systems*, 30, 107–117. Retrieved from <http://infolab.stanford.edu/pub/papers/google.pdf>
- Brinkley, J. F. (1985). Knowledge-driven ultrasonic three-dimensional organ modelling. *Patiernanalysis and Machine Intelligence, PAMI-7(4)*, 431–441.
- Brinkley, J. F. (1992). Hierarchical geometric constraint networks as a representation for spatial structural knowledge. *Proceedings of the 16th Annual Symposium on Computer Applications in Medical Care*, 140–144.
- Brinkley, J. F. (1993a). A flexible, generic model for anatomic shape: Application to interactive two-dimensional medical image segmentation and matching. *Computers and Biomedical Research*, 26, 121–142.
- Brinkley, J. F. (1993b). The potential for three-dimensional ultrasound. In F. A. Chervenak, G. C. Isaacson, & S. Campbell (Eds.), *Ultrasound in obstetrics and gynecology*. Boston: Little, Brown and Company.
- Brinkley, J. F., Bradley, S. W., et al. (1997). The digital anatomist information system and its use in the generation and delivery of Web-based anatomy atlases. *Computers and Biomedical Research*, 30, 472–503.
- Brinkley, J. F., Wong, B. A., et al. (1999). Design of an anatomy information system. *Computer Graphics and Applications*, 19(3), 38–48.
- Brinkman, R. R., Courtot, M., Derom, D., et al. (2010). Modeling biomedical experimental processes with OBI. *Journal of Biomedical Semantics*, 1(Suppl 1), S7.
- Brody, B. A. (1989). The ethics of using ICU scoring systems in individual patient management. *Problems in Critical Care*, 3, 662–670.
- Brown, E. G., Wood, L., & Wood, S. (1999). The medical dictionary for regulatory activities (MedDRA). *Drug Safety*, 20, 109–117.
- Brown, S. H., Lincoln, M. J., Groen, P. J., et al. (2003). VistA–U.S. Department of veterans affairs national-scale HIS. *International Journal of Medical Informatics*, 69(2–3), 135–156.
- Brown, S.H., Fischietti, L.F., Graham, G., Bates, J., et al. (2007). Use of electronic health records in disaster response: The experience of department of veterans affairs after hurricane katrina. *American Journal of Public Health*, 97, S136–S141.
- Brown, D.B., Gould, J.E., et al. (2009). Transcatheter Therapy for Hepatic Malignancy: Standardization of Terminology and Reporting Criteria. *Journal of*

- Vascular and Interventional Radiology* 20(7): S425–S434. (Reprinted from *Journal of Vascular and Interventional Radiology*, 18, 1469–1478, 2007)
- Brownstein, J. S., Sordo, M., Kohane, I. S., & Mandl, K. D. (2007). The tell-tale heart: Population-based surveillance reveals an association of rofecoxib and celecoxib with myocardial infarction. *PLoS One*, 2(9), e840.
- Bruer, J. T. (1993). *Schools for thought: A science of learning in the classroom*. Cambridge: MIT Press.
- Bruls, T., & Weissenbach, J. (2011). The human metagenome: Our other genome? *Human Molecular Genetics*, 20(R2), R142–R148.
- Buchanan, B. G., & Shortliffe, E. H. (1984). *Rule-based expert systems: The MYCIN experiments of the Stanford heuristic programming project*. Reading: Addison-Wesley.
- Buetow, K. H. (2009). An infrastructure for interconnecting research institutions. *Drug Discovery Today*, 14(11–12), 605–610.
- Buetow, K. H., & Niederhuber, J. (2009). Infrastructure for a learning health care system: CaBIG. *Health Affairs (Project Hope)*, 28(3), 923–924; author reply 924–925.
- Bug, W. J., Ascoli, G. A., et al. (2008). The NIFSTD and BIRNLex vocabularies: Building comprehensive ontologies for neuroscience. *Neuroinformatics*, 6(3), 175–194.
- Buntin, M. B., Jain, S. H., & Blumenthal, D. (2010). Health information technology: Laying the infrastructure for national health reform. *Health Affairs (Millwood)*, 29(6), 1214–1219.
- Buntin, M. B., Burke, M. F., Hoaglin, M. C., & Blumenthal, D. (2011). The benefits of health information technology: A review of the recent literature shows predominantly positive results. *Health Affairs (Millwood)*, 30(3), 464–471.
- Burley, S. K., & Bonanno, J. B. (2002). Structuring the universe of proteins. *Annual Review of Genomics and Human Genetics*, 3, 243–262.
- Burley, L., Scheepers, H., & Owen, L. (2009). *User involvement in the design and appropriation of a mobile clinical information system: Reflections on organisational learning*. New York: Springer.
- Burnside, E., Rubin, D., et al. (2000). A Bayesian network for mammography. *Proceedings of the AMIA Symposium*, 106–110.
- Burnside, E. S., Rubin, D. L., et al. (2004a). Using a Bayesian network to predict the probability and type of breast cancer represented by microcalcifications on mammography. *Studies in Health Technology and Informatics*, 107(Pt 1), 13–17.
- Burnside, E. S., Rubin, D. L., et al. (2004b). A probabilistic expert system that provides automated mammographic-histologic correlation: Initial experience. *AJR. American Journal of Roentgenology*, 182(2), 481–488.
- Burnside, E. S., Rubin, D. L., Fine, J. P., et al. (2006). Bayesian network to predict breast cancer risk of mammographic microcalcifications and reduce number of benign biopsy results: Initial experience. *Radiology*, 240(3), 666–673.
- Burnside, E. S., Ochsner, J. E., et al. (2007). Use of microcalcification descriptors in BI-RADS 4th edition to stratify risk of malignancy. *Radiology*, 242(2), 388–395.
- Burnside, E. S., Davis, J., et al. (2009). Probabilistic computer model developed from clinical data in national mammography database format to classify mammographic findings. *Radiology*, 251(3), 663–672.
- Burykin, A., Peck, T., & Buchman, T. G. (2011). Using “off-the-shelf” tools for a terabyte-scale waveform recording in intensive care: Computer system design, database description and lessons learned. *Computer Methods and Programs in Biomedicine*, 103, 151–160. PMID 21093093.
- Butler, D. (2001). Data, data, everywhere. *Nature*, 414(6866), 840–841.
- Butte, A. J. (2008a). Medicine. The ultimate model organism. *Science*, 320(5874), 325–327.
- Butte, A. J. (2008b). Translational bioinformatics: Coming of age. *Journal of the American Medical Informatics Association: JAMIA*, 15, 709–714.
- Butte, A. (2009). Bioinformatic and computational analysis for genomic medicine. In G. S. Ginsburg & H. F. Willard (Eds.), *Essentials of genomic and personalized medicine*. Burlington: Elsevier.
- Butte, A. J., & Chen, R. (2006). Finding disease-related genomic experiments within an international repository: first steps in translational bioinformatics. *AMIA Annual Symposium Proceedings*, 106–110.
- Butte, A. J., Weinstein, D. A., & Kohane, I. S. (2000). Enrolling patients into clinical trials faster using RealTime Recruiting. *Proceedings of the AMIA Symposium*, 111–115.
- Buxton, R. B. (2009). *Introduction to functional magnetic resonance imaging: Principles and techniques*. Cambridge/New York: Cambridge University Press.
- Cabrera Fernandez, D., Salinas, H. M., et al. (2005). Automated detection of retinal layer structures on optical coherence tomography images. *Optics Express*, 13(25), 10200–10216.
- Cairncross, F. (2001). *The death of distance: how the communications revolution is changing our lives (completely new ed.)*. Boston: Harvard Business School Press.
- California Health Care Foundation. (2005). *National Consumer Health Privacy Survey*. Available at: <http://www.chcf.org/publications/2005/11/national-consumer-health-privacy-survey-2005>. Accessed 12 Aug 2011.
- Callen, J., Georgiou, A., Li, J., & Westbrook, J. I. (2011). The safety implications of missed test results for hospitalized patients: A systematic review. *BMJ Quality & Safety*, 20, 194–199. PMID 21300992.
- Camon, E., Magrane, M., Barrell, D., et al. (2003). The gene ontology annotation (GOA) project: Implementation of GO in SWISS-PROT, TrEMBL, and InterPro. *Genome Research*, 13, 662–672.



- Campbell, D. T., & Stanley, J. C. (1963). *Experimental and quasi experimental designs for research*. Boston: Houghton Mifflin, reprinted often since.
- Campbell, K.E., Tuttle, M.S., Spackman, & K.A. (1998). A "lexically-suggested logical closure" metric for medical terminology maturity. In *Proceedings of the 1998 AMIA Annual Fall Symposium* (pp. 785–789), Orlando.
- Campbell, M., Fitzpatrick, R., Haines, A., Kinmonth, A. L., Sandercock, P., Spiegelhalter, D., & Tyrer, P. (2000). Framework for design and evaluation of complex interventions to improve health. *BMJ*, *321*(7262), 694–696.
- Campbell, E. M., Sittig, D. F., Ash, J. S., Guappone, K. P., & Dykstra, R. H. (2006). Types of unintended consequences related to computerized provider order entry. *Journal of the American Medical Informatics Association: JAMIA*, *13*(5), 547–556.
- Campillos, M., Kuhn, M., Gavin, A. C., et al. (2008). Drug target identification using side-effect similarity. *Science*, *321*, 263–266.
- Campion, T. R., Jr., May, A. K., Waitman, L. R., Ozdas, A., Lorenzi, N. M., & Gadd, C. S. (2011). Characteristics and effects of nurse dosing overrides on computer-based intensive insulin therapy protocol performance. *Journal of the American Medical Informatics Association: JAMIA*, *18*(3), 251–258.
- Cao, Y., Liu, F., Simpson, P., Antieau, L., Bennett, A., Cimino, J. J., Ely, J., & Yu, H. (2011). AskHERMES: An online question answering system for complex clinical questions. *Journal of Biomedical Informatics*, *44*(2), 277–288.
- Caporaso, J. G., Deshpande, N., Fink, J. L., Bourne, P. E., Cohen, K. B., & Hunter, L. (2008). Intrinsic evaluation of text mining tools may not predict performance on realistic tasks. *Proceedings of the Pacific Symposium Biocomputing*, *13*, 640–651.
- Caputo, B., Tornmasi, T., et al. (2008). Discriminative cue integration for medical image annotation. *Pattern Recognition Letters*, *29*(15), 1996–2002.
- Carayon, P. (Ed.). (2007). *Handbook of human factors and ergonomics in health care and patient safety*. Mahwah: Lawrence Erlbaum Associates.
- Carayon, P., Cartmill, R., Blossky, M. A., Brown, R., Hackenberg, M., Hoonakker, P., Hundt, A. S., Norfolk, E., Wetterneck, T. B., & Walker, J. M. (2011). ICU nurses' acceptance of electronic health records. *Journal of the American Medical Informatics Association: JAMIA*, *18*(6), 812–819. PMID 21697291.
- Card, S. K., Moran, T. P., & Newell, A. (1983). *The psychology of human-computer interaction*. Hillsdale: L. Erlbaum Associates.
- Card, S. K., Mackinlay, J. D., & Shneiderman, B. (1999). *Readings in information visualization: Using vision to think*. San Francisco: Morgan Kaufmann Publishers.
- Carneiro, G., Chan, A. B., et al. (2007). Supervised learning of semantic classes for image annotation and retrieval. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, *29*(3), 394–410.
- Carpenter, A. E., Jones, T. R., et al. (2006). CellProfiler: Image analysis software for identifying and quantifying cell phenotypes. *Genome Biology*, *7*(10), R100.
- Carroll, J. M. (1997). Human-computer interaction: Psychology as a science of design [Literature review/research review]. *Annual Review of Psychology*, *48*(1), 61–83.
- Carroll, J. M. (2003). *HCI models, theories, and frameworks: Toward a multidisciplinary science*. San Francisco: Morgan Kaufmann.
- Carroll, D. L., Dykes, P. C., & Hurley, A. C. (2010). Patients' perspectives of falling while in an acute care hospital and suggestions for prevention. *Applied Nursing Research*, *23*(4), 238–241.
- Carroll, A. E., Biondich, P. G., Anand, V., Dugan, T. M., Sheley, M. E., Xu, S. Z., & Downs, S. M. (2011). Targeted screening for pediatric conditions with the CHICA system. *Journal of the American Medical Informatics Association: JAMIA*, *18*(4), 485–490.
- Castro, D. (2007). *Improving health care: why a dose of IT may be just what the doctor ordered*. Information Technology and Innovation Foundation. Available at <http://www.itif.org/publications/improving-health-care-why-dose-it-may-be-just-what-doctor-ordered>. Accessed 17 Dec 2012.
- Cavalleranno, A. A., Cavallerano, J. D., Katalinic, P., Blake, B., Conlin, P. R., Hock, K., Tolson, A. M., Aiello, L. P., & Aiello, L. M. (2005). Joslin vision network research team. *American Journal of Ophthalmology*, *139*, 597–604.
- Caviness, V. S., Meyer, J., et al. (1996). MRI-based topographic parcellation of human neocortex: An anatomically specified method with estimate of reliability. *Journal of Cognitive Neuroscience*, *8*(6), 566–587.
- Cech, T. R. (2000). Structural biology. The ribosome is a ribozyme. *Science*, *289*(5481), 878–879.
- Cedar, H. (1988). DNA methylation and gene activity. *Cell*, *53*, 3–4.
- Celi, L. A., Hassan, E., Marquardt, C., Breslow, M., & Rosenfeld, B. (2001). The eICU: it's not just telemedicine. *Critical Care Medicine*, *29*(8 Suppl), N183–N189. PMID 11496041.
- Cella, D., Riley, W., Stone, A., et al. (2010). The patient-reported outcomes measurement information system (promis) developed and tested its first wave of adult self-reported health outcome item banks: 2005–2008. *Journal of Clinical Epidemiology*, *63*(11), 1179–1194.
- Centers for Disease Control and Prevention. (2011). *Public Health Information Network (PHIN) strategic plan: strategies to facilitate standards-based public health information exchange (2011–2016)*. Atlanta, GA.
- Chambrin, M. C. (2001). Alarms in the intensive care unit: how can the number of false alarms be reduced? *Critical Care*, *5*, 184–188. PMID 11511330.
- Chan, I. S., & Ginsburg, G. S. (2011). Personalized medicine: Progress and promise. *Annual Review of Genomics and Human Genetics*, *12*, 217–244.
- Chan, C. V., & Kaufman, D. R. (2011). A framework for characterizing eHealth literacy demands and barriers. *Journal of Medical Internet Research*, *13*(4), e94. 0.2196/jmir.1750.

- Chan, A. S., Coleman, R. W., Martins, S. B., Advani, A., Musen, M. A., Bosworth, H. B., Oddone, E. Z., Shilpak, M. G., Hoffman, B. B., & Goldstein, M. K. (2004). Evaluating provider adherence in a trial of a guideline-based decision support system for hypertension. *Studies in Health Technology and Informatics*, 107(Pt 1), 125–129.
- Chan, E. Y., Qian, W. J., Diamond, D. L., et al. (2007). Quantitative analysis of human immunodeficiency virus type 1-infected CD4+ cell proteome: Dysregulated cell cycle progression and nuclear transport coincide with robust virus production. *Journal of Virology*, 81, 7571–7583.
- Chan, K. S., Fowles, J. B., & Weiner, J. P. (2010). Review: Electronic health records and the reliability and validity of quality measures: A review of the literature. *Medical Care Research and Review*, 67(5), 503–527.
- Chan, J., Shojania, K. G., Easty, A. C., & Etchells, E. E. (2011). Does user-centred design affect the efficiency, usability and safety of CPOE order sets? *Journal of the American Medical Informatics Association: JAMIA*, 18(3), 276–281.
- Chandler, P., & Sweller, J. (1991). Cognitive load theory and the format of instruction. *Cognition and Instruction*, 8(4).
- Channin, D. S., Mongkolwat, P., et al. (2009a). Computing human image annotation. *Conference of the Proceeding IEEE Engineering in Medicine and Biology Society*, 1, 7065–7068.
- Channin, D. S., Mongkolwat, P., et al. (2009b). The caBIG annotation and image markup project. *Journal of Digital Imaging*, 23(2), 217–225.
- Chapanis, A. (1996). *Human factors in systems engineering*. New York: Wiley.
- Chapman, W. C., Dowling, J. N., & Wagner, M. M. (2004). Fever detection from free-text clinical records for biosurveillance. *Journal of Biomedical Informatics*, 37(2), 120–127.
- Chapman, W. W., Bridewell, W., Hanbury, P., Cooper, G. F., & Buchanan, B. G. (2001). A simple algorithm for identifying negated findings and diseases in discharge summaries. *Journal of Biomedical Informatics*, 34(5), 301–310.
- Charen, T. (1976). *MEDLARS indexing manual, part I: Bibliographic principles and descriptive indexing*, 1977. Springfield: National Technical Information Service.
- Charen, T. (1983). *MEDLARS indexing manual, part II*. Springfield: National Technical Information Service.
- Chase, W. G., & Simon, H. A. (1973). Perception in chess. *Cognitive Psychology*, 4(1), 55–81.
- Chaudhry, B., Wang, J., Wu, S., Maglione, M., Mojica, W., Roth, E., Morton, S. C., et al. (2006). Systematic review: Impact of health information technology on quality, efficiency, and costs of medical care. *Annals of Internal Medicine*, 144(10), 742–752.
- Chen, E. S., Zhou, L., Kashyap, V., Schaeffer, M., Dykes, P. C., & Goldberg, H. S. (2008). Early experiences in evolving an enterprise-wide information model for laboratory and clinical observations. *AMIA Annual Symposium Proceedings*, 2008, 106–110.
- Chen, T., Clifford, G. D., & Mark, R. G. (2009). *Computers in Cardiology*, 36, 197–200. PMC2926988.
- Cheung, N. T., Fung, K. W., Wong, K. C., et al. (2001). Medical informatics – the state of the art in the hospital authority. *International Journal of Medical Informatics*, 62, 113–119.
- Chi, M. T. H., & Glaser, R. (1981). Categorization and representation of physics problems by experts and novices. *Cognitive Science*, 5, 121–152.
- Chi, M. T. H., Glaser, R., & Farr, M. J. (1988). *The nature of expertise*. Hillsdale: L. Erlbaum Associates.
- Chin, T. (2003). Doctors pull plug on paperless system. *American Medical News*.
- Choi, H. S., Haynor, D. R., et al. (1991). Partial volume tissue classification of multichannel magnetic resonance images – a mixel model. *IEEE Transactions on Medical Imaging*, 10(3), 395–407.
- Choi, M., Scholl, U. I., Ji, W., et al. (2009). Genetic diagnosis by whole exome capture and massively parallel DNA sequencing. *Proceedings of the National Academy of Sciences of the United States of America*, 106, 19096–19101.
- Chopra, A., Park, T., & Levin, P. L. (2010). ‘Blue Button’ provides access to downloadable personal health data. Available at <http://www.whitehouse.gov/blog/2010/10/07/blue-button-provides-access-downloadable-personal-health-data>. Accessed 17 Dec 2012.
- Christensen, L., Haug, P., & Fiszman, P. (2002). MPLUS: a probabilistic medical language understanding system. *Proceedings of the ACL BioNLP*, 29–36.
- Christensen, C. M., Grossman, J. H., & Hwang, J. (2009). *The innovator’s prescription: A disruptive solution for health care*. New York: McGraw-Hill.
- Chuang, J. H., Friedman, C., & Hripcsak, G. (2002). A comparison of the Charlson comorbidities derived from medical language processing and administrative data. *Proceedings of the AMIA Symposium*, 160–164.
- Chui, M., Loffler, M., & Roberts, R. (2010). *The internet of things*. McKinsey Quarterly, 2, 1–9.
- Chung, T. K., Kukafka, R., & Johnson, S. B. (2006). Reengineering clinical research with informatics. *Journal of Neurocytology*, 54(6), 327–333.
- Church, G., Heeney, C., Hawkins, N., et al. (2009). Public access to genome-wide data: Five views on balancing research with privacy and protection. *PLoS Genetics*, 5, e1000665.
- Church, G. M., Gao, Y., & Kosuri, S. (2012). Next-generation digital information storage in DNA. *Science*, 337, 1628.
- Chused, A. E., Kuperman, G. J., & Stetson, P. D. (2008). Alert override reasons: A failure to communicate. *Proceeding of the AMIA Annual Symposium*, 111–115.
- Chute, C. G. (2000). Clinical classification and terminology: Some history and current observations. *Journal of the American Medical Informatics Association: JAMIA*, 7(3), 298–303.

- Cimino, J. J. (1996). Review paper: Coding systems in health care. *Methods of Information in Medicine*, 35(4-5), 273-284.
- Cimino, J. J. (1998). Desiderata for controlled medical vocabularies in the twenty-first century. *Methods of Information in Medicine*, 37(4-5), 394-403.
- Cimino, J., & delFiol, G. (2007). Infobuttons and point of care access to knowledge. In R. Greenes (Ed.), *Clinical decision support: The road ahead* (pp. 345-371). Amsterdam: Elsevier.
- Cimino, J.J., Sengupta, S., Clayton, P.D., Patel, V.L., Kushniruk, A., & Huang, X. (1998). Architecture for a Web-based clinical information system that keeps the design open and the access closed. [Research Support, U.S. Gov't, P.H.S.]. *Proceedings/AMIA ... Annual Symposium. AMIA Symposium*, 121-125.
- Cimino, J.J., Li, J., Mendonca, E.A., Sengupta, S., Patel, V.L., & Kushniruk, A.W. (2000). An evaluation of patient access to their electronic medical records via the World Wide Web. *Proceeding of AMIA Symposium*, 151-155. D200410 [pii]
- Cimino, J.J., Li, J., Bakken, S., & Patel, V. (2002a). Theoretical, empirical and practical approaches to resolving unmet information needs of clinical information system users. *Proceeding of the AMIA Annual Symposium*, 170-174.
- Cimino, J. J., Patel, V. L., & Kushniruk, A. W. (2002b). The patient clinical information system (PatCIS): technical solutions for and experience with giving patients access to their electronic medical records. [Research Support, U.S. Gov't, P.H.S.]. *International Journal of Medical Informatics*, 68(1-3), 113-127.
- Cirulli, E. T., & Goldstein, D. B. (2010). Uncovering the roles of rare variants in common disease through whole-genome sequencing. *Nature Reviews Genetics*, 11, 415-425.
- Clancey, W. J., & Shortliffe, E. H. (1984). *Readings in medical artificial intelligence: The first decade*. Reading: Addison-Wesley.
- Clancey, W. J. (1984). The epistemology of a rule-based system: A framework for explanation. *Artificial Intelligence*, 20, 215-251.
- Clancy, C. M., Anderson, K. M., & White, P. J. (2009). Investing in health information infrastructure: can it help achieve health reform? *Health Affairs*, 28(2), 478-482.
- Clark, R. C., & Mayer, R. E. (2011). *e-Learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning* (3rd ed.). San Francisco: Pfeiffer.
- Clark, O., Clark, L., & Djulbegovic, B. (2001). Is clinical research still too haphazard? *The Lancet*, 358(9293), 1648.
- Clark, A. P., Giuliano, K., & Chen, H. M. (2006). Pulse oximetry revisited "but His O2 was normal". *Clinical Nursing Specialist CNS*, 20, 268-272. PMID 17149014.
- Clark, E. N., Sejersten, M., Clemmensen, P., & MacFarland, P. W. (2010). Automated electrocardiogram interpretation programs versus cardiologists' triage decision making based on teletransmitted data in patients with suspected acute coronary syndrome. *The American Journal of Cardiology*, 106, 1696-1702. PMID 21126612.
- Clarysse, P., Friboulet, D., et al. (1997). Tracking geometrical descriptors on 3-D deformable surfaces: Application to the left-ventricular surface of the heart. *IEEE Transactions on Medical Imaging*, 16(4), 392-404.
- Classen, D. C., Pestotnik, S. L., Evans, R. S., & Burke, J. P. (1991). Computerized surveillance of adverse drug events in hospital patients. *JAMA : The Journal of the American Medical Association*, 266, 2847-2851. PMID 194452.
- Classen, D. C., Pestotnik, S. L., Evans, R. S., Lloyd, J. F., & Burke, J. P. (1997). Adverse drug events in hospitalized patients. Excess length of stay, extra costs, and attributable mortality. *Journal of the American Medical Association*, 277(4), 301-306.
- Classen, D. C., Avery, A. J., & Bates, D. W. (2007). Evaluation and certification of computerized provider order entry systems. *Journal of the American Medical Informatics Association: JAMIA*, 14(1), 48-55.
- Clemmer, T. P. (2004). Computers in the ICU: Where we started and where we are now. *Journal of Critical Care*, 19, 204-207. PMID 15648035.
- Clemmer, T. P., Spuhler, V. J., Berwick, D. M., & Nolan, T. W. (1998). Cooperation: The foundation of improvement. *Annals of Internal Medicine*, 128(12 Pt 1), 1004-1009. PMID 9625663.
- CMS P4P. Retrieved July 17, 2011, from <https://www.cms.gov/MedicaidCHIPQualPrac/>
- Cobb, J. P., Suffredini, A. F., & Danner, R. L. (2008). The fourth national institutes of health symposium on the functional genomics of critical injury: Surviving stress from organ systems and molecules. *Critical Care Medicine*, 36, 2905-2911. PMID 18828200.
- Coenen, A., McNeil, B., Bakken, S., Bickford, C., Warren, J. J., & American Nurses Association Committee on Nursing Practice Information Infrastructure. (2001). Toward comparable nursing data: American Nurses Association criteria for data sets, classification systems, and nomenclatures. *Computers in Nursing*, 19(6), 240-246.
- Coffey, R. (1979). *How medical information systems affect costs: the El Camino experience*. Washington, D.C.: Public Health Service. Publication DHEW-PHS-80-3626.
- Cohen, J.D. (2001). *FisWidgets*. From <http://neurocog.lrdc.pitt.edu/fiswidgets/>
- Cohen, A., Stavri, P., & Hersh, W. (2004). A categorization and analysis of the criticisms of evidence-based medicine. *International Journal of Medical Informatics*, 73, 35-43.
- Cole, M., & Engstroem, Y. (1997). A cultural-historical approach to distributed cognition. In G. Salomon (Ed.), *Distributed cognition* (pp. 1-47). New York: Cambridge University Press.
- Coletti, M., & Bleich, H. (2001). Medical subject headings used to search the biomedical literature. *Journal of the American Medical Informatics Association: JAMIA*, 8, 317-323.
- College of American Pathologists. (1971). *Systematized nomenclature of pathology*. Chicago: The College of American Pathologists.

- Collen, M. F. (1969). Value of multiphasic health check-ups. *The New England Journal of Medicine*, 280(19), 1072–1073.
- Collen, M. F. (1995). *A history of medical informatics in the United States, 1950 to 1990*. Bethesda: American Medical Informatics Association.
- Collen, M. F., Rubin, L., Neyman, J., Dantzig, G. B., Baer, R. M., & Siegelau, A. B. (1964). Automated multiphasic screening and diagnosis. *American Journal of Public Health and the Nations Health*, 54, 741–750.
- Collins, F. S. (2011). Reengineering translational science: The time is right. *Science Translational Medicine*, 3(90), 90cm17.
- Collins, D. L., Neelin, P., et al. (1994). Automatic 3-D intersubject registration of MR volumetric data in standardized Talairach space. *Journal of Computer Assisted Tomography*, 18(2), 192–205.
- Collins, D. L., Holmes, D. J., et al. (1995). Automatic 3-D model-based neuroanatomical segmentation. *Human Brain Mapping*, 3, 190–208.
- Collins, S. A., Bakken, S., Vawdrey, D. K., Coiera, E., & Currie, L. (2011a). Model development for EHR interdisciplinary information exchange of ICU common goals. *International Journal of Medical Informatics*, 80(8), 141–149.
- Collins, S. A., Bakken, S., Vawdrey, D. K., Coiera, E., & Currie, L. M. (2011b). Agreement between common goals discussed and documented in the ICU. *Journal of the American Medical Informatics Association: JAMIA*, 18(1), 45–50.
- Collins, S. A., Bakken, S., Vawdrey, D. K., Coiera, E., & Currie, L. (2011c). Clinical preferences for verbal communication compared to EHR documentation in the ICU. *Journal of Applied Clinical Informatics*, 2, 190–201.
- Colombet, I., Bura-Rivière, A., Chatila, R., Chatellier, G., Durieux, P., & PHRC-OAT study group. (2004). Personalized versus non-personalized computerized decision support system to increase therapeutic quality control of oral anticoagulant therapy: An alternating time series analysis. *BMC Health Services Research*, 4(1), 27.
- Comaniciu, D., & Meer, P. (2002). Mean shift: A robust approach toward feature space analysis. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 24(5), 603–619.
- Commission on Professional and Hospital Activities. (1978). *International classification of diseases, ninth revision, with clinical modifications (ICD-9-CM)*. Ann Arbor: American Hospital Association.
- Committee on Data Standards for Patient Safety. (2004). *Patient safety: Achieving a new standard for care. A report of the institute of medicine*. Washington, DC: The National Academies Press.
- Committee on Quality of Health Care in America. (2001). *Crossing the quality chasm: A new health system for the 21st century. A report of the institute of medicine*. Washington, DC: National Academy Press.
- Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing at the Institute of Medicine. (2010). *The future of nursing: Leading change, advancing health*. Washington, DC: Institute of Medicine of the National Academies, The National Academies Press.
- Concato, J., Shah, N., & Horwitz, R. I. (2000). Randomized, controlled trials, observational studies, and the hierarchy of research designs. *The New England Journal of Medicine*, 342(25), 1887–1892.
- Congressional Budget Office. (2008). *Evidence on the costs and benefits of health information technology*. Washington, D.C.: CBO Paper.
- Conn, J., & Lubell, J. (2006). Boosting personal records. Blues, AHIP offer model health record for patient use. *Modern Healthcare*, 36(50), 10.
- Consortium, E. P. (2004). The ENCODE (ENCyclopedia of DNA elements) project. *Science*, 306, 636–640.
- Corina, D.P., Poliakov, A.V., et al. (2000). Correspondences between language cortex identified by cortical stimulation mapping and fMRI. *Neuroimage (Human Brain Mapping Annual Meeting, June 12–16)*, 11(5), S295.
- Corn, M. (2009). Archiving the phenome: Clinical records deserve long-term preservation. *Journal of the American Medical Informatics Association: JAMIA*, 16(1), 1–6.
- Côté, R. A., & Rothwell, D. J. (1993). *The systematised nomenclature of human and veterinary medicine, 1993*. Northfield: College of American Pathologists.
- Coulet, A., Shah, N. H., Garten, Y., et al. (2010). Using text to build semantic networks for pharmacogenomics. *Journal of Biomedical Informatics*, 43, 1009–1019.
- Courtney, P. K. (2011). Data liquidity in health information systems. *Cancer Journal*, 17(4), 219–221.
- Covell, D., Uman, G., & Manning, P. (1985). Information needs in office practice: are they being met? *Annals of Internal Medicine*, 103, 596–599.
- Cox, J., Jr. (1972). Digital analysis of the electroencephalogram, the blood pressure wave, and the electrocardiogram. *Proceedings of the IEEE*, 60, 1137.
- Cox, R. W. (1996). AFNI: Software for analysis and visualization of functional magnetic resonance neuroimages. *Computers and Biomedical Research*, 29, 162–173.
- Cresswell, K., & Sheikh, A. (2009). The nhs care record service (nhs crs): recommendations from the literature on successful implementation and adoption. *Informatics in Primary Care*, 17(3), 153–160.
- Crick, F. (1970). Central dogma of molecular biology. *Nature*, 227, 561–563.
- Cronenwett, L., Sherwood, G., & Gelmon, S. B. (2009). Improving quality and safety education: The QSEN Learning Collaborative. *Nursing Outlook*, 57(6), 304–312.
- Crossley, G. H., Poole, J. E., Rozner, M. A., et al. (2011). The Heart Rhythm Society (HRS)/American Society of Anesthesiologists (ASA) Expert Consensus Statement on the Perioperative management Arrhythmia Monitors. *Heart Rhythm*, 8, 1114–1154. PMID 21722856.

- Crowley, R. S., Naus, G. J., Stewart, J., 3rd, & Friedman, C. P. (2003). Development of visual diagnostic expertise in pathology – an information-processing study. *Journal of the American Medical Informatics Association: JAMIA*, 10(1), 39–51.
- Crowley, R. S., Legowski, E., Medvedeva, O. M., Tseytlin, E., Roh, E., & Jukic, D. (2007). Evaluation of an intelligent tutoring system in pathology: Effects of external representation on performance gains, metacognition, and acceptance. *Journal of the American Medical Informatics Association: JAMIA*, 14(2), 182–190.
- Cuadros, J., & Bresnick, G. (2009). EyePACS: An adaptable telemedicine system for diabetic retinopathy screening. *Journal of Diabetes Science and Technology*, 3, 509–516.
- Cundick, R. M., Jr., & Gardner, R. M. (1980). Clinical comparison of pressure-pulse and indicator-dilution cardiac output determination. *Circulation*, 62, 371–376. PMID 6994922.
- Curran, W. J., Stearns, B., & Kaplan, H. (1969). Privacy, confidentiality, and other legal considerations in the establishment of a centralized health-data system. *The New England Journal of Medicine*, 281, 241–248.
- Cusack, C. M., Pan, E., Hook, J. M., Vincent, A., Kaelber, D. C., & Middleton, B. (2008). The value proposition in the widespread use of telehealth. *Journal of Telemedicine and Telecare*, 14(4), 167–168.
- Cushing, H. (1903). On routine determination of arterial tension in operating room and clinic. *Boston Medical Surgical Journal*, 148:250. Dalto 1997
- Cushman, R., Froomkin, M. A., Cava, A., Abril, P., & Goodman, K. W. (2010). Ethical, legal and social issues for personal health records and applications. *Journal of Biomedical Informatics*, 43, S51–S55.
- D'Orsi, C. J., & Newell, M. S. (2007). BI-RADS decoded: Detailed guidance on potentially confusing issues. *Radiologic Clinics of North America*, 45(5), 751–763. v.
- Da Vinci Surgery. Available at: <http://www.davincisurgery.com>. Accessed 28 June 2011.
- Dale, A. M., Fischl, B., et al. (1999). Cortical surface-based analysis. I. Segmentation and surface reconstruction. *NeuroImage*, 9(2), 179–194.
- Dalton, J. S., Johnson, K. V., Gardner, R. M., Spuhler, V. J., & Egbert, L. (1997). Medical information bus usage for automated IV pump data acquisition: Evaluation of use and nurse attitudes. *International Journal of Clinical Monitoring and Computing*, 14, 151–154. PMID 9387004.
- Dameron, O., Roques E., et al. (2006). Grading lung tumors using OWL-DL based reasoning. *9th International Protégé Conference*. Stanford.
- Damiani, G., Pinnarelli, L., Colosimo, S. C., Almiento, R., Sicuro, L., Galasso, R., Sommello, L., & Ricciardi, W. (2010). The effectiveness of computerized clinical guidelines in the process of care: A systematic review. *BMC Health Services Research*, 10, 2.
- Damush, T. M., Weinberger, M., Clark, D. O., Tierney, W. M., Rao, J. K., Perkins, S. M., & Verel, K. (2002). Acute low back pain self management intervention for urban primary care patients: Rationale, design, and predictors of participation. *Arthritis and Rheumatism*, 47, 372–379.
- Dansky, K. H., Palmer, L., Shea, D., & Bowles, K. H. (2001). Cost analysis of telehomecare. *Telemedicine Journal of E-Health*, 7(3), 225–232. doi:10.1089/153056201316970920.
- Darmoni, S., Leroy, J., Baudic, F., Douyere, M., Piot, J., & Thirion, B. (2000). CISMeF: A structured health resource guide. *Methods of Information in Medicine*, 9, 30–35.
- Datta, R., Joshi, D., et al. (2008). Image retrieval: ideas, influences, and trends of the new age. *ACM Computing Surveys*, 40(2), Article 5:1–60.
- Davatzikos, C., & Bryan, R. N. (1996). Using a deformable surface model to obtain a shape representation of the cortex. *IEEE Transactions on Medical Imaging*, 15(6), 785–795.
- David, J. M., Krivine, J. P., & Simmons, R. (Eds.). (1993). *Second generation expert systems*. Berlin: Springer.
- Davies, K. (2008). Keeping score of your sequence. *BioIT World*, 7, 16–21.
- Davies, K. (2010). Physicians and their use of information: A survey comparison between the United States, Canada, and the United Kingdom. *Journal of the Medical Library Association*, 99, 88–91.
- Davis, L. S., Collen, M. F., Rubin, F. L., & Van Brunt, E. E. (1968). Computer stored medical record. *Computer Biomedical Research*, 1, 452–469.
- Davis, R., Buchanan, B., & Shortliffe, E. H. (1977). Production rules as a representation for a knowledge-based consultation system. *Artificial Intelligence*, 8, 15–45.
- Dayhoff, M. O. (1974). Computer analysis of protein sequences. *Federal Proceedings*, 33(12), 2314–2316.
- de Dombal, F. T. (1987). Ethical considerations concerning computers in medicine in the 1980s. *Journal of Medical Ethics*, 13, 179–184.
- de Dombal, F. T., Leaper, D. J., Staniland, J. R., McCann, A. P., & Horrocks, J. C. (1972). Computer-aided diagnosis of acute abdominal pain. *British Medical Journal*, 1, 376–380.
- de Figueiredo, E. H., Borgonovi, A. F., et al. (2011). Basic concepts of MR imaging, diffusion MR imaging, and diffusion tensor imaging. *Magnetic Resonance Imaging Clinics of North America*, 19(1), 1–22.
- Dean, J., & Ghemawat, S. (2008). MapReduce: Simplified data processing on large clusters. *Communications of the ACM*, 51(1), 107–113.
- DeAngelis, C., Drazen, J., Frizelle, F., Haug, C., Hoey, J., Horton, R., & VanDerWeyden, M. (2005). Is this clinical trial fully registered? A statement from the International Committee of Medical Journal Editors. *Journal of the American Medical Association*, 293, 2927–2929.

- DeBakey, M. (1991). The national library of medicine: Evolution of a premier information center. *Journal of the American Medical Association*, 266, 1252–1258.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- Decker, S. L., Jamoom, E. W., & Sisk, J. E. (2012). Physicians in nonprimary care and small practices and those age 55 and older lag in adopting electronic health record systems. *Health Affairs*, 31(5), 1108–1114.
- DeClerq, P. A., Blom, J. A., Korsten, H. H., & Hasman, A. (2004). Approaches for creating computer-interpretable guidelines that facilitate decision support. *Artificial Intelligence in Medicine*, 31(1), 1–27.
- Deflandre, E., Bonhomme, V., & Hans, P. (2008). Delta down compared with delta pulse pressure as an indicator of volaemia during intracranial surgery. *British Journal of Anaesthesia*, 100, 245–250. PMID 18083787.
- DeGroot, A. T. (1965). *Thought and choice in chess*. The Hague: Mouton.
- Del Fiol, G., Huser, V., Strasberg, H. R., et al. (2012). Implementations of the HL7 context-aware knowledge retrieval (“infobutton”) standard: Challenges, strengths, limitations, and uptake. *Journal of Biomedical Informatics*, 45(4), 726–735.
- Deleger, L., Merkel, M., & Zweigenbaum, P. (2009). Translating medical terminologies through word alignment in parallel text corpora. *Journal of Biomedical Informatics*, 42(4), 692–701.
- Demiris, G., Speedie, S., & Finkelstein, S. (2000). A questionnaire for the assessment of patients’ impressions of the risks and benefits of home telecare. *Journal of Telemedicine and Telecare*, 6(5), 278–284.
- Demner-Fushman, D., & Lin, J. (2007). Answering clinical questions with knowledge-based and statistical techniques. *Computational Linguistics*, 33(1), 63–103.
- Dempster, A. P., Laird, N. M., et al. (1977). Maximum likelihood from incomplete data via the EM algorithm. *Journal of the Royal Statistical Society Series B*, 39, 1–38.
- Denny, J. C., Ritchie, M. D., Basford, M. A., et al. (2010). PheWAS: Demonstrating the feasibility of a phenome-wide scan to discover gene-disease associations. *Bioinformatics*, 26, 1205–1210.
- Department of Health and Human Services. (1994). Essential public health functions. *Public Health in America*. Accessed 2005 at: <http://www.health.gov/phfunctions/public.htm>
- Department of Health and Human Services. (2003). *Building the national health information infrastructure*. Available at <http://aspe.hhs.gov/sp/nhiif/>. Accessed 12 Aug 2011.
- Department of Health and Human Services. (2010). *Healthy people 2020*. Washington, DC: US Department of Health and Human Services. Available at <http://healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicid=23>. Accessed 29 Nov 2012.
- Department of Health and Human Services. (2011). *Childhood overweight and obesity prevention initiative*. Washington, DC: National Academies Press.
- Deselaers, T., Hegerath, A., et al. (2006). Sparse patch-histograms for object classification in cluttered images. In *DAGM 2006, Pattern Recognition, 27th DAGM Symposium, Lecture Notes in Computer Science* (pp. 202–211).
- Deselaers, T., Muller, H., et al. (2007). The CLEF 2005 automatic medical image annotation task. *International Journal of Computer Vision*, 74(1), 51–58.
- Deserno, T. M., Antani, S., et al. (2009). Ontology of gaps in content-based image retrieval. *Journal of Digital Imaging*, 22(2), 202–215.
- DesRoches, C. M., et al. (2008). Electronic health records in ambulatory care – a national survey of physicians. *The New England Journal of Medicine*, 359, 50–60.
- DesRoches, C. M., Worzala, C., Joshi, M. S., Kralovec, P. D., & Jha, A. K. (2012). Small, nonteaching, and rural hospitals continue to be slow in adopting electronic health record systems. *Health Affairs*, 31(5), 1092–1099.
- Detmer, D. E. (2003). Building the national health information infrastructure for personal health, health care services, public health, and research. *BMC Medical Informatics and Decision Making*, 3, 1.
- Dewey, F. E., Chen, R., Cordero, S. P., et al. (2011). Phased whole-genome genetic risk in a family quartet using a major allele reference sequence. *PLoS Genetics*, 7, e1002280.
- Dexter, P. R., Perkins, S., Overhage, J. M., et al. (2001). A computerized reminder system to increase the use of preventive care for hospitalized patients. *The New England Journal of Medicine*, 345(13), 965–970.
- Dexter, P. R., Perkins, S. M., Maharry, K. S., Jones, K., & McDonald, C. J. (2004). Inpatient computer-based standing orders vs. physician reminders to increase influenza and pneumococcal vaccination rates. *Journal of the American Medical Association*, 292(19), 2366–2371.
- Dhenain, M., Ruffins, S. W., et al. (2001). Three-dimensional digital mouse atlas using high-resolution MRI. *Developmental Biology*, 232(2), 458–470.
- Diamond, G., & Kaul, S. (2008). The disconnect between practice guidelines and clinical practice – stressed out. *Journal of the American Medical Association*, 300, 1817–1819.
- DiCenso, A., Bayley, L., & Haynes, R. (2009). ACP Journal Club. Editorial: Accessing preappraised evidence: Fine-tuning the 5S model into a 6S model. *Annals of Internal Medicine*, 151(6), JC3-2. JC3-3.
- Dick, R., & Steen, E. (Eds.) (1991). *The Computer-Based Patient Record: An Essential Technology for Health Care* (Rev. 1997). Washington, D.C.: Institute of Medicine, National Academy Press.
- Diepgen, T. L., & Eysenbach, G. (1998). Digital images in dermatology and the Dermatology Online Atlas on the World Wide Web. *The Journal of Dermatology*, 25(12), 782–787.

- Do, N. V., Barnhill, R., Heermann-Do, K. A., Salzman, K. L., & Gimbel, R. W. (2011). The military health system's personal health record pilot with Microsoft HealthVault and Google health. *Journal of the American Medical Informatics Association: JAMIA*, 18(2), 118–124.
- Dodd, B. (1997, October). An independent "health information bank" could solve health data security issues. *British Journal of Healthcare Computing and Information Management*, 14(8), 2.
- Doi, K. (2007). Computer-aided diagnosis in medical imaging: Historical review, current status and future potential. *Computerized Medical Imaging and Graphics*, 31(4–5), 198–211.
- Doig, A. K., Drews, F. A., & Keefe, M. R. (2011). Informing the design of hemodynamic monitoring displays. *Computers, Informatics, Nursing*, 29(12), 706–713. PMID 21412150.
- Doing-Harris, K. M., & Zeng-Treitler, Q. (2011). Computer-assisted update of a consumer health vocabulary through mining of social network data. *Journal of Medical Internet Research*, 13(2), e37.
- Dolin, R.H., Giannone, G., & Schadow, G. (2007). Enabling Joint Commission medication reconciliation objectives with the HL7/ASTM Continuity of Care Document Standard. In *Proceedings of the 2007 AMIA Annual Symposium*, 186–190.
- Donley, G., Hull, S. C., & Berkman, B. E. (2012). Prenatal whole genome sequencing. *The Hastings Center Report*, 42, 28–40.
- Donovan, T., & Manning, D. J. (2007). The radiology task: Bayesian theory and perception. *The British Journal of Radiology*, 80(954), 389–391.
- Doolan, D. F., Bates, D. W., & James, B. C. (2003). The use of computers for clinical care: A case series of advanced U.S. Sites. *Journal of the American Medical Informatics Association: JAMIA*, 10(1), 94–107.
- Dossia Consortium. (2006). <http://www.dossia.org>. Accessed 17 Dec 2012.
- Downs, S. M., Biondich, P. G., Anand, V., Zore, M., & Carroll, A. E. (2006). Using Arden syntax and adaptive turnaround documents to evaluate clinical guidelines. *AMIA Annual Symposium Proceedings, 2006*, 214–218.
- Drazen, J., & Curfman, G. (2004). Public access to biomedical research. *The New England Journal of Medicine*, 351, 1343.
- Drew, B. J., & Funk, M. (2006). Practice standards for ECG monitoring in hospital setting: Executive summary and guide for implementation. *Critical Care Nursing Clinics of North America*, 18(2), 157–168. PMID 16728301.
- Drews, F. A., Musters, A., & Samore, M. H. (2008). Error producing conditions in intensive care unit. In *Advances in patient safety: New directions and alternative approaches* (Performance and tools, Vol. 3). Rockville: AHRQ. PMID 21249947.
- Drucker, P. F. (1959). Long-range planning. *Management Science*, 5(3), 238–249.
- Drury, H. A., & Van Essen, D. C. (1997). Analysis of functional specialization in human cerebral cortex using the visible man surface based atlas. *Human Brain Mapping*, 5, 233–237.
- Du, X., Callister, S. J., Manes, N. P., et al. (2008). A computational strategy to analyze label-free temporal bottom-up proteomics data. *Journal of Proteome Research*, 7, 2595–2604.
- Duch, W., Oentaryo, R.J., & Pasquier, M. (2008). *Cognitive architectures: Where do we go from here?* Paper presented at the proceeding of the 2008 conference on Artificial General Intelligence 2008: Proceedings of the First AGI Conference. Memphis, TN.
- Duda, R. O., & Shortliffe, E. H. (1983). Expert systems research. *Science*, 220, 261–268.
- Duda, R. O., Hart, P. E., et al. (2001). *Pattern classification*. New York: Wiley.
- Dugas-Phocion, G., Ballester, M. A. G., et al. (2004). "Improved EM-based tissue segmentation and partial volume effect quantification in multi-sequence brain MRI." Medical Image Computing and Computer-Assisted Intervention – Miccai 2004, Pt 1. *Proceedings*, 3216, 26–33.
- Duncan, R. G., Saperia, D., Dulbandzhyan, R., et al. (2001). Integrated web-based viewing and secure remote access to a clinical data repository and diverse clinical systems. *Proceedings of the AMIA Fall Symposium, 2001*, 149–153.
- Dunham, I., Kundaje, A., Aldred, S. F., et al. (2012). An integrated encyclopedia of DNA elements in the human genome. *Nature*, 489(7414), 57–74.
- Dupuits, F. M. (1994). The use of the Arden syntax for MLMs in HIOS+, a decision support system for general practitioners in The Netherlands. *Computers in Biology and Medicine*, 24(5), 405–410.
- Durbin, R., Eddy, S. R., Krogh, A., & Mitchison, G. (1998). *Biological sequence analysis: Probabilistic models of proteins and nucleic acids*. Cambridge: Cambridge University Press.
- Durfy, S. J. (1993). Ethics and the human genome project. *Archives of Pathology & Laboratory Medicine*, 117(5), 466–469.
- Dykes, P. C., Carroll, D. L., Hurley, A. C., Benoit, A., & Middleton, B. (2009). Why do patients in acute care hospitals fall? Can falls be prevented? *The Journal of Nursing Administration*, 39(6), 299–304.
- Dykes, P. C., Carroll, D. L., Hurley, A., Lipsitz, S., Benoit, A., Chang, F., et al. (2010). Fall prevention in acute care hospitals: A randomized trial. *Journal of the American Medical Association*, 304(17), 1912–1918.
- Dyson, E. (2005, September). *Personal health information: data comes alive! Release 1.0* 24.1.
- Earle, K. (2011). In people with poorly controlled hypertension, self-management including telemonitoring is more effective than usual care for reducing systolic blood pressure at 6 and 12 months. *Evidence-Based Medicine*, 16(1), 17–18.
- East, T. D., Bohm, S. H., Wallace, C. J., Clemmer, T. P., Weaver, L. K., Orme, J. F., Jr., & Morris, A. H. (1992). A successful computerized protocol for clinical

- management of pressure control inverse ration ventilation. *Chest*, 101(3), 697–710. Edworthy 2006.
- Ebbert J. O., Dupras D. M., Erwin P. J. (2003). Searching the medical literature using PubMed: a tutorial. *Mayo Clin Proc*, 78(1), 87–91.
- Eddy, D. M. (1992). *A manual for assessing health practices and designing practice policies: The explicit approach*. Philadelphia: American College of Physicians.
- Edgar, E.P. (2009). *Physician retention in Army Medical Department. Strategic Research Project, U.S. Army War College, Carlisle Barracks PA 17013–5050*. Available at: <http://handle.dtic.mil/100.2/ADA499087>
- Edgar, R., Domrachev, M., & Lash, A. E. (2002). Gene expression omnibus: NCBI gene expression and hybridization array data repository. *Nucleic Acids Research*, 30, 207–210.
- Edworthy, J., & Hellier, E. (2006). Alarms and human behavior: Implications for medical alarms. *British Journal of Anaesthesia*, 97, 12–17. PMID 16698858.
- Egan, D., Remde, J., Gomez, L., Landauer, T., Eberhardt, J., & Lochbaum, C. (1989). Formative design-evaluation of superbook. *ACM Transactions on Information Systems*, 7, 30–57.
- EHI Primary Care. (2007). *NHS London orders data transfer review*.
- Elhadad, N. (2006). Comprehending technical texts: predicting and defining unfamiliar terms. *Proceedings AMIA Symposium*, 239–243.
- Elhadad, N., Kan, M. Y., Klavans, J. L., & McKeown, K. R. (2005). Customization in a unified framework for summarizing medical literature. *Artificial Intelligence in Medicine*, 33(2), 179–198.
- Eliot CR, Woolf BP. (1996). A Simulation-Based Tutor that Reasons about Multiple Agents, Proceedings of the 13th National Conference on Artificial Intelligence (AAAI-96), Cambridge, MA: AAAI/MIT Press, pp. 409-415.
- Elkin, P. L., Sorensen, B., De Palo, D., Poland, G., Bailey, K. R., Wood, D. L., & LaRusso, N. F. (2002). Optimization of a research web environment for academic internal medicine faculty. *Journal of the American Medical Informatics Association: JAMIA*, 9(5), 472–478.
- Elstein, K. A., Shulman, L. S., & Sprafka, S. A. (1978). *Medical problem solving: An analysis of clinical reasoning*. Cambridge, MA: Harvard University Press.
- Elter, M., & Horsch, A. (2009). CADx of mammographic masses and clustered microcalcifications: A review. *Medical Physics*, 36(6), 2052–2068.
- Elwyn, G., Edwards, A., & Kinnersley, P. (1999). Shared decision-making in primary care: The neglected second half of the consultation. *The British Journal of General Practice*, 49(443), 477–482.
- Ely, J., Osherooff, J., Ebell, M., Bergus, G., Levy, B., Chambliss, M., & Evans, E. (1999). Analysis of questions asked by family doctors regarding patient care. *British Medical Journal*, 319, 358–361.
- Ely, J., Osherooff, J., Ebell, M., Chambliss, M., Vinson, D., Stevermer, J., & Pifer, E. (2002). Obstacles to answering doctors' questions about patient care with evidence: Qualitative study. *British Medical Journal*, 324, 710–713.
- Embi, P. J., & Payne, P. R. (2009). Clinical research informatics: Challenges, opportunities and definition for an emerging domain. *Journal of the American Medical Informatics Association: JAMIA*, 16(3), 316–327.
- Embi, P. J., Jain, A., Clark, J., Bizjack, S., Hornung, R., & Harris, C. M. (2005). Effect of a clinical trial alert system on physician participation in trial recruitment. *Archives of Internal Medicine*, 165(19), 2272–2277.
- Eminovic, N., Wyatt, J. C., Tarpey, A. M., Murray, G., & Ingrams, G. J. (2004, June 02). First evaluation of the NHS direct online clinical enquiry service: A nurse-led Web chat triage service for the public. *Journal of Medical Internet Research*, 6(2), E17.
- Engel, G. L. (1977). The need for a new medical model: A challenge for biomedicine. *Science*, 196, 129–136.
- Erickson, B. (2011). Experience with importation of electronic images into the medical record from physical media. *Journal of Digital Imaging*, 24(4), 694–699.
- Erickson, B., & Hangiandreou, N. (1998). The evolution of electronic imaging in the medical environment. *Journal of Digital Imaging*, 11(3 suppl 1), 71–74.
- Erickson, B., Ryan, W., Gehring, D., & Pynadath, A. (2007, Summer). Top 10 features clinicians require in an image viewer. *SIIM News*.
- Ericsson, K. A. (2006). *The Cambridge handbook of expertise and expert performance*. Cambridge/New York: Cambridge University Press.
- Ericsson, K. A., & Simon, H. A. (1993). *Protocol analysis: Verbal reports as data (Rev. ed.)*. Cambridge, MA: MIT Press.
- Ericsson, K. A., & Smith, J. (1991). *Toward a general theory of expertise: Prospects and limits*. New York: Cambridge University Press.
- Estes, W. K. (1975). The state of the field: General problems and issues of theory and metatheory. In W. K. Estes (Ed.), *Handbook of learning and cognitive processes* (Vol. 1). Hillsdale/New York: L. Erlbaum Associates.
- Etheredge, L. M. (2007). A rapid-learning health system. *Health Affairs (Millwood)*, 26(2), w107–w118.
- Evans, D. (2002). Database searches for qualitative research. *Journal of the Medical Library Association*, 90(3), 290–293.
- Evans, B. J. (2011). Much ado about data ownership. *Harvard Journal of Law & Technology*, 25(1), 70–130.
- Evans, D. A., & Gadd, C. S. (1989). Managing coherence and context in medical problem-solving discourse. In D. A. Evans & V. L. Patel (Eds.), *Cognitive science in medicine: Biomedical modeling* (pp. 211–255). Cambridge, MA: MIT Press.
- Evans, D. A., & Patel, V. L. (1989). *Cognitive science in medicine*. Cambridge, MA: MIT Press.
- Evans, D. A., Cimino, J. J., Hersh, J. J., Huff, S. M., & Bell, D. S. (1994). Toward a medical-concept representation language. The Canon Group. *Journal of the American Medical Informatics Association: JAMIA*, 1(3), 207–217.
- Evans, R. S., Pestotnik, S. L., Classen, D. C., Clemmer, T. P., Weaver, L. K., Orme, J. F., Lloyd, J. F., & Burke, J. P. (1998). A computer-assisted management pro-



- gram for antibiotics and other antinfective agents. *The New England Journal of Medicine*, 338(4), 232–238.
- Evans, R. S., Carlson, R., Johnson, K. V., Palmer, B. K., & Lloyd, J. F. (2010). Enhanced notification of infusion pump programming errors. *Studies in Health Technology and Informatics*, 160(Pt 1), 734–738. PMID 20841783.
- Evans, R.S., Johnson, K.V., Flint, V.B., Kinder, T., Lyon, C.R., Hawley, W.L., Vawdrey, D.K., Thomsen, G.E. (2005). Enhanced notification of critical ventilator events. *J Am Med Inform Assoc* 12, 589–95. PMID 16049226.
- Eveillard, P. (2000). Bibliographic databases. Medline via PubMed. *La Revue du Praticien*, 50(16 Suppl), 1–34.
- Executive Office of the President: President's Council of Advisors on Science and Technology. (2010). *Report to the President Realizing the Full Potential of Health Information Technology To Improve Healthcare For Americans: The Path Forward*. Washington, DC: Executive Office of the President of the United States.
- Eysenbach, G. (2006). Citation advantage of open access articles. *PLoS Biology*, 4(5), e157.
- Eysenbach, G. (2008). Medicine 2.0: Social networking, collaboration, participation, apomediation, and openness. *Journal of Medical Internet Research*, 10(3), e22.
- Eysenbach, G., & Kohler, C. (2004). Health-related searches on the internet. *Journal of the American Medical Association*, 291, 2946.
- Eysenbach, G., & Till, J. E. (2001). Ethical issues in qualitative research on internet communities. *BMJ*, 323(7321), 1103–1105.
- Eysenbach, G., & Wyatt, J. (2002). Using the internet for surveys and health research. *Journal of Medical Internet Research*, 4(2), E13.
- Eysenbach, G., Bauer, J., et al. (1998). An international dermatological image atlas on the WWW: Practical use for undergraduate and continuing medical education, patient education and epidemiological research. *Studies in Health Technology and Informatics*, 52(Pt 2), 788–792.
- Eysenbach, G., Su, E., & Diepgen, T. (1999). Shopping around the internet today and tomorrow: Towards the millennium of cybermedicine. *British Medical Journal*, 319, 1294–1298.
- Eysenbach, G., Tuische, J., & Diepgen, T. L. (2001). Evaluation of the usefulness of internet searches to identify unpublished clinical trials for systematic reviews. *Medical Informatics and the Internet in Medicine*, 26(3), 203–218.
- Eysenbach, G., Powell, J., Kuss, O., & Sa, E.-R. (2002). Empirical studies assessing the quality of health information for consumers on the world wide web: A systematic review. *Journal of the American Medical Association*, 287, 2691–2700.
- Eysenbach, G., Powell, J., Englesakis, M., Rizo, C., & Stern, A. (2004). Health related virtual communities and electronic support groups: Systematic review of the effects of online peer to peer interactions. *British Medical Journal*, 328(7449), 1166.
- Fabienne, C., Olson, K. L., & Mandl, K. D. (2010). Health care reform- patients treated at multiple acute health care facilities: Quantifying information fragmentation. *Archives of Internal Medicine*, 170(22), 1989–1995.
- Fafchamps, D., Young, C. Y., & Tang, P. C. (1991). Modelling work practices: Input to the design of a physician's workstation. In *Proceedings of the 15th annual symposium on Computer Applications in Medical Care* (pp. 788–792). Washington, D.C.: CAMC.
- Fargher, E. A., Eddy, C., Newman, W., Qasim, F., Tricker, K., Elliott, R. A., & Payne, K. (2007). Patients' and healthcare professionals' views on pharmacogenetic testing and its future delivery in the NHS. *Pharmacogenomics*, 8(11), 1511–1519.
- Fazi, P., Grifoni, P., Luzi, D., Ricci, F. L., & Vignetti, M. (2000). Is workflow technology suitable to represent and manage clinical trials? *Studies in Health Technology and Informatics*, 77, 302–306.
- Fazi, P., Luzi, D., Manco, M., Ricci, F.L., Toffoli, G., & Vignetti, M. (2002). WITH: a system to write clinical trials using XML and RDBMS. *Proceedings of the AMIA Symposium*, 240–244.
- FDA (U.S. Food and Drug Administration). (2011). *Infusion pump software safety research at FDA*. Retrieval 1 Aug 2012: <http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/GeneralHospitalDevicesandSupplies/InfusionPumps/ucm202511.htm>
- Federative Committee on Anatomical Terminology. (1998). *Terminologia anatomica*. Stuttgart: Thieme.
- Feero, W. G., Guttmacher, A. E., & Collins, F. S. (2010). Genomic medicine—an updated primer [Review]. *The New England Journal of Medicine*, 362(21), 2001–2011.
- Fei-Fei, L., & Perona, P. (2005). A Bayesian hierarchical model for learning natural scene categories. In *Proceedings of IEEE Computer Vision and Pattern Recognition* (pp. 524–531), San Diego.
- Feltovich, P. J., Johnson, P. E., Moller, J. H., & Swanson, D. B. (1984). The role and development of medical knowledge in diagnostic expertise. In W. J. Clancey & E. H. Shortliffe (Eds.), *Readings in medical artificial intelligence: The first decade* (pp. 275–319). Reading: Addison Wesley.
- Ferguson, T. (1996). *Health Online: how to find health information, support groups, and self help communities in cyberspace*. The Millenium Whole Earth Catalogue. Da Capo Press. Boston, MA.
- Ferguson, T. (1997). Health care in cyberspace: Patients lead a revolution. *Futurist*, 31(6), 29–34.
- Ferguson, T. (2002). From patients to end users: Quality of online patient networks needs more attention than quality of online health information. *British Medical Journal*, 324, 555–556.
- Ferguson, G., Quinn, J., Horwitz, C., Swift, M., Allen, J., & Galescu, L. (2010). Towards a personal health management assistant. *Journal of Biomedical Informatics*, 43(5 Suppl), S13–S16.
- Ferranti, J. M., Musser, R. C., Kawamoto, K., & Hammond, W. E. (2006). The clinical document architecture and the continuity of care record: A critical analysis. *Journal of the American Medical Informatics Association: JAMIA*, 13(3), 245–252.

- Ferrucci, D., Brown, E., Chu-Carroll, J., et al. (2010). Building Watson: an overview of the DeepQA Project. *AI Magazine*, 31(3), 59–79. Retrieved from <http://www.aaai.org/ojs/index.php/aimagazine/article/view/2303>
- Fiala, J. C., & Harris, K. M. (2001). Extending unbiased stereology of brain ultrastructure to three-dimensional volumes. *Journal of the American Medical Informatics Association: JAMIA*, 8(1), 1–16.
- Ficarra, V., Novara, G., Fracalanza, S., et al. (2009). A prospective, non-randomized trial comparing robot-assisted laparoscopic and retropubic radical prostatectomy in one European institution. *BJU International*, 104, 534–539.
- Fielding, N. G., & Lee, R. M. (1991). *Using computers in qualitative research*. Newbury Park: Sage Press.
- Figurska, M., Robaszkiewicz, J., et al. (2010). Optical coherence tomography in imaging of macular diseases. *Klinika Oczna*, 112(4–6), 138–146.
- Fiks, A. G., Alessandrini, E. A., Forrest, C. B., Khan, S., Localio, A. R., Gerber, A., et al. (2011). Electronic medical record use in pediatric primary care. *Journal of the American Medical Informatics Association: JAMIA*, 18(1), 38–44.
- Final Rule: Centers for Medicare and Medicaid Services (CMS), HHS. Medicare and Medicaid Programs; Electronic Health Record Incentive Program—Stage 2, 77(171) Fed. Reg. 53968 (Sept. 4, 2012) (amending 42 C.F.R. § 412, 413, and 495).
- Final Rule: Office of the National Coordinator (ONC) for Health Information Technology, Department of Health and Human Services. Health Information Technology: Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology, 2014 Edition; Revisions to the Permanent Certification Program for Health Information Technology, 77(171) Fed. Reg. 54163 (Sept. 4, 2012) (amending 45 C.F.R. § 170).
- Fine, A. M., Nizet, V., & Mandl, K. D. (2011). Improved diagnostic accuracy of group A streptococcal pharyngitis with use of real-time biosurveillance. *Annals of Internal Medicine*, 155(6), 345–352.
- Finkel, A. (ed.) (1977). *CPT4: Physician's Current Procedural Terminology* (4th ed.). Chicago: American Medical Association.
- Fischer, B. A., & Zigmond, M. J. (2010). The essential nature of sharing in science. *Science and Engineering Ethics*, 16(4), 783–799.
- Fischl, B., Sereno, M. I., et al. (1999). Cortical surface-based analysis. II: Inflation, flattening, and a surface-based coordinate system. *NeuroImage*, 9(2), 195–207.
- Fisk, A. D., Rogers, W. A., Charness, N., Czaja, S. J., & Sharit, J. (2009). *Designing for older adults: Principles and creative human factors approaches*. Boca Raton: CRC Press.
- Fiszman, M., Rindfleisch, T., & Kilicoglu, H. (2004). Summarization of an online medical encyclopedia. MEDINFO 2004. In *Proceedings of the Eleventh World Congress on Medical Informatics* (pp. 506–510). San Francisco.
- Fitzmaurice, J. M., Adams, K., & Eisenberg, J. M. (2002). Three decades of research on computer applications in health care: Medical informatics support at the agency for healthcare research and quality. *Journal of the American Medical Informatics Association: JAMIA*, 9(2), 144–160.
- Fleurant, M., Kell, R., Love, J., Jenter, C., Volk, L. A., Zhang, F., Bates, D. W., & Simon, S. R. (2011). Massachusetts e-Health Project increased physicians' ability to use registries, and signals progress toward better care. *Health Affairs (Millwood)*, 30(7), 1256–1264.
- Flexner, A. (1910). *Medical education in the united states and Canada: A report to the Carnegie foundation for the advancement of teaching*. New York: The Carnegie Foundation for the Advancement of Teaching. OCLC 9795002.
- Flin, R., & Patey, R. (2009). Improving patient safety through training in non-technical skills. *British Medical Journal*, 339, B3595. doi:10.1136/Bmj.B3595.
- FMRIB Image Analysis Group. (2001). *FSL – The FMRIB Software Library*. From <http://www.fmriv.ox.ac.uk/fsl/index.html>
- Foley, D.D., Van Dam, A., Feiner, S.K., Hughes, J.F. (1990). *Computer Graphics: Principles and Practice*. Reading, MA: Addison-Wesley.
- Forsythe, D.E. (1992). Using ethnography to build a working system: rethinking basic design assumptions. *Proceedings Annual Symposium Computer Applications in Medical Care*, 505–509.
- Forsythe, D. E., Buchanan, B. G., Osheroff, J. A., & Miller, R. A. (1992). Expanding the concept of medical information: An observational study of physicians' information needs. *Computers and Biomedical Research*, 25, 181–200.
- Foster, K.R. (2010, Spring). Telehealth in Sub-Saharan Africa. In *IEEE Technology and Society Magazine* (pp. 42–49).
- Fougerousse, F., Bullen, P., et al. (2000). Human-mouse differences in the embryonic expression of developmental control genes and disease genes. *Human Molecular Genetics*, 9(2), 165–173.
- Foulonneau, M., & Riley, J. (2008). *Metadata for digital resources: Implementation, systems design and interoperability*. New York: Neal-Schuman Publishers.
- Fowler, F. J., Levin, C. A., & Sepucha, K. R. (2011). Informing and involving patients to improve the quality of medical decisions. *Health Affairs (Millwood)*, 30(4), 699–706.
- Fox, C. (1992). Lexical analysis and stop lists. In W. Frakes & R. Baeza-Yates (Eds.), *Information retrieval: Data structures and algorithms* (pp. 102–130). Englewood Cliffs: Prentice-Hall.
- Fox, J. (1993). Decision support systems as safety-critical components: Towards a safety culture for medical informatics. *Methods of Information in Medicine*, 32, 345–348.
- Fox, P. T. (Ed.). (2001). *Human brain mapping*. New York: Wiley.
- Fox, S. (2011). *Health topics*. Washington, D.C.: Pew Internet & American Life Project. Retrieved from

- [http://www.pewinternet.org/~media/Files/Reports/2011/PIP\\_HealthTopics.pdf](http://www.pewinternet.org/~media/Files/Reports/2011/PIP_HealthTopics.pdf)
- Frackowiak, R. S. J., Friston, K. J., et al. (Eds.). (1997). *Human brain function*. New York: Academic Press.
- Frakes, W. (1992). Stemming algorithms. In W. Frakes & R. Baeza-Yates (Eds.), *Information retrieval: Data structures and algorithms* (pp. 131–160). Englewood Cliffs: Prentice-Hall.
- Frank, S.J. (1988). What AI practitioners should know about the law. *AI Magazine*. Part One 9:63–75; Part Two 9:109–114.
- Franken, E. A., Jr., Berbaum, K. S., Marley, S. M., Smith, W. L., Sato, K., Kao, S. C., & Milam, S. G. (1992). Evaluation of a digital workstation for interpreting neonatal examinations. A receiver operating characteristic study. *Investigative Radiology*, 27, 732–737.
- Franklin, K. B. J., & Paxinos, G. (1997). *The mouse brain in stereotactic coordinates*. San Diego: Academic Press.
- Fred, M., Vawdrey, D., et al. (2009). *Enhancing a commercial electronic health record with a novel patient handoff application*. In Society of Hospital Medicine (SHM) Annual Meeting, Chicago, IL.
- Frederiksen, C. H. (1975). Representing logical and semantic structure of knowledge acquired from discourse. *Cognitive Psychology*, 7(3), 371–458.
- Frenk, J. (2010). The global health system: Strengthening national health systems as the next step for global progress. *PLoS Medicine*, 7(1), e1000089.
- Frenk, J., Chen, L., Bhutta, Z. A., Cohen, J., Crisp, N., Evans, T., Fineberg, H., et al. (2010). Health professionals for a new century: Transforming education to strengthen health systems in an interdependent world. *The Lancet*, 376(9756), 1923–1958.
- Fretton A, Finger P. T. (2012). Spectral domain-optical coherence tomography analysis of choroidal osteoma. *The British Journal of Ophthalmology*, 96(2), 224–8.
- Friede, A., & O'Carroll, P. W. (1998). Public health informatics. In R. B. Wallace (Ed.), *Public health and preventive medicine* (14th ed., pp. 59–65). Stamford: Appleton & Lange.
- Friede, A., McDonald, M. C., & Blum, H. (1995). Public health informatics: How information-age technology can strengthen public health. *Annual Review of Public Health*, 16, 239–252.
- Friedman, C. P. (1994). The research we should be doing. *Academic Medicine*, 69(6), 455–457.
- Friedman, C. P. (1995). Where's the science in medical informatics? *Journal of the American Medical Informatics Association: JAMIA*, 2(1), 65–67.
- Friedman, T.L. (2007). *The world is flat: a brief history of the twenty-first century (1st further updated and expanded hardcover ed.)*. New York: Farrar, Straus and Giroux.
- Friedman, C. P. (2009). A “fundamental theorem” of biomedical informatics. *Journal of the American Medical Informatics Association: JAMIA*, 16(2), 169–170.
- Friedman, C. P., & Abbas, U. L. (2003, March). Is medical informatics a mature science? A review of measurement practice in outcome studies of clinical systems. *International Journal of Medical Informatics*, 69(2–3), 261–272.
- Friedman, B., & Dieterle, M. (1987). The impact of the installation of a local area network on physicians and the laboratory information system in a large teaching hospital. In *Proceedings of the 11th annual symposium on Computer Applications in Medical Care* (pp. 783–788), Washington, D.C.
- Friedman, C., & Hripcsak, G. (1998). Evaluating natural language processors in the clinical domain. *Methods Inf Med*, 37(4–5), 334–44.
- Friedman, C. P., & Wyatt, J. C. (2005). *Evaluation methods in biomedical informatics* (2nd ed.). New York: Springer-Publishing, p. 386. ISBN 0-387-25889-2.
- Friedman, C., Hripcsak, G., Johnson, S. B., Cimino, J. J., & Clayton, P. D. (1990). A generalized relational schema for an integrated clinical patient database. In R. A. Miller (Ed.), *Proceedings of the 14th annual SCAMC* (pp. 335–339). Los Alamitos: IEEE Computer Soc. Press.
- Friedman, C., Alderson, P. O., Austin, J., Cimino, J. J., & Johnson, S. B. (1994). A general natural language text processor for clinical radiology. *Journal of the American Medical Informatics Association: JAMIA*, 1(2), 161–174.
- Friedman, C., Huff, S. M., Hersh, W. R., Pattison-Gordon, E., & Cimino, J. J. (1995). The canon group's effort: Working toward a merged model. *Journal of the American Medical Informatics Association: JAMIA*, 2(1), 4–18.
- Friedman, C., Kra, P., Krauthammer, M., Yu, H., & Rzhetsky, A. (2001). GENIES: A natural-language processing system for the extraction of molecular pathways from journal articles. *Bioinformatics*, 17(suppl), S74–S82.
- Friedman, C., Shagina, L., Lussier, Y., & Hripcsak, G. (2004). Automated encoding of clinical documents based on natural language processing. *Journal of the American Medical Informatics Association: JAMIA*, 11(5), 392–402.
- Friedman, C. P., Wong, A. K., & Blumenthal, D. (2010). Achieving a nationwide learning health system. *Science Translational Medicine*, 2(57), 57cm29.
- Friefeld, O., Greenspan, H., et al. (2009). Multiple sclerosis lesion detection using constrained GMM and curve evolution. *Journal of Biomedical Imaging*, 2009, 1–13.
- Fries, J. F. (1974). Alternatives in medical record formats. *Medical Care*, 12(10), 871–881.
- Frisse, M. E., King, J. K., Rice, W. B., et al. (2008). A regional health information exchange: Architecture and implementation. *American Medical Informatics Association Annual Symposium Proceedings*, 2008, 212–216.
- Frisse, M. E., Johnson, K., Nian, H., et al. (2011). The financial impact of health information exchange on emergency department care. *Journal of the American Medical Informatics Association: JAMIA*, 19(3), 328–333.
- Friston, K. J., Holmes, A. P., et al. (1995). Stastical parametric maps in functional imaging: A general linear approach. *Human Brain Mapping*, 2, 189–210.

- Frost, J. H., & Massagli, M. P. (2008). Social uses of personal health information within PatientsLikeMe, an online patient community: What can happen when patients have access to one another's data. *Journal of Medical Internet Research*, *10*(3), e15.
- Frueh, F. W., & Gurwitz, D. (2004). From pharmacogenetics to personalized medicine: A vital need for educating health professionals and the community. *Pharmacogenomics*, *5*, 571–579.
- Fuchs, V. R., & Milstein, A. (2011). The \$640 billion question—why does cost-effective care diffuse so slowly? *The New England Journal of Medicine*, *364*(21), 1985–1987.
- Fukuda, K., Tamura, A., Tsunoda, T., & Takagi, T. (1998). Toward information extraction: identifying protein names from biological papers. *Proceedings of the Pacific Symposium on Biocomputing*, 707–718.
- Fung, K. W., Xu, J., Rosenbloom, S. T., et al. (2011). Testing three problem list terminologies in a simulated data entry environment. *American Medical Informatics Association Annual Symposium Proceeds, 2011*, 445–454.
- Funk, M., & Reid, C. (1983). Indexing consistency in MEDLINE. *Bulletin of the Medical Library Association*, *71*, 176–183.
- Funk, M., Winkler, C. G., May, J. L., Stephens, K., Fennie, K. P., Rose, L. L., Turkman, Y. E., & Drew, B. J. (2010). Unnecessary arrhythmia monitoring and underutilization of ischemia and QT interval monitoring in current clinical practice: Baseline results of the practice Use of the latest standards for electrocardiography trial. *Journal of Electrocardiology*, *43*, 542–547. PMID 20832819.
- Gaba, D. M. (2004). The future vision of simulation in health care. *Quality & Safety in Health Care*, *13*(Suppl 1), i2–i10.
- Gabril, M. Y., & Yousef, G. M. (2010). Informatics for practicing anatomical pathologists: Marking a new era in pathology practice. *Modern Pathology*, *23*(3), 349–358.
- Galbraith, D. W. (2006). The daunting process of MIAME. *Nature*, *444*(7115), 31.
- Galperin, M., & Cochrane, G. (2011). The 2011 nucleic acids research database issue and the online molecular biology database collection. *Nucleic Acids Research*, *39*(suppl1), D1–D6.
- Gamazon, E. R., Huang, R. S., Cox, N. J., & Dolan, M. E. (2010). Chemotherapeutic drug susceptibility associated SNPs are enriched in expression quantitative trait loci. *Proceedings of the National Academy of Sciences of the United States of America*, *107*, 9287–9292.
- Garcia-Molina, H., Ullman, J. D., & Widom, J. D. (2002). *Database systems: The complete book*. Englewood Cliffs: Prentice-Hall.
- Garcia-Molina, H., Ullman, J. D., & Widom, J. D. (2008). *Database systems: The complete book* (2nd ed.). Englewood Cliffs: Prentice-Hall.
- Gardner, H. (1985). *The mind's new science: A history of the cognitive revolution*. New York: Basic Books.
- Gardner, R. M. (1996). Accuracy and reliability of disposable pressure transducers coupled with modern pressure monitors. *Critical Care Medicine*, *24*, 879–882. PMID 8706469.
- Gardner, R. M. (2004). Computerized clinical decision-support in respiratory care. *Respiratory Care*, *49*, 378–386. PMID 15030611.
- Gardner, R. M. (2009). Clinical decision support systems: the fascination with closed-loop control. *IMIA Yearbook of Medical Informatics*, 12–21. PMID 19855866.
- Gardner, R. M., & Beale, R. J. (2009). Pressure to perform: Is cardiac output estimation from arterial waveforms good enough for routine use? *Critical Care Medicine*, *37*, 337–338. EDITORIAL PMID 19112291.
- Gardner, R. M., & Lundsgaarde, H. P. (1994). Evaluation of user acceptance of a clinical expert system. *Journal of the American Medical Informatics Association: JAMIA*, *1*(6), 428–438.
- Gardner, R. M., & Shabot, M. M. (2001). Computer-based patient-record systems. In E. H. Shortliffe & L. E. Perreault (Eds.), *Patient-monitoring systems* (2nd ed., pp. 443–485). New York: Springer Verlag.
- Gardner, R. M., Warner, H. R., Toronto, A. F., & Gaisford, W. D. (1970). Cather-flush system for continuous monitoring of central arterial pulse waveform. *Journal of Applied Physiology*, *29*, 911–913. PMID 5485368.
- Gardner, R. M., Tariq, H., Hawley, W. L., & East, T. D. (1989). Medical information bus: The key to future integrated monitoring. *International Journal of Clinical Monitoring and Computing*, *6*, 197–204. PMID 2628508.
- Gardner, R. M., Hawley, W. H., East, T. D., Oniki, T., & Young, H. F. W. (1991). Real time data acquisition: Experience with the medical information bus (MIB). *Proceedings of the Annual Symposium on Computer Applications in Medical Care*, *15*, 813–817. PMID 1807719.
- Gardner, R. M., Pryor, T. A., & Warner, H. R. (1999). The HELP system: Update 1998. *International Journal of Medical Informatics*, *54*, 169–182. PMID 10405877.
- Gardner, R. M., Overhage, J. M., Steen, E., Holmes, J. H., Williamson, J. J., Detmer, D. E., & AMIA Board of Directors. (2009). Core content for the subspecialty of clinical informatics. *Journal of the American Medical Informatics Association: JAMIA*, *16*, 153–157. PMID 19074296.
- Garg, A. X., Adhikari, N. K. J., McDonald, H., et al. (2005). Effects of computerized clinical decision support systems on practitioner performance and patient outcomes: A systematic review. *Journal of the American Medical Association*, *293*(10), 1223–1238.
- Garten, Y., & Altman, R. B. (2009). Pharmspresso: A text mining tool for extraction of pharmacogenomic concepts and relationships from full text. *BMC Bioinformatics*, *10*(Suppl 2), S6.
- Garten, Y., Coulet, A., & Altman, R. B. (2010). Recent progress in automatically extracting information from the pharmacogenomic literature. *Pharmacogenomics*, *11*, 1467–1489.
- Gaschnig, J., Klahr, P., Pople, H., Shortliffe, E., & Terry, A. (1983). Evaluation of expert systems: Issues and case studies. In F. Hayes-Roth, D. A. Waterman, & D.

- Lenat (Eds.), *Building expert systems*. Reading: Addison Wesley.
- Gawande, A. (2009). *The checklist manifesto: How to get things right*. New York: Metropolitan Books.
- Ge, D., Ruzzo, E. K., Shianna, K. V., et al. (2011). SVA: Software for annotating and visualizing sequenced human genomes. *Bioinformatics*, 27, 1998–2000.
- Geissbuhler, A. J., & Miller, R. A. (1997). Desiderata for product labeling of medical expert systems. *International Journal of Medical Informatics*, 47(3), 153–163.
- Gennari, J.H., Musen, M.A., Fergerson, R.W., Grosso, W.E., Crubézy, M., Eriksson, H., Noy, N.F., & Tu, S.W. (2003). The evolution of Protégé: an environment for knowledge-based systems development. *International Journal of Human-Computer Studies*, 58(1):89–123.
- George, J. S., Aine, C. J., et al. (1995). Mapping function in human brain with magnetoencephalography, anatomical magnetic resonance imaging, and functional magnetic resonance imaging. *Journal of Clinical Neurophysiology*, 12(5), 406–431.
- Gerstner, E. R., & Sorensen, A. G. (2011). Diffusion and diffusion tensor imaging in brain cancer. *Seminars in Radiation Oncology*, 21(2), 141–146.
- Ghazvinian, A., Noy, N. F., & Musen, M. A. (2009). Creating mappings for ontologies in biomedicine: Simple methods work. *AMIA Annual Symposium Proceedings, 2009*, 198–202.
- Ghazvinian, A., Noy, N. F., & Musen, M. A. (2011). How orthogonal are the OBO foundry ontologies? *Journal of Biomedical Semantics*, 2(Suppl 2), S2.
- Gibson, K., & Scheraga, H. (1967). Minimization of polypeptide energy. I. Preliminary structures of bovine pancreatic ribonuclease S-peptide. *Proceedings of the National Academy of Sciences*, 58(2), 420–427.
- Giger, M., & MacMahon, H. (1996). Image processing and computer-aided diagnosis. *Radiologic Clinics of North America*, 34(3), 565–596.
- Giles, J. (2005). Internet encyclopaedias go head to head. *Nature*, 438, 900–901. Retrieved from <http://www.nature.com/nature/journal/v438/n7070/full/438900a.html>
- Gillan, D. J., & Schvaneveldt, R. W. (1999). Applying cognitive psychology: Bridging the gulf between basic research and cognitive artifacts. In F. T. Durso, R. Nickerson, R. Schvaneveldt, S. Dumais, M. Chi, & S. Lindsay (Eds.), *Handbook of applied cognition* (pp. 3–31). Chichester/New York: Wiley.
- Ginsburg, G. S., & Willard, H. F. (2009). Genomic and personalized medicine: Foundations and applications. *Translational Research*, 154, 277–287.
- Giuse, D. A., & Mickish, A. (1996). Increasing the availability of the computerized patient record. *Proceedings of the AMIA Annual Fall Symposium, 1996*, 633–637.
- Glaser, R. (Ed.). (2000). *Advances in instructional psychology: Education design and cognitive science* (Vol. 5). Mahwah: Lawrence Erlbaum and Associates.
- Glaser, J. (2010). HITECH lays the foundation for more ambitious outcomes-based reimbursement. *The American Journal of Managed Care*, 16(12), SP19–SP23.
- Goddard, K., Roudsari, A., & Wyatt, J. C. (2012). Automation bias: A systematic review of frequency, effect mediators, and mitigators. *Journal of the American Medical Informatics Association: JAMIA*, 19, 121–127.
- Goetz, T. (2010). Sergey Brin's search for a Parkinson's cure. *Wired*, June 22
- Goffman, E. (1959). *The presentation of self in everyday life*. Garden City: Doubleday.
- Goh, K. I., Cusick, M. E., Valle, D., et al. (2007). The human disease network. *Proceedings of the National Academy of Sciences of the United States of America*, 104, 8685–8690.
- Gold, J. D., & Ball, M. J. (2007). The health record banking imperative: A conceptual model. *IBM Systems Journal*, 46(1), 43–55.
- Gold, M. R., Siegel, J. E., Russell, L. B., & Weinstein, M. C. (Eds.). (1996). *Cost effectiveness in health and medicine*. New York: Oxford University Press.
- Goldberg, A. D., Allis, C. D., et al. (2007). Epigenetics: A landscape takes shape. *Cell*, 128(4), 635–638.
- Goldberg, S. N., Grassi, C. J., et al. (2009). Image-guided tumor ablation: Standardization of terminology and reporting criteria. *Journal of Vascular and Interventional Radiology*, 20(7 Suppl), S377–S390.
- Goldstein, M.K., Hoffman, B.B., Coleman, R.W., Musen, M.A., Tu, S.W., Advani, A., Shankar, R.D., O'Connor, M. (2000). Implementing clinical practice guidelines while taking account of evidence: ATHENA, an easily modifiable decision-support system for management of hypertension in primary care. In *Proceedings of the Annual AMIA Fall Symposium* (pp. 300–304). Philadelphia: Hanley & Belfus.
- Goldzweig, C. L., Towfigh, A., Maglione, M., & Shekelle, P. G. (2009). Costs and benefits of health information technology: new trends from the literature. *Health Affairs (Millwood)*, 28(2), w282–w293.
- Gombas, P., Skepper, J. N., et al. (2004). Past, present and future of digital pathology. *Orvosi Hetilap*, 145(8), 433–443.
- Gonzalez, R. C., Woods, R. E., et al. (2009). *Digital image processing using MATLAB*. S.I., Gatesmark Publishing. Natick, MA.
- Gooch, P., & Roudsari, A. (2011). Computerization of workflows, guidelines, and care pathways: A review of implementation challenges for process-oriented health information systems. *Journal of the American Medical Informatics Association: JAMIA*, 18, 738–748.
- Goodman, K. W. (1996). Ethics, genomics and information retrieval. *Computers in Biology and Medicine*, 26, 223–229.
- Goodman, K. W. (1998a). Bioethics and health informatics: An introduction. In K. W. Goodman (Ed.), *Ethics, computing, and medicine: Informatics and the transformation of health care* (pp. 1–31). Cambridge: Cambridge University Press.
- Goodman, K. W. (1998b). Outcomes, futility, and health policy research. In K. W. Goodman (Ed.), *Ethics, computing, and medicine: Informatics and the*

- transformation of health care* (pp. 116–138). Cambridge: Cambridge University Press.
- Goodman, K. W. (2000). Using the web as a research tool. *MD Computing*, 17(5), 13–14.
- Goodman, K. W., & Cava, A. (2008). Bioethics, business ethics, and science: Bioinformatics and the future of healthcare. *Cambridge Quarterly of Healthcare Ethics*, 17(4), 361–372.
- Goodman, K. W., Berner, E. S., Dente, M. A., Kaplan, B., Koppel, R., Rucker, D., Sands, D. Z., & Winkelstein, P. (2010). Challenges in ethics, safety, best practices, and oversight regarding HIT vendors, their customers, and patients. *Journal of the American Medical Informatics Association: JAMIA*, 18(1), 77–81.
- Goodwin, J. O., & Edwards, B. S. (1975). Developing a computer program to assist the nursing process: Phase I – from systems analysis to an expandable program. *Nursing Research*, 24, 299–305.
- Gorges, M., Markewitz, B. A., & Westenskow, D. R. (2009). Improving alarm performance in the medical intensive care unit using delays and clinical context. *Anesthesia and Analgesia*, 108, 1546–1552. PMID19372334.
- Gorman, P., & Helfand, M. (1995). Information seeking in primary care: how physicians choose which clinical questions to pursue and which to leave unanswered. *Medical Decision Making*, 15, 113–119.
- Goroll, A. H., Simon, S. R., Tripathi, M., Ascenzo, C., & Bates, D. W. (2009). Community-wide implementation of health information technology: The Massachusetts eHealth collaborative experience. *Journal of the American Medical Informatics Association: JAMIA*, 16(1), 132–139.
- Gorry, G. A., & Barnett, G. O. (1968). Sequential diagnosis by computer. *JAMA: The Journal of the American Medical Association*, 205(12), 849–854.
- Gottschalk, A., & Flocke, S. A. (2005). Time spent in face-to-face patient care and work outside the examination room. *Annals of Family Medicine*, 3(6), 488–493.
- Granger, R. (2004). *The National Programme for Information Technology (NPfIT). Given at MEDINFO 2004 (San Francisco, CA)*. Available at [http://www.nhiadvisors.com/slides/GrangerMedinfo\\_2004.ppt](http://www.nhiadvisors.com/slides/GrangerMedinfo_2004.ppt). Accessed 17 Dec 2012.
- Grant, R. W., Wald, J. S., Poon, E. G., Schnipper, J. L., Gandhi, T. K., Volk, L. A., et al. (2006). Design and implementation of a web-based patient portal linked to an ambulatory care electronic health record: Patient gateway for diabetes collaborative care. *Diabetes Technology & Therapeutics*, 8(5), 576–586.
- Grau, B., Horrocks, I., et al. (2008). Chapter 3: Description logics. In B. Porter, V. Lifschitz, & F. Van Harmelen (Eds.), *Handbook of knowledge representation* (Vol. 28, p. 1005). Amsterdam/Boston: Elsevier.
- Gray Southon, F. C., Sauer, C., & Grant, C. N. (2004). Information technology in complex health services: Organizational impediments to successful technology transfer and diffusion. *Journal of the American Medical Informatics Association: JAMIA*, 11(2), 104–112.
- Gray, J. E., Safran, C., Davis, R. B., Pompilio-Weitzner, G., Stewart, J. E., Zaccagnini, L., & Pursley, D. (2000). Baby CareLink: Using the internet and telemedicine to improve care for high-risk infants. *Pediatrics*, 106, 1318–1324.
- Green, E. D., & Guyer, M. S. (2011). Charting a course for genomic medicine from base pairs to bedside. *Nature*, 470(7333), 204–213.
- Green, B. B., Cook, A. J., Ralston, J. D., et al. (2008). Effectiveness of home blood pressure monitoring, web communication, and pharmacist care on hypertension control: A randomized controlled trial. *Journal of the American Medical Association*, 299(24), 2857–2867.
- Green, R. C., Roberts, J. S., Cupples, L. A., et al. (2009). Disclosure of APOE genotype for risk of Alzheimer's disease. *The New England Journal of Medicine*, 361, 245–254.
- Greenberg, M. D., Ridgely, M. S., & Hillestad, R. J. (2009). Crossed wires: how yesterday's privacy rules might undercut tomorrow's nationwide health information network. *Health Affairs (Millwood)*, 28(2), 450–452.
- Greenes, R. (1989, June). The radiologist as clinical activist: A time to focus outward. *Paper presented at the Proc First Internat Conf on Image Management and Communication in Patient Care: Implementation and Impact (IMAC 89)*, Los Alamitos, CA.
- Greenes, R. A. (Ed.). (2007). *Clinical decision support: The road ahead*. Burlington: Elsevier Inc.
- Greenes, R. A., & Brinkley, J. F. (2001). Computer-based patient-record systems. In E. H. Shortliffe & L. E. Perreault (Eds.), *Patient-monitoring systems* (2nd ed., pp. 485–538). New York: Springer.
- Greenes, R. A., & Shortliffe, E. H. (1990). Medical informatics: An emerging academic discipline and institutional priority. *Journal of the American Medical Association*, 263(8), 1114–1120.
- Greenes, R. A., Barnett, G. O., Klein, S. W., Robbins, A., & Prior, R. E. (1970). Recording, retrieval, and review of medical data by physician-computer interaction. *The New England Journal of Medicine*, 282(6), 307–315.
- Greenhalgh, T., Stramer, K., Bratan, T., Byrne, E., Russell, J., & Potts, H. W. W. (2010). Adoption and non-adoption of a shared electronic summary record in England: A mixed-method case study. *BMJ*, 340, c3111.
- Greeno, J. G., & Simon, H. A. (1988). Problem solving and reasoning. In R. C. Atkinson & R. J. Herrnstein (Eds.), *Stevens' handbook of experimental psychology Vol 1: Perception and motivation; Vol 2: Learning and cognition* (2nd ed., Vol. 1, pp. 589–672). New York: Wiley.
- Greenspan, H., & Pinhas, A. T. (2007). Medical image categorization and retrieval for PACS using the GMM-KL framework. *IEEE Transactions on Information Technology in Biomedicine*, 11(2), 190–202.
- Greenspan, H., Ruf, A., et al. (2006). Constrained Gaussian mixture model framework for automatic segmentation of MR brain images. *IEEE Transactions on Medical Imaging*, 25(9), 1233–1245.

- Greenspan, H., Avni, U., et al. (2011). X-ray categorization and retrieval on the organ and pathology level, using patch-based visual words. *IEEE Transactions on Medical Imaging*, 30(3), 733–746.
- Gregg, R. E., Zhou, S. H., Lindauer, J. M., Helfendbein, E. D., & Giuliano, K. K. (2008). What is inside the electrocardiograph? *Journal of Electrocardiology*, 41, 8–14. PMID 1819652.
- Gregory, S. (2011). Personal communication.
- Grimm, R. H., Shimoni, K., Harlan, W. R., & Estes, E. H. J. (1975). Evaluation of patient-care protocol use by various providers. *The New England Journal of Medicine*, 282(10), 507–511.
- Grishman, R., & Kittredge, R. (Eds.). (1986). *Analyzing language in restricted domains: Sublanguage description and processing*. Hillsdale: Erlbaum Associates.
- Grishman, R., & Sundheim, B. (1996). Message Understanding Conference-6: A Brief History. In COLING, 96,466–471.
- Grishman, R., Sager, N., Raze, C., & Bookchin, B. (1973). The linguistic string parser. *Proceedings of the National Computer Conference*, 42, 427–434.
- Grosz, B., Joshi, A., & Weinstein, S. (1995). Centering: A framework for modeling the local coherence of discourse. *Computational Linguistics*, 2(21), 203–225.
- Groves, R. H., Jr., Holcomb, B. W., Jr., & Smith, M. L. (2008). Intensive care telemedicine: Evaluating a model for proactive remote monitoring and intervention in the critical care setting. *Studies in Health Technology and Informatics*, 131, 131–146. PMID 18305328.
- Grunfeld, A., & Ho, K. (1997). An internet primer, part II: Tools of the internet. *The Journal of Emergency Medicine*, 15(3), 401–404.
- Grunfeld, A., Ho, K., & Walls, R. (1996). The internet: What's all the fuss about? *The Journal of Emergency Medicine*, 14(6), 769–770.
- Guglin ME, Thatai D. Common errors in computer electrocardiogram interpretation. *Int J Cardiol* 2006; 106: 232–7. PMID 16321696.
- Guide to Community Preventive Services. (2010). *Universally recommended vaccinations: immunization information systems*. Atlanta: Guide to Community Preventive Services. Available at <http://www.thecomunityguide.org/vaccines/universally/imminfosystems.html>. Accessed 29 Nov 2012.
- Gur, D., & Sumkin, J. (2006). CAD in screening mammography. *AJR. American Journal of Roentgenology*, 187, 1474. 10.2214.
- Gurses, A. P., & Xiao, Y. (2006). A systematic review of the literature on multidisciplinary rounds to design information systems. *Journal of the American Medical Informatics Association: JAMIA*, 13, 267–278. PMID 16501176.
- Gusfield, D. (1997). *Algorithms on strings, trees and sequences: Computer science and computational biology*. Cambridge: Cambridge University Press.
- Haddow, G., Bruce, A., Sathanandam, S., & Wyatt, J. C. (2011). ‘Nothing is really safe’: A focus group study on the processes of anonymizing and sharing of health data for research purposes. *Journal of Evaluation in Clinical Practice*, 17, 1140–1146.
- Hagen, P. T., Turner, D., Daniels, L., & Joyce, D. (1998). Very large-scale distributed scanning solution for automated entry of patient information. *TEPR Proceedings (Toward an Electronic Patient Record)*, 1, 228–232.
- Hagglund, M., Chen, R., & Koch, S. (2011). Modeling shared care plans using CONTsys and openEHR to support shared homecare of the elderly. *Journal of the American Medical Informatics Association: JAMIA*, 18(1), 66–69.
- Hahn, U., Romacker, M., & Schulz, S. (1999). Discourse structures in medical reports – watch out! the generation of referentially coherent and valid text knowledge bases in the MEDSYNDIKATE system. *International Journal of Medical Informatics*, 53(1), 1–28.
- Hahn, U., Romacker, M., & Schulz, S. (2002). MEDSYNDIKATE: A natural language system for the extraction of medical information from finding reports. *International Journal of Medical Informatics*, 67(1/3), 63–74.
- Haislmaier, E.F. (2006). *Health care information technology: getting the policy right*. Available at <http://www.heritage.org/Research/Reports/2006/06/Health-Care-Information-Technology-Getting-the-Policy-Right>. Accessed 17 Dec 2012.
- Halamka, J. D. (2010). Making the most of federal health information technology regulations. *Health Affairs (Millwood)*, 29(4), 596–600.
- Halamka, J. D., & Safran, C. (1998). CareWeb: A web-based medical record for an integrated healthcare delivery system. *Proceedings of Medinfo 1998, Part 1*, 36–39.
- Halamka, J. D., Mandl, K. D., & Tang, P. C. (2008). Early experiences with personal health records. *Journal of the American Medical Informatics Association: JAMIA*, 15(1), 1–7.
- Hamburg, M. A., & Collins, F. S. (2010). The path to personalized medicine. *The New England Journal of Medicine*, 363(4), 301–304.
- Han, Y. Y., Carcillo, J. A., Venkataraman, S. T., Clark, R. S. B., Watson, R. S., Nguyen, T. C., Bayir, H., & Orr, R. A. (2005). Unexpected increased mortality after implementation of a commercially sold computerized physician order entry system. *Pediatrics*, 116(6), 1506–1512.
- Hansell, D. M., Bankier, A. A., et al. (2008). Fleischner society: Glossary of terms for thoracic imaging. *Radiology*, 246(3), 697–722.
- Hansen, L. K., Nielsen, F. A., et al. (1999). Lyngby – modeler’s Matlab toolbox for spatio-temporal analysis of functional neuroimages. *NeuroImage*, 9(6), S241.
- Hansen, N. T., Brunak, S., & Altman, R. B. (2009). Generating genome-scale candidate gene lists for pharmacogenomics. *Clinical Pharmacology and Therapeutics*, 86, 183–189.
- Haralick, R. M. (1988). *Mathematical morphology*. Seattle: University of Washington.
- Haralick, R. M., & Shapiro, L. G. (1992). *Computer and robot vision*. Reading: Addison-Wesley.

- Harkema, H., Dowling, J. N., Thornblad, T., & Chapman, W. W. (2009). ConText: An algorithm for determining negation, experienter, and temporal status from clinical reports. *Journal of Biomedical Informatics*, 42(5), 839–851.
- Harmonizing State Privacy Law Collaborative. (2009). *Harmonizing state privacy law. Office of the National Coordinator of Health Information Technology*. Washington, DC.
- Harney, A. S., & Meade, T. J. (2010). Molecular imaging of in vivo gene expression. *Future Medicinal Chemistry*, 2(3), 503–519.
- Harris, Z. 1982. A grammar of English on mathematical principles. Wiley New York.
- Harris, M. A. et al., for the Gene Ontology Consortium. (2004). The Gene Ontology (GO) database and informatics resource. *Nucleic Acids Research*, 32 (Database issue) D258-6.
- Harris, Z. (1991). *A theory of language and information – a mathematical approach*. New York: Oxford University Press.
- Harris Interactive. (2007). *Many U.S. adults are satisfied with use of their personal health records*. Available at: <http://www.harrisinteractive.com/vault/Harris-Interactive-Poll-Research-Health-Privacy-2007-03.pdf>. Accessed 17 Dec 2012.
- Harris, Z., Gottfried, M., Ryckman, T., Mattick, P., Daladier, A., Harris, T., & Harris, S. (1989). *The form of information in science – analysis of an immunology sublanguage*. Dordrecht: Kluwer Academic.
- Harris, T.W., Lee, R., Schwarz, E., et al. (2003) WormBase: a cross-species database for comparative genomics. *Nucleic Acids Research*, 31:133–137. Available at <http://www.wormbase.org>
- Harris, P. A., Taylor, R., Thielke, R., Payne, J., Gonzalez, N., & Conde, J. G. (2009). Research electronic data capture (REDCap)—a metadata-driven methodology and workflow process for providing translational research informatics support. *Journal of Biomedical Informatics*, 42(2), 377–381.
- Harrison, M. I., Koppel, R., & Bar-Lev, S. (2007). Unintended consequences of information technologies in health care—an interactive sociotechnical analysis. *Journal of the American Medical Informatics Association: JAMIA*, 14(5), 542–549.
- Hart, J., McBride, A., Blunt, D., Gishen, P., & Strickland, N. (2010). Immediate and sustained benefits of a “total” implementation of speech recognition reporting. *The British Journal of Radiology*, 83(989), 424–427.
- Harter, S. (1992). Psychological relevance and information science. *Journal of the American Society for Information Science*, 43, 602–615.
- Hartung, C., Anokwa, Y., Brunette, W., Lerer, A., Tseng, C., & Borriello, G. (2010). Open data kit: Tools to build information services for developing regions. *International Conference on Information and Communication Technologies and Development (ICTD2010) Proceedings*. <http://www.gg.rhul.ac.uk/ict4d/ictd2010/papers/ICTD2010%20Hartung%20et%20al.pdf>. Accessed 2 Jan 2012.
- Hartzband, P., & Groopman, J. (2008). Off the record—avoiding the pitfalls of going electronic. *The New England Journal of Medicine*, 358(16), 1656–1658.
- Hasan, K. M., Walimuni, I. S., et al. (2010). A review of diffusion tensor magnetic resonance imaging computational methods and software tools. *Computers in Biology and Medicine*, 41(12), 1062–1072.
- Hassan, E., Badawi, O., Weber, R. J., & Cohen, H. (2010). Using technology to prevent adverse drug events in the intensive care unit. *Critical Care Medicine*, 38(6 Suppl), S97–S105. PMID 20502181.
- Hassol, A., Walker, J. M., Kidder, D., Rokita, K., Young, D., Pierdon, S., et al. (2004). Patient experiences and attitudes about access to a patient electronic health care record and linked web messaging. *Journal of the American Medical Informatics Association: JAMIA*, 11(6), 505–513.
- Hastie, T., Tibshirani, R., et al. (2009). *The elements of statistical learning: Data mining, inference, and prediction*. New York: Springer.
- Haug, P. J., Ranum, D. L., & Frederick, P. R. (1990). Computerized extraction of coded findings from free-text radiology reports. *Radiology*, 174, 543–548.
- Haug, P., Koehler, S., Lau, L.M., Wang, P., Rocha, R., & Huff, S. (1994). A natural language understanding system combining syntactic and semantic techniques. *Proceedings of the Annual Symposium on Computer Applications in Medical Care*, 247–251.
- Haupt, M. T., Bekes, C. E., Brill, R. J., Carl, L. C., Gray, A. W., Jastremski, M. S., Naylor, D. F., & Wedel, S. K. (2003). Guidelines on critical care services and personnel: Recommendations based on a system of categorization of these levels of care. *Critical Care Medicine*, 31, 2877–2883. PMID 14805541.
- Haynes, R. B. (2002). What kind of evidence is it that Evidence-Based Medicine advocates want health care providers and consumers to pay attention to? *BMC Health Services Research*. 2:3. <http://www.biomed-central.com/1472-6963/2/3>.
- Haynes, R.B. (Ed.) (2011). Computerized clinical decision support systems: how effective are they? [article collection] *Implementation Science*, 6, 87–108. Articles available at: <http://www.implementation-science.com/series/CCDSS>. Accessed 2 Jan 2012.
- Haynes, R., McKibbin, K., Walker, C., Ryan, N., Fitzgerald, D., & Ramsden, M. (1990). Online access to MEDLINE in clinical settings. *Annals of Internal Medicine*, 112, 78–84.
- Haynes, R., Wilczynski, N., McKibbin, K., Walker, C., & Sinclair, J. (1994). Developing optimal search strategies for detecting clinically sound studies in MEDLINE. *Journal of the American Medical Informatics Association: JAMIA*, 1, 447–458.
- Haynes, R. B., Wilczynski, N. L., & Computerized Clinical Decision Support System (CCDSS) Systematic Review Team. (2010). Effects of computerized clinical decision support systems on practitioner performance and patient outcomes: Methods of a decision-maker-researcher partnership systematic review. *Implementation Science: IS*, 5, 12.



- Hazlehurst, B., McMullen, C., Gorman, P., & Sittig, D. (2003). How the ICU follows orders: Care delivery as a complex activity system. *AMIA Annual Symposium Proceedings, 2003*, 284–288. D030003599 [pii].
- Hazlehurst, B., McMullen, C. K., & Gorman, P. N. (2007). Distributed cognition in the heart room: how situation awareness arises from coordinated communications during cardiac surgery. *Journal of Biomedical Informatics*, 40(5), 539–551. doi:10.1016/j.jbi.2007.02.001. S1532-0464(07)00008-1 [pii].
- Health Information Technology for Economic and Clinical Health (HITECH) Act, Title XIII of Division A and Title IV of Division B of the American Recovery and Reinvestment Act of 2009 (ARRA), (2009).
- Health IT Standards Committee. (2011). *Recommendations to ONC on the assignment of code sets to clinical concepts [data elements] for use in quality measures*. [Letter]. Retrieved from [http://www.healthit.gov/sites/default/files/standards-certification/HITSC\\_CQMWG\\_VTF\\_Transmit\\_090911.pdf](http://www.healthit.gov/sites/default/files/standards-certification/HITSC_CQMWG_VTF_Transmit_090911.pdf). Accessed 3 Jan 2012.
- Health Record Banking Alliance. (2006). <http://www.healthbanking.org>. Accessed 17 Dec 2012.
- Health Record Banking Alliance. (2008). *Principles and fact sheet*. Available at <http://www.healthbanking.org/docs/HRBAPrinciples & Fact Sheet 2008 FINAL.pdf>. Accessed 17 Dec 2012.
- Health Record Banking Alliance. (2012). *Health record banking: a foundation for myriad health information sharing models*. Available at <http://www.healthbanking.org/docs/HRBABusiness Model White Paper Dec 2012.pdf>. Accessed 17 Dec 2012.
- Health Record Banking Alliance [2013]. A Proposed National Infrastructure for HIE Using Personally Controlled Records. Available at <http://www.healthbanking.org/docs/HRBA%20Architecture%20White%20Paper%20Jan%202013.pdf>. Accessed 7 Sep 2013.
- Heath, B., Salerno, R., Hopkins, A., et al. (2009). Pediatric critical care telemedicine in rural underserved emergency departments. *Pediatric Critical Care Medicine*, 10, 588–591.
- Heckerman, D., & Horvitz, E. (1986). The myth of modularity in rule-based systems for reasoning with uncertainty. In J. Lemmer & L. Kanal (Eds.), *Uncertainty in artificial intelligence 2*. Amsterdam: North Holland.
- Heikamp, K., & Bajorath, J. (2011). Large-scale similarity search profiling of ChEMBL compound data sets. *Journal of Chemical Information and Modeling*, 51, 1831–1839.
- Heiss, W. D., & Phelps, M. E. (Eds.). (1983). *Positron emission tomography of the brain*. Berlin/New York: Springer.
- Held, K., Rota Kops, E., et al. (1997). Markov random field segmentation of brain MR images. *IEEE Transactions on Medical Imaging*, 16(6), 878–886.
- Hellmich, M., Abrams, K. R., & Sutton, A. J. (1999). Bayesian approaches to meta-analysis of ROC curves. *Medical Decision Making*, 19, 252–264.
- Henchley, A. (2003). Understanding Version 3. *A primer on the HL7 Version 3 Communication Standard*. Munich: Alexander Moench Publishing Co. Easily readable overview of HL7 Version 3 messaging standard.
- Henderson, M. (2003). *HL7 messaging*. Silver Spring: OTEch Inc.
- Hennessy, J. L., & Patterson, D. A. (1996). *Computer architecture: A quantitative approach* (2nd ed.). San Francisco: Morgan Kaufmann.
- Henriksen, K. (2008). *Understanding adverse events: A human factors framework*. In H. R.G. (Ed.), *patient safety and quality: An evidence-based handbook for nurses* (pp. 84–101). Rockville: Agency for Healthcare Research and Quality.
- Henriksen, K. (2010). Partial truths in the pursuit of patient safety. *BMJ Quality & Safety Health Care*, 19(3), i3–i7.
- Henry (Bakken), S. B., & Mead, C. N. (1997). Nursing classification systems: Necessary but not sufficient for representing “what nurses do” for inclusion in computer-based patient record systems. *Journal of the American Medical Informatics Association: JAMIA*, 4(3), 222–232.
- Herasevich, V., Yilmaz, M., Khan, H., Hubmayr, R. D., & Gajic, O. (2009). Validation of an electronic surveillance system for acute lung injury. *Intensive Care Medicine*, 35, 1018–1023. PMID 19280175.
- Herasevich, V., Pickering, B. W., Dong, Y., Peters, S. G., & Gajic, O. (2010). Informatics infrastructure for syndromic surveillance, decision support, reporting, and modeling of critical illness. *Mayo Clinic Proceedings*, 85, 247–254. PMID 21194152.
- Herasevich, V., Afessa, B., & Pickering, B. W. (2011). Sepsis in critically ill patients with trauma. *Critical Care Medicine*, 39, 876–879. PMID 21613830.
- Hersh, W. (1994). Relevance and retrieval evaluation: Perspectives from medicine. *Journal of the American Society for Information Science*, 45, 201–206.
- Hersh, W. (1999). “A world of knowledge at your fingertips”: the promise, reality, and future directions of on-line information retrieval. *Academic Medicine*, 74, 240–243.
- Hersh, W. (2001). Interactivity at the text retrieval conference (TREC). *Information Processing and Management*, 37, 365–366.
- Hersh, W. (2004). Healthcare information technology: Progress and barriers. *JAMA : The Journal of the American Medical Association*, 292, 2273–2274.
- Hersh, W. (2009). *Information retrieval: A health and biomedical perspective* (3rd ed.). New York: Springer.
- Hersh, W., & Hickam, D. (1995). An evaluation of interactive Boolean and natural language searching with an on-line medical textbook. *Journal of the American Society for Information Science*, 46, 478–489.
- Hersh, W., & Hickam, D. (1998). How well do physicians use electronic information retrieval systems? A framework for investigation and review of the literature. *Journal of the American Medical Association*, 280, 1347–1352.

- Hersh, W., & Rindfleisch, T. (2000). Electronic publishing of scholarly communication in the biomedical sciences. *Journal of the American Medical Informatics Association: JAMIA*, 7, 324–325.
- Hersh, W., & Voorhees, E. (2009). TREC genomics special issue overview. *Information Retrieval*, 12, 1–15.
- Hersh, W., Pentecost, J., & Hickam, D. (1996). A task-oriented approach to information retrieval evaluation. *Journal of the American Society for Information Science*, 47, 50–56.
- Hersh, W., Crabtree, M., Hickam, D., et al. (2002). Factors associated with success for searching MEDLINE and applying evidence to answer clinical questions. *Journal of the American Medical Informatics Association: JAMIA*, 9, 283–293.
- Hersh, W., Bhupatiraju, R., Ross, L., Johnson, P., Cohen, A., & Kraemer, D. (2006). Enhancing access to the bibliome: the TREC 2004 Genomics Track. *Journal of Biomedical Discovery and Collaboration*, 1, 3. Retrieved from <http://www.j-biomed-discovery.com/content/1/1/3>
- Hersh, W., Muller, H., et al. (2009). The ImageCLEFmed medical image retrieval task test collection. *Journal of Digital Imaging*, 22(6), 648–655.
- Hey, T., Tansley, S., & Tolle, K. (Eds.). (2009). *The fourth paradigm: Data-intensive scientific discovery*. Redmond: Microsoft Research.
- Hickam, D. H., Shortliffe, E. H., Bischoff, M. B., Scott, A. C., Jacobs, C. D. (1985). The treatment advice of a computer-based cancer chemotherapy protocol advisor. *Annals of Internal Medicine*, 103(6 Pt 1), 928–936.
- Hilgard, E. R., & Bower, G. H. (1975). *Theories of learning* (4th ed.). Englewood Cliffs: Prentice-Hall.
- Hillestad, R., Bigelow, J., Bower, A., Girosi, F., Meili, R., Scoville, R., & Taylor, R. (2005). Can electronic medical record systems transform health care? Potential health benefits, savings, and costs. *Health Affairs*, 24, 1103–1117.
- Himmelstein, D. U., & Woolhandler, S. (2010). Obama's reform: no cure for what ails us. *BMJ*, 340, c1778.
- Hinshaw, K. P., Poliakov, A. V., et al. (2002). Shape-based cortical surface segmentation for visualization brain mapping. *NeuroImage*, 16(2), 295–316.
- Hirschman, L., Yeh, A., Blaschke, C., & Valencia, A. (2005). Overview of BioCreAtIvE: Critical assessment of information extraction for biology. *BMC Bioinformatics*, 6(Suppl 1), S1.
- Hirschorn, D., & Dreyer, K. (2006, April 27–30). *Comparison of consumer grade displays to medical grade displays for the primary interpretation of radiography*. Paper presented at the Society for Computer Applications in Radiology, Austin.
- Hobbs, J. R., Appelt, D. E., Bear, J., Israel, D., Kameyama, M., Stickel, M., et al. (1996). FASTUS: A cascaded finite-state transducer for extracting information from natural-language text. In *Finite state devices for natural language processing*. Cambridge, MA: MIT Press.
- Hoffman, R. R. (Ed.). (1992). *The psychology of expertise: Cognitive research and empirical AI*. Mahwah: Lawrence Erlbaum Associates.
- Hoffman, M. A. (2007). The genome-enabled electronic medical record. *Journal of Biomedical Informatics*, 40, 44–46.
- Hoffman, J. M., & Gambhir, S. S. (2007). Molecular imaging: The vision and opportunity for radiology in the future. *Radiology*, 244(1), 39–47.
- Hoffman, M. A., & Williams, M. S. (2011). Electronic medical records and personalized medicine. *Human Genetics*, 130(1), 33–39.
- Hoffman, R. R., Shadbolt, N. R., Burton, A. M., & Klein, G. (1995). Eliciting knowledge from experts – a methodological analysis. *Organizational Behavior and Human Decision Processes*, 62(2), 129–158.
- Hohne, K., Bomans, M., et al. (1990). 3-D visualization of tomographic volume data using the generalized voxel model. *The Visual Computer*, 6(1), 28–36.
- Hohne, K.H., Bomans, M., et al. (1992). A volume-based anatomical atlas. *IEEE Computer Graphics and Applications*, 72–78.
- Hohne, K. H., Pflesser, B., et al. (1995). A new representation of knowledge concerning human anatomy and function. *Nature Medicine*, 1(6), 506–510.
- Holden, R. J., & Karsh, B. (2007). A review of medical error reporting system design considerations and a proposed cross-level systems research framework. *Human Factors*, 49, 257–276.
- Holford, N. H., Kimko, H. C., Monteleone, J. P., & Peck, C. C. (2000). Simulation of clinical trials. *Annual Review of Pharmacology and Toxicology*, 40, 209–234.
- Hollingsworth, J. C., Chisholm, C. D., Giles, B. K., Cordell, W. H., & Nelson, D. R. (1998). How do physicians and nurses spend their time in the emergency department? *Annals of Emergency Medicine*, 31, 87–91.
- Holroyd-Leduc, J. M., Lorenzetti, D., Straus, S. E., Sykes, L., & Quan, H. (2011). The impact of the electronic medical record on structure, process and outcomes within primary care: A systematic review of the evidence. *Journal of the American Medical Informatics Association: JAMIA*, 18, 732–737.
- Homer, N., Szelinger, S., Redman, M., et al. (2008). Resolving individuals contributing trace amounts of DNA to highly complex mixtures using high-density SNP genotyping microarrays. *PLoS Genetics*, 4(8), e1000167.
- Homerova, D., Sprusansky, O., Kutejova, E., & Kormanec, J. (2002). Some features of DNA-binding proteins involved in the regulation of the *Streptomyces aureofaciens* gap gene, encoding glyceraldehyde-3-phosphate dehydrogenase. *Folia Microbiologica (Praha)*, 47, 311–317.
- Hood, L., & Friend, S. H. (2011). Predictive, personalized, preventive, participatory (P4) cancer medicine. *Nature Reviews. Clinical Oncology*, 8, 184–187.
- Horii, S.C. (1996). *Image acquisition: Sites, technologies and approaches*. In Greenes, R.A. and Bauman,

- R.A. (eds.) Imaging and information management: computer systems for a changing health care environment. *The Radiology Clinics of North America*, 34(3):469-494.
- Horrigan, J. B., Rainie, L., & Fox, S. (2001). *Online communities: Networks that nurture long-distance relationships and local ties*. Washington, D.C: Pew Internet & American Life Project.
- Horsky, J., Kaufman, D. R., & Patel, V. L. (2003a). The cognitive complexity of a provider order entry interface. *AMIA Annual Symposium Proceedings*, 294–298. doi:D030003723 [pii].
- Horsky, J., Kaufman, D. R., Oppenheim, M. I., & Patel, V. L. (2003b). A framework for analyzing the cognitive complexity of computer-assisted clinical ordering. *Journal of Biomedical Informatics*, 36(1-2), 4–22.
- Horsky, J., Kuperman, G. J., & Patel, V. L. (2005). Comprehensive analysis of a medication dosing error related to CPOE. *Journal of the American Medical Informatics Association: JAMIA*, 12(4), 377–382. doi:10.1197/jamia.M1740. M1740 [pii].
- House, E. (1980). *Evaluating with validity*. San Francisco: Sage.
- Hoy, J. D., & Hyslop, A. Q. (1995). Care planning as a strategy to manage variation in practice: From care planning to integrated person-based record. *Journal of the American Medical Informatics Association: JAMIA*, 2(4), 260–266.
- Hripsak, G., & Wilcox, A. (2002). Reference standards, judges, and comparison subjects: Roles for experts in evaluating system performance. *Journal of the American Medical Informatics Association: JAMIA*, 9(1), 1–15.
- Hripsak, G., Ludemann, P., Pryor, T. A., Wigertz, O. B., & Clayton, P. D. (1994). Rationale for the Arden syntax. *Computers and Biomedical Research*, 27, 291–324.
- Hripsak, G., Friedman, C., Alderson, P. O., DuMouchel, W., Johnson, S. B., & Clayton, P. D. (1995). Unlocking data from narrative reports: A study of natural language processing. *Annals of Internal Medicine*, 122(9), 681–688.
- Hripsak, G., Kuperman, G. J., et al. (1998). Extracting findings from narrative reports: Software transferability and sources of physician disagreement. *Methods of Information in Medicine*, 37(1), 1–7.
- Hripsak, G., Cimino, J. J., & Sengupta, S. (1999). WebCIS: Large scale deployment of a web-based clinical information system. *Proceedings of the Annual AMIA Symposium, 1999*, 804–808.
- Hripsak, G., Vawdrey, D., Fred, M., & Bostwick, S. (2011). Use of electronic clinical documentation: Time spent and team interactions. *Journal of the American Medical Informatics Association: JAMIA*, 18(1), 112–117.
- Hripsak, G., Soulakis, ND., Li, L., Morrison, FP., Lai, AM., Friedman, C., Calman, NS., Mostashari, F. (2009) Syndromic surveillance using ambulatory electronic health records. *Journal of the American Medical Informatics Association: JAMIA*, 16(3):354–61. doi: 10.1197/jamia.M2922. Epub 2009 Mar 4.
- Hsi-Yang Fritz, M., Leinonen, R., Cochrane, G., & Birney, E. (2011). Efficient storage of high throughput DNA sequencing data using reference-based compression. *Genome Research*, 21, 734–740.  
[http://healthit.hhs.gov/portal/server.pt/gateway/PTARGS\\_0\\_12811\\_955546\\_0\\_0\\_18/HITSC\\_CQMWG\\_VTF\\_Transmit\\_090911.pdf](http://healthit.hhs.gov/portal/server.pt/gateway/PTARGS_0_12811_955546_0_0_18/HITSC_CQMWG_VTF_Transmit_090911.pdf)
- Hu, Z., Abramoff, M. D., et al. (2010a). Automated segmentation of neural canal opening and optic cup in 3D spectral optical coherence tomography volumes of the optic nerve head. *Investigative Ophthalmology and Visual Science*, 51(11), 5708–5717.
- Hu, Z., Niemeijer, M., et al. (2010b). Automated segmentation of 3-D spectral OCT retinal blood vessels by neural canal opening false positive suppression. *Medical Image Computing and Computer Assisted Intervention*, 13(Pt 3), 33–40.
- Hudson, D. L., & Cohen, M. E. (2009). Multidimensional medical decision making. *Conference Proceedings – IEEE Engineering in Medicine and Biology Society*, 1, 3405–3408.
- Hudson, H. E., & Parker, E. B. (1973). Medical communication in Alaska by satellite. *The New England Journal of Medicine*, 289, 1351–1356.
- Hudson, K. L., Holohan, M. K., & Collins, F. S. (2008). Keeping pace with the times—the Genetic Information Nondiscrimination Act of 2008. *The New England Journal of Medicine*, 358, 2661–2663.
- Humphreys, B. L. (Ed.). (1990). *UMLS knowledge sources – first experimental edition documentation*. Bethesda: National Library of Medicine.
- Humphreys, B., Lindberg, D., Schoolman, H., & Barnett, G. (1998). The unified medical language system: An informatics research collaboration. *Journal of the American Medical Informatics Association: JAMIA*, 5, 1–11.
- Humphreys, K., Demetriou, G., & Gaizauskas, R. (2000). Two applications of information extraction to biological science journal articles: enzyme interactions and protein structures. *Proceedings of the Pacific Symposium on Biocomputing*, 505–516.
- Hunt, D. L., Haynes, R. B., et al. (1998). Effects of computer-based clinical decision support systems on physician performance and patient outcomes: A systematic review. *JAMA : The Journal of the American Medical Association*, 280(15), 1339–1346.
- Hutchins, E. (1995). *Cognition in the wild*. Cambridge, MA: MIT Press.
- Iezzoni, L. I. (1990). Using administrative diagnostics data to assess the quality of hospital care: Pitfalls and potential of ICD-9-CM. *International Journal of Technology Assessment in Health Care*, 6(2), 272–281.
- Imai, K., Kricka, L. J., & Fortina, P. (2011). Concordance study of 3 direct-to-consumer genetic-testing services. *Clinical Chemistry*, 57(3), 518–521.
- Imhoff, M., & Kuhls, S. (2006). Alarm algorithms in critical care monitoring. *Anesthesia and Analgesia*, 102, 1525–1537. PMID 16632837.
- Institute of Medicine. (1988). *The future of public health*. Washington, DC: National Academy Press.

- Institute of Medicine. (1991). *The computer-based patient record: An essential technology for patient care*. Washington, DC: National Academy Press.
- Institute of Medicine. (1999). *Committee on quality of health care in America. To Err is human: Building a safer health care system*. Washington, DC: National Academy Press.
- Institute of Medicine. (2003). *Patient safety: Achieving a new standard for care*. Washington, D.C.: National Academy Press.
- Institute of Medicine. (2007). *The learning healthcare system: Workshop summary*. Washington, DC: National Academies Press.
- Institute of Medicine. (2011a). *Engineering a learning healthcare system: A look at the future*. Washington, DC: National Academies Press.
- Institute of Medicine. (2011b). *Health IT and patient safety: Building safer systems for better care*. Washington: The National Academies Press.
- Institute of Medicine. (2011c). *Digital infrastructure for the learning health system: The foundation for continuous improvement in health and healthcare* (Workshop series summary). Washington: The National Academies Press.
- Institute of Medicine. (2012). *Best care at lower cost: The path to continuously learning health care in America*. Washington, DC: National Academies Press.
- Institute of Medicine (IOM) Committee on Improving the Patient Record. (1997). *The Computer-Based Patient Record: An essential technology for healthcare* (revised edition) Dick, R.S., Steen E.B., & Detmer, D.E. (Eds.), Washington: National Academy Press. Available at: <http://www.iom.edu/Reports/1997/The-Computer-Based-Patient-Record-An-Essential-Technology-for-Health-Care-Revised-Edition.aspx>. Accessed 2 Jan 2012.
- Institute of Medicine (IOM) Committee on Improving the Patient Record. (2001). *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, D.C.: National Academy Press. Available at: <http://www.iom.edu/Reports/2001/Crossing-the-Quality-Chasm-A-New-Health-System-for-the-21st-Century.aspx>. Accessed 2 Jan 2012.
- International Anatomical Nomenclature Committee. (1989). *Nomina anatomica*. Edinburgh: Churchill Livingstone.
- International Classification of Primary Care. (1998). Singapore: World Organization of National Colleges, Academies and Academic Associations of General Practitioners/Family Physicians.
- International Health Terminology Standards Development Organization. (2011). *SNOMED CT (Systematized Nomenclature of Medicine-Clinical Terms)*. Retrieved August 31, 2011, from <http://www.ihtsdo.org/>
- International Standards Organization 1087. (2000). *Terminology work – Vocabulary*. (ISO 1087–1:2000): International Standards Organization. Geneva, Switzerland.
- International Standards Organization. (1987). *Information processing systems-Concepts and terminology for the conceptual schema and the information base*. (ISO TR 9007:1987): International Standards Organization. Geneva, Switzerland.
- InTouch Health. Available at: <http://www.intouchhealth.com>. Accessed 6 May 2011.
- Irwin, J. J., & Shoichet, B. K. (2005). ZINC—a free database of commercially available compounds for virtual screening. *Journal of Chemical Information and Modeling*, 45, 177–182.
- Isaac, T., Weissman, J., Davis, R., Massagli, M., Cyrulik, A., Sands, D., & Weingart, S. (2009). Overrides of medication alerts in ambulatory care. *Archives of Internal Medicine*, 169(3), 305.
- Issel-Tarver, L., Christie, K.R., Dolinski, K., Andrada, R., Balakrishnan, R., Ball, C.A., Binkley, G., Dong, S., Dwight, S.S., Fisk, D.G., Harris, M., Schroeder, M., Sethuraman, A., Tse, K., Weng, S., Botstein, D., & Cherry, J.M. (2001). Saccharomyces genome database. *Methods Enzymol*, 350, 329–346. Available at <http://www.yeastgenome.org/>
- Ivers, M.T., Timson, G.F., von Blankensee, H., Whitfield, G., Keltz, P.D., & Pfeil, C.N. (1983). Large scale implementation of compatible hospital computer systems within the Veterans Administration. *Proceedings of the Sixth Annual Symposium on Computer Applications in Medical Care*, 53–56.
- Jadad, A. (1999). Promoting partnerships: Challenges for the internet age. *British Medical Journal*, 319, 761–764.
- James, B. C., & Savitz, L. A. (2011). How intermountain trimmed health care costs through robust quality improvement efforts. *Health Affairs (Millwood)*, 30(6), 1185–1191.
- Janamanchi, B., Katsamakas, E., Raghupathi, W., & Gao, W. (2009). The state and profile of open source software projects in health and medical informatics. *International Journal of Medical Informatics*, 78(2009), 457–472.
- Jaspers, M. W. (2009). A comparison of usability methods for testing interactive health technologies: Methodological aspects and empirical evidence. *International Journal of Medical Informatics*, 78(5), 340–353.
- Jaspers, M. W., Smeulers, M., Vermeulen, H., & Peute, L. W. (2011). Effects of clinical decision-support systems on practitioner performance and patient outcomes: A synthesis of high-quality systematic review findings. *Journal of the American Medical Informatics Association: JAMIA*, 18(3), 327–334.
- Jenders, R. A. (2008). Suitability of the Arden syntax for representation of quality indicators. *AMIA Annual Symposium Proceedings*, 6, 991.
- Jenders, R.A., & Shah, A. (2001). Challenges in using the Arden Syntax for computer-based nosocomial infection surveillance. *Proceedings of the AMIA Symposium*, 289–293.
- Jenssen, T.K., & Vinterbo, S. (2000). A set-covering approach to specific search for literature about human genes. *Proceedings of the AMIA Symposium*, 384–388.
- Jewett, A. I., Huang, C. C., & Ferrin, T. E. (2003). MINRMS: An efficient algorithm for determining protein structure similarity using root-mean-squared-distance. *Bioinformatics*, 19(5), 625–634.

- Jha, A. K., Doolan, D., Grandt, D., Scott, T., & Bates, D. W. (2008). The use of health information technology in seven nations. *International Journal of Medical Informatics*, 77(12), 848–854.
- Jha, A. K., DesRoches, C. M., Campbell, E. G., Donelan, K., Rap, S. R., Ferris, T. G., Shields, A., Rosenbaum, S., & Blumenthal, D. (2009). Use of electronic health records in U.S. Hospitals. *The New England Journal of Medicine*, 360, 1628–1638. PMID 19321858.
- Jha, A. K., Prasopa-Plaizier, N., Larizgoitia, I., & Bates, D. W. (2010). Patient safety research: An overview of the global evidence. *Quality & Safety in Health Care*, 19(1), 42–47. doi:10.1136/qshc.2008.029165.
- Jiang, Y.-G., Ngo C.-W., et al. (2007). Towards optimal bag-of-features for object categorization and semantic video retrieval. In *Proceedings of the 6th ACM international conference on Image and video retrieval* (pp. 494–501). Amsterdam: ACM.
- Jimison, H. B., Pavel, M., Larimer, N., & Mullen, P. (2007). A general architecture for computer based health coaching. In *Proceedings of the International Conference on Technology & Aging*, Toronto.
- Johnson, S. B. (2000). Natural language processing in biomedicine. In J. D. Bronzino (Ed.), *The handbook of biomedical engineering* (p. 188-1-6). Boca Raton: CRC Press.
- Johnson, K.A., & Becker, J.A. (2001). *The whole brain atlas*. From <http://www.med.harvard.edu/AANLIB/home.html>
- Johnson, S.B., Friedman, C., Cimino, J.J., Clark, T., Hripcsak, G., & Clayton, P.D. (1991). Conceptual data model for a central patient database. *Proceedings of the Symposium on Computer Applications in Medical Care*, 381–385.
- Johnson, P.D., Tu, S.W., Musen, M.A., & Purves, I. (2001a). A virtual medical record for guideline-based decision support. In *Proceedings of the AMIA Annual Symposium*, 294–298, Washington, DC.
- Johnson, K. B., Ravert, R. D., & Everton, A. (2001c). Hopkins teen central: Assessment of an internet-based support system for children with cystic fibrosis. *Pediatrics*, 107(2), E24.
- Johnson, S. B., Bakken, S., Dine, D., Hyun, S., Mendonca, E., Morrison, F., et al. (2008). An electronic health record based on structured narrative. *Journal of the American Medical Informatics Association: JAMIA*, 15(1), 54–64.
- Johnston, D., Pan, E., Walker, J., Bates, D. W., & Middleton, B. (2003). *The value of computerized provider order entry in ambulatory settings*. Boston: Center for Information Technology Leadership, Partners Healthcare.
- Jollis, J. G., Ancukiewicz, M., DeLong, E. R., Pryor, D. B., Muhlbaier, L. H., & Mark, D. B. (1993). Discordance of databases designed for claims payment versus clinical information systems. Implications for outcomes research. *Annals of Internal Medicine*, 119(8), 844–850.
- Jones, S. S., Heaton, P. S., Rudin, R. S., & Schneider, E. C. (2012). Unraveling the IT productivity paradox — lessons for health care. *The New England Journal of Medicine*, 366(24), 2243–2245.
- Jonquet, C., Musen, M. A., & Shah, N. H. (2010). Building a biomedical ontology recommender web service. *Journal of Biomedical Semantics*, 1(Suppl 1), S1.
- Jonquet, C., LePendu, P., Falconer, S., Coulet, A., Noy, N. F., Musen, M. A., & Shah, N. H. (2011). NCBO resource index: Ontology-based search and mining of biomedical resources. *Journal of Web Semantics: Science, Services and Agents on the World Wide Web*, 9(3), 316–324.
- Jordan, D. A., McKeown, K. R., Concepcion, K. J., Feiner, S. K., & Hatzivassiloglou, V. (2001). Generation and evaluation of intraoperative inferences for automated health care briefings on patient status after bypass surgery. *Journal of the American Medical Informatics Association: JAMIA*, 8(3), 267–280.
- Joshi-Tope, G., Gillespie, M., Vastrik, I., et al. (2005). Reactome: A knowledgebase of biological pathways. *Nucleic Acids Research*, 33, D428–D432.
- Joyce, V. R., Barnett, P. G., Bayoumi, A. M., Griffin, S. C., Kyriakides, T. C., Yu, W., Sundaram, V., Holodniy, M., Brown, S. T., Cameron, W., Youle, M., Sculpher, M., Anis, A. H., & Owens, D. K. (2009). Health-related quality of life in a randomized trial of antiretroviral therapy for advanced HIV disease. *Journal of the Acquired Immunodeficiency Syndrome*, 50, 27–36.
- Joyce, V. R., Barnett, P. G., Chow, A., Bayoumi, A. M., Griffin, S. C., Sun, H., Holodniy, M., Brown, S. T., Cameron, D. W., Youle, M., Sculpher, M., Anis, A. H., & Owens, D. K. (2012). Effect of treatment interruption and intensification of antiretroviral therapy on health-related quality of life in patients with advanced HIV: A randomized controlled trial. *Medical Decision Making*, 32, 70–82.
- Juni, P., Altman, D. G., & Egger, M. (2001). Systematic reviews in health care: Assessing the quality of controlled clinical trials. *British Medical Journal*, 323(7303), 42–46.
- Jurafsky, D., & Martin, J. H. (2009). *Speech and language processing. An introduction to natural language processing, computational linguistics and speech recognition*. Upper Saddle River: Prentice Hall.
- Jurie, F., & Triggs, B. (2005). *Creating efficient codebooks for visual recognition*. Proceedings of the tenth IEEE international conference on Computer Vision (ICCV'05) Volume 1 – Volume 01, IEEE Computer Society: 604–610 %@ 600-7695-2334-X-7601.
- Kaelber, D., & Pan, E.C. (2008). The value of personal health record (phr) systems. *AMIA Annual Symposium Proceedings*, 343–347.
- Kaelber, D. C., et al. (2008). *The value of personal health records. Center for information technology leadership, partners healthcare (Boston)* (p. 52). Chicago: Health Information Management and Systems Society.
- Kahn, J. M. (2011a). The use and misuse of ICU telemedicine. *Editorial JAMA*, 305, 2176–2183. PMID 21576623.
- Kahn, S. D. (2011b). On the future of genomic data. *Science*, 331(6018), 728–729.

- Kahn, C. E., & Rubin, D. L. (2009). Automated semantic indexing of figure captions to improve radiology image retrieval. *Journal of the American Medical Informatics Association: JAMIA*, 16(3), 380–386.
- Kahn, C. E., Roberts, L. M., Shaffer, K. A., & Haddawy, P. (1997). Construction of a Bayesian network for mammographic diagnosis of breast cancer. *Computers in Biology and Medicine*, 27, 19–29.
- Kahn, C. E., Jr., Langlotz, C. P., et al. (2009). Toward best practices in radiology reporting. *Radiology*, 252(3), 852–856.
- Kane, B., & Sands, D. Z. (1998). Guidelines for the clinical use of electronic mail with patients. *Journal of the American Medical Informatics Association: JAMIA*, 5, 104–111.
- Kang, J. H., & Chung, J. K. (2008). Molecular-genetic imaging based on reporter gene expression. *Journal of Nuclear Medicine*, 49(Suppl 2), 164S–179S.
- Kang, M. J., Lee, C. G., Cho, S. J., et al. (2006). IFN-gamma-dependent DNA injury and/or apoptosis are critical in cigarette smoke-induced murine emphysema. *Proceedings of the American Thoracic Society*, 3, 517–518.
- Kaplan, B., & Harris-Salamone, K. D. (2009). Health IT success and failure: Recommendations from literature and an AMIA workshop. *Journal of the American Medical Informatics Association: JAMIA*, 16, 291–299.
- Kapur, T., Grimson, W. E., et al. (1996). Segmentation of brain tissue from magnetic resonance images. *Medical Image Analysis*, 1(2), 109–127.
- Karat, J. (1994). Workplace applications – tools for motivation and tools for control. *Information Processing '94*, Vol III, 53, 382–387.
- Karplus, M., & Weaver, D. L. (1976). Protein-folding dynamics. *Nature*, 260(5550), 404–406.
- Karr, J. R., Sanghvi, J. C., et al. (2012). A whole-cell computational model predicts phenotype from genotype. *Cell*, 150(2), 389–401.
- Karsh, B.-T., Weinger, M. B., Abbott, P. A., & Wears, R. L. (2010). Health information technology: Fallacies and sober realities. *Journal of the American Medical Informatics Association: JAMIA*, 17(6), 617–623.
- Kass, B. (2001). *Reducing and preventing adverse drug events to decrease hospital costs*. Research in Action, Issue 1. AHRQ Publication Number 01–0020. Available at <http://www.ahrq.gov/qual/aderia/aderia.htm>. Accessed 12 Aug 2011.
- Kass, M., Witkin, A., et al. (1987). Snakes: Active contour models. *International Journal of Computer Vision*, 1(4), 321–331.
- Kassirer, J.P., & Gorry, G.A. (1978). Clinical problem solving: A behavioral analysis. *Annals Int Med*, 89(2):245–255.
- Kastor, J. (2001). *Mergers of teaching hospitals in Boston, New York, and Northern California*. Ann Arbor: University of Michigan Press.
- Kato, P. M., & Beale, I. L. (2006). Factors affecting acceptability to young cancer patients of a psychoeducational video game about cancer. *Journal of Pediatric Oncology Nursing*, 23(5), 269–275.
- Kaufman, D. R., Patel, V. L., & Magder, S. (1996). The explanatory role of spontaneously generated analogies in a reasoning about physiological concepts. *International Journal of Science Education*, 18, 369–386.
- Kaufmann, A., Meltzer, M., & Schmid, G. (1997). The economic impact of a bioterrorist attack: Are prevention and post-attack intervention programs justifiable? *Emerging Infectious Diseases*, 3(2), 83–94.
- Kaufman, D. R., Patel, V. L., Hilliman, C., Morin, P. C., Pevzner, J., Weinstock, R. S., Starren, J. (2003). Usability in the real world: assessing medical information technologies in patients' homes. *J Biomed Inform*, 36(1-2), 45–60.
- Kaufman, D. R., Pevzner, J., Rodriguez, M., Cimino, J. J., Ebner, S., Fields, L., & Starren, J. (2009). Understanding workflow in telehealth video visits: Observations from the IDEATel project. *Journal of Biomedical Informatics*, 42(4), 581–592.
- Kaushal, R., Shojania, K. G., & Bates, D. W. (2003). Effects of computerized physician order entry and clinical decision support systems on medication safety: A systematic review. *Archives of Internal Medicine*, 163(12), 1409–1416.
- Kawamoto, K., Del Fiol, G., Strasberg, H.R., et al. (2010). Multi-national, multi-institutional analysis of clinical decision support data needs to inform development of the HL7 Virtual Medical Record standard. *AMIA Annual Symposium Proceedings*, 377–381.
- Keiser, M. J., Setola, V., Irwin, J. J., et al. (2009). Predicting new molecular targets for known drugs. *Nature*, 462, 175–181.
- Kelley, M. A., Angus, D., Chalfin, D. B., Crandall, E. D., Ingbar, D., Johanson, W., Medina, J., Sessler, C. N., & Vender, J. S. (2004). The critical care crisis in the united states: A report from the profession. *Chest*, 125, 1514–1517. PMID 15078767.
- Kemper, A. R., Trotter, T. L., Lloyd-Puryear, M. A., Kyler, P., Feero, W. G., & Howell, R. R. (2010). A blueprint for maternal and child health primary care physician education in medical genetics and genomic medicine: Recommendations of the United States secretary for health and human services advisory committee on heritable disorders in newborns and children [Research Support, U.S. Gov't, P.H.S.]. *Genetics in Medicine: Official Journal of the American College of Medical Genetics*, 12(2), 77–80.
- Kendall, D. B. (2009). Protecting patient privacy through health record trusts. *Health Affairs*, 28(2), 444–446.
- Kennedy, D. (2001). *Internet brain segmentation repository*. From <http://neuro-www.mgh.harvard.edu/cma/ibsr>
- Kennelly, R. J., & Gardner, R. M. (1997). Perspectives on development of IEEE 1073: The medical information bus (MIB) standard. *International Journal of Clinical Monitoring and Computing*, 14(3), 143–149.
- Kent, H. (2001). Hands across the ocean for the world's first trans-Atlantic surgery. *CMAJ: Canadian Medical Association Journal*, 13, 1374.

- Kent, W. J. (2003). BLAT – the BLAST-like alignment tool. *Genome Research*, 12(4), 656–664.
- Keren, H., Burkhoff, D., & Squara, P. (2007). Evaluation of a non-invasive continuous cardiac output monitoring system based on thoracic bioreactance. *American Journal of Physiology - Heart and Circulatory Physiology*, 293, H583–H589. PMID 17384132.
- Kershaw, A. (2003). Patient use of the internet to obtain health information. *Nursing Times*, 99(36), 30–32.
- Keselman, A., Tse, T., Crowell, J., Browne, A., Ngo, L., & Zeng, Q. (2007). Assessing consumer health vocabulary familiarity: An exploratory study. *Journal of Medical Internet Research*, 9(1), e5.
- Kevles, B. (1997). *Naked to the bone: Medical imaging in the twentieth century*. New Brunswick: Rutgers University Press.
- Khajouei, R., & Jaspers, M. W. (2010). The impact of CPOE medication systems' design aspects on usability, workflow and medication orders: A systematic review. *Methods of Information in Medicine*, 49(1), 3–19.
- Khatri, P., & Draghici, S. (2005). Ontological analysis of gene expression data: Current tools, limitations, and open problems. *Bioinformatics*, 21, 3587–3595.
- Kho, A. N., Pacheco, J. A., Peissig, P. L., et al. (2011). Electronic medical records for genetic research: Results of the eMERGE consortium. *Science Translational Medicine*, 3, 79re71.
- Kidd, M. R. (2008). Personal electronic health records: MySpace or HealthSpace? *British Medical Journal*, 336, 1029–1030.
- Kilo, C. M., & Wasson, J. H. (2010). Practice redesign and the patient-centered medical home: History, promises, and challenges. *Health Affairs (Millwood)*, 29(5), 773–778.
- Kim, M., & Johnson, K. (2004). Patient entry of information: Evaluation of user interfaces [Comparative study]. *Journal of Medical Internet Research*, 6(2), e13.
- Kim, J. H., Kohane, I. S., & Ohno-Machado, L. (2002). Visualization and evaluation of clusters for exploratory analysis of gene expression data. *Journal of Biomedical Informatics*, 35, 25–36.
- Kim, J. D., Ohta, T., Tateisi, Y., & Tsujii, J. (2003). GENIA corpus – semantically annotated corpus for biotextmining. *Bioinformatics*, 19(suppl 1), i180–i182.
- Kim, H., Dykes, P. C., Thomas, D., Winfield, L. A., & Rocha, R. A. (2011). A closer look at nursing documentation on paper forms: Preparation for computerizing a nursing documentation system. *Computational Biology in Medicine*, 41(4), 182–189.
- Kimborg, D. Y., & Aguirre, G. K. (2002). *A flexible architecture for neuroimaging data analysis and presentation*. From <http://www.nimh.nih.gov/neuroinformatics/kimberg.cfm>
- King, W., Proffitt, J., et al. (2000). The role of fluorescence in situ hybridization technologies in molecular diagnostics and disease management. *Molecular Diagnosis*, 5(4), 309–319.
- Kinnings, S. L., Liu, N., Buchmeier, N., et al. (2009). Drug discovery using chemical systems biology: Repositioning the safe medicine Comtan to treat multi-drug and extensively drug resistant tuberculosis. *PLoS Computational Biology*, 5, e1000423.
- Kintsch, W. (1998). *Comprehension: A paradigm for cognition*. Cambridge/New York: Cambridge University Press.
- Kirkpatrick, D. L. (1994). *Evaluating training programs*. San Francisco: Berrett-Koehler.
- Kittredge, R., & Lehrberger, J. (Eds.). (1982). *Sublanguage – studies of language in restricted semantic domains*. New York: De Gruyter.
- Kleinke, J. D. (2005). Dot-gov: Market failure and the creation of a national health information technology system. *Health Affairs (Millwood)*, 24(5), 1246–1262.
- Kleinmuntz, B. (1968). *Formal Representation of Human Judgment (Vol. 3)*. New York: Wiley.
- Kleinmuntz, D. N., & Schkade, D. A. (1993). Information displays and decision-processes. *Psychological Science*, 4(4), 221–227.
- Kleinmuntz, D. N., & Schkade, D. A. (1993). Information displays and decision-processes. *Psychological Science*, 4(4), 221–227.
- Knaus, W. A., Wagner, D. P., & Lynn, J. (1991). Short-term mortality predictions for critically ill hospitalized adults: Science and ethics. *Science*, 254, 389–394.
- Knox, C., Law, V., Jewison, T., et al. (2011). DrugBank 3.0: A comprehensive resource for 'omics' research on drugs. *Nucleic Acids Research*, 39, D1035–D1041.
- Kohane, I. S. (2011). Using electronic health records to drive discovery in disease genomics. *Nature Reviews Genetics*, 12(6), 417–428.
- Kohane, I. S., & Altman, R. B. (2005). Health-information altruists—a potentially critical resource. *The New England Journal of Medicine*, 353(19), 2074–2077.
- Kohane, I., & Mandl, K. (2011). *SHARP research area three: substitutable medical apps, reusable technologies. Strategic Health IT Advanced Research Projects (SHARP) Program*. 2012, from [http://healthit.hhs.gov/portal/server.pt/community/sharp:\\_area\\_3/3127/home/20707](http://healthit.hhs.gov/portal/server.pt/community/sharp:_area_3/3127/home/20707)
- Kohane, I. S., Churchill, S. E., & Murphy, S. N. (2011b). A translational engine at the national scale: Informatics for integrating biology and the bedside. *Journal of the American Medical Informatics Association: JAMIA*, 19(2), 181–185.
- Kohn, L. T., Corrigan, J., & Donaldson, M. S. (2000). *To err is human: Building a safer health system*. Washington, D.C.: National Academy Press.
- Kohn, L., Corrigan, J., & Donaldson, M. (Eds.). (2002). *To err is human: Building a safer health system. Institute of medicine*. Washington: National Academy Press.
- Kolodner, R., & Douglas, J. V. (1997). *Computerizing large integrated health networks: The VA success*. New York: Springer.
- Komaroff, A., Black, W., & Flatley, M. (1974). Protocols for physician assistants: Management of diabetes and

- hypertension. *The New England Journal of Medicine*, 290, 307–312.
- Kong, Y. M., Dahlke, X., Xiang, Q., Qian, Y., Karp, D., & Scheuermann, R. H. (2011). Toward an ontology-based framework for clinical research databases. *Journal of Biomedical Informatics*, 44(1), 48–58.
- Koppel, R., & Kreda, D. (2009). Health care information technology vendors' "hold harmless" clause: Implications for patients and clinicians. *Journal of the American Medical Association*, 301, 1276–1278.
- Koppel, R., Metlay, J. P., Cohen, A., Abaluck, B., Localio, A. R., Kimmel, S. E., & Strom, B. L. (2005). Role of computerized physician order entry systems in facilitating medication errors. *JAMA : The Journal of the American Medical Association*, 293(10), 1197–1203.
- Korean, S., Gelman, R., Martinez-Perez, M. E., et al. (2007). *Ophthalmology*, 114, e59–e67.
- Korner, M., Weber, C. H., et al. (2007). Advances in digital radiography: Physical principles and system overview. *Radiographics*, 27(3), 675–686.
- Kosara, R., & Miksch, S. (2002). Visualization methods for data analysis and planning in medical applications. *International Journal of Medical Informatics*, 68(1–3), 141–153.
- Koshy, S., Feustel, P. J., Hong, M., & Kogan, B. A. (2010). Scribes in an ambulatory urology practice: Patient and physician satisfaction. *Journal of Urology*, 184(1), 258–262.
- Koslow, S. H., & Huerta, M. F. (Eds.). (1997). *Neuroinformatics: An overview of the human brain project*. Mahwah: Lawrence Erlbaum.
- Kostyack, P. (2002). The emergence of the healthcare information trust. *Matrix: Journal of Law-Medicine*, 12(293), 339–447.
- Kouwenhoven, W. B., Jude, J. R., & Knickerbocker, G. G. (1960). Closed-chest cardiac massage. *JAMA : The Journal of the American Medical Association*, 173, 1064–1067. PMID 14411374.
- Kowalczyk, L. (2011). *Patient alarms often unheard, unheeded*. Boston Globe.
- Kraus, V. B., Burnett, B., Coindreau, J., et al. (2011). Application of biomarkers in the development of drugs intended for the treatment of osteoarthritis. *Osteoarthritis and Cartilage*, 19, 515–542.
- Kremkau, F. W. (2006). *Diagnostic ultrasound principles and instruments*. St. Louis: Saunders Elsevier.
- Krishnaral, A., Lee, J., Laws, S., & Crawford, T. (2010). Voice recognition software: Effect on radiology report turnaround time at an academic medical center. *AJR. American Journal of Roentgenology*, 195(1), 194–197.
- Krist, A., Woolf, S., & Rothemich, S. (2010). *Improving care through AHRQ health IT tools*. Retrieved July 10, 2011, from [http://www.ahrq.gov/about/annualconf10/krist\\_rosenthal/krist.HTM](http://www.ahrq.gov/about/annualconf10/krist_rosenthal/krist.HTM).
- Krist, A. H., & Woolf, S. H. (2011). A vision for patient-centered health information systems. *JAMA : The Journal of the American Medical Association*, 305(3), 300–301.
- Kuchenbecker, J., Dick, H. B., Schmitz, K., & Behrens-Baumann, W. (2001). Use of internet technologies for data acquisition in large clinical trials. *Telemedicine Journal of E-Health*, 7(1), 73–76.
- Kuchinke, W., Aerts, J., Semler, S. C., & Ohmann, C. (2009). CDISC standard-based electronic archiving of clinical trials. *Medical Informatics and the Internet in Medicine*, 48(5), 408–413.
- Kuhn, I.M., Wiederhold, G., Rodnick, J.E., et al. (1984). Automated ambulatory medical record systems in the U.S. In Blum, B. (Ed.), *Information Systems for Patient Care* (pp.199–217), New York: Springer. Original 1982 report available at: <http://infolab.stanford.edu/TR/CS-TR-82-928.html>. Accessed 2 Jan 2012.
- Kuhn, M., Campillos, M., Letunic, I., Jensen, L. J., & Bork, P. (2010). A side effect resource to capture phenotypic effects of drugs. *Molecular Systems Biology*, 6, 343.
- Kulikowski, C. A. (1997). Medical imaging informatics: Challenges of definition and integration. *Journal of the American Medical Informatics Association: JAMIA*, 4(3), 252–253.
- Kulikowski, C. A., Shortliffe, E. H., et al. (2012) AMIA Board white paper: Definition of biomedical informatics and specification of core competencies for graduate education in the discipline. *Journal of the American Medical Informatics Association*, 19(6), 931–938.
- Kulkarni, A., Aziz, B., Shams, I., & Busse, J. (2009). Comparisons of citations in web of science, Scopus, and Google scholar for articles published in general medical journals. *Journal of the American Medical Association*, 302, 1092–1096.
- Kullo, I. J., Fan, J., Pathak, J., Savova, G. K., Ali, Z., & Chute, C. G. (2010). Leveraging informatics for genetic studies: use of the electronic medical record to enable a genome-wide association study of peripheral arterial disease. *Journal of the American Medical Informatics Association: JAMIA*, 17(5), 568–574.
- Kuperman, G. J., & Gibson, R. F. (2003). Computer physician order entry: Benefits, costs, and issues. *Annals of Internal Medicine*, 139(1), 31–39.
- Kuperman, G. J., Gardner, R. M., & Pryor, T. A. (1991). *HELP: A dynamic hospital information system*. New York: Springer.
- Kurtzke, J. F. (1979). ICD-9: A regression. *American Journal of Epidemiology*, 108(4), 383–393.
- Kush, R. D., Helton, E., Rockhold, F. W., & Hardison, C. D. (2008). Electronic health records, medical research, and the tower of Babel. *The New England Journal of Medicine*, 358(16), 1738–1740.
- Kushniruk, A. W., Kaufman, D. R., Patel, V. L., Levesque, Y., & Lottin, P. (1996). Assessment of a computerized patient record system: A cognitive approach to evaluating medical technology. *MD Computing*, 13(5), 406–415.
- Kushniruk, A. W., Triola, M. M., Borycki, E. M., Stein, B., & Kannry, J. L. (2005). Technology induced error and usability: The relationship between usability problems and prescription errors when using a handheld application. *International*



- Journal of Medical Informatics*, 74(7–8), 519–526. doi:10.1016/j.ijmedinf.2005.01.003. S1386-5056(05)00011-0 [pii].
- Labkoff, S. E., & Yasnoff, W. A. (2007). A framework for systematic evaluation of health information infrastructure progress in communities. *Journal of Biomedical Informatics*, 40(2), 100–105.
- Laine, C., Horton, R., DeAngelis, C., Drazen, J., Frizelle, F., Godlee, F., & Verheugt, F. (2007). Clinical trial registration: Looking back and moving ahead. *Journal of the American Medical Association*, 298, 93–94.
- Lamb, A. (1955). *The Presbyterian Hospital and the Columbia-Presbyterian Medical Center, 1868–1943: A history of a great medical adventure*. New York: Columbia University Press.
- Lamb, J. (2007). The connectivity map: A new tool for biomedical research. *Nature Reviews Cancer*, 7(1), 54–60.
- Lamb, J., Crawford, E. D., Peck, D., et al. (2006). The connectivity map: Using gene-expression signatures to connect small molecules, genes, and disease. *Science*, 313, 1929–1935.
- Lancet (1879). Practice by telephone. *Lancet*, 114(2985), 819.
- Lander, E. S., Linton, L. M., Birren, B., et al. (2001). Initial sequencing and analysis of the human genome. *Nature*, 409, 860–921.
- Landrigan, P. J., Trasande, L., Thorpe, L. E., et al. (2006). The National Children's Study: A 21-year prospective study of 100,000 American children. *Pediatrics*, 118, 2173–2186.
- Lane, W. A. (1936, November). What the mouth reveals. *New Health*, 11, 34–35.
- Langer, S. (2002). Impact of speech recognition on radiologist productivity. *Journal of Digital Imaging*, 15(4), 203–209.
- Langer, S., Fetterly, K., Mandrekar, J., Harmsen, S., Bartholmai, B., Patton, C., et al. (2006). ROC study of four LCD displays under typical medical center lighting conditions. *Journal of Digital Imaging*, 19(1), 30–40.
- Langheier, J. M., & Snyderman, R. (2004). Prospective medicine: The role for genomics in personalized health planning. *Pharmacogenomics*, 5(1), 1–8.
- Langley, P., Laird, J. E., & Rogers, S. (2009). Cognitive architectures: Research issues and challenges. *Cognitive Systems Research*, 10(2), 141–160. doi:10.1016/j.cogsys.2006.07.004.
- Langlotz, C. P. (2006). RadLex: A new method for indexing online educational materials. *Radiographics*, 26(6), 1595–1597.
- Langridge, R. (1974). Interactive three-dimensional computer graphics in molecular biology. *Federation Proceedings*, 33(12), 2332–2335.
- Lapsia, V., Lamb, K., & Yasnoff, W. A. (2012). Where should electronic records for patients be stored? *International Journal of Medical Informatics*, 81(12), 821–827.
- Larabell, C. A., & Nugent, K. A. (2010). Imaging cellular architecture with X-rays. *Current Opinion in Structural Biology*, 20(5), 623–631.
- Larkin, J. H., & Simon, H. A. (1987). Why a diagram is (sometimes) worth 10000 words. *Cognitive Science*, 11(1), 65–99.
- Larkin, J., McDermott, J., Simon, D. P., & Simon, H. A. (1980). Expert and novice performance in solving physics problems. *Science*, 208(4450), 1335–1342.
- Larsen, R. A., Evans, R. S., Burke, J. P., Pestotnik, S. L., Gardner, R. M., & Classen, D. C. (1989). Improved perioperative antibiotic Use and reduced surgical wound infections through use of computer decision analysis. *Infection Control and Hospital Epidemiology*, 10(7), 316–320.
- Lashkari, D. A., DeRisi, J. L., McCusker, J. H., Namath, A. F., Gentile, C., Hwang, S. Y., Brown, P. O., & Davis, R. W. (1997). Yeast microarrays for genome wide parallel genetic and gene expression analysis. *Proceedings of the National Academy of Sciences*, 94(24), 13057–13062.
- Lau, F., Kuziemy, C., Price, M., & Gardner, J. (2010). A review on systematic reviews of health information system studies. *Journal of the American Medical Informatics Association: JAMIA*, 17(6), 637–645.
- Lauer, M. S., & Collins, F. S. (2010). Using science to improve the nation's health system: NIH's Commitment to comparative effectiveness research. *JAMA: The Journal of the American Medical Association*, 303(21), 2182–2183.
- Laurent, M., & Vickers, T. (2009). Seeking health information online: Does Wikipedia matter? *Journal of the American Medical Informatics Association: JAMIA*, 16, 471–479.
- Lawrence, S. (2001). Free online availability substantially increases a paper's impact. *Nature*, 411, 521.
- Le Bihan, D., Mangin, J. F., et al. (2001). Diffusion tensor imaging: Concepts and applications. *Journal of Magnetic Resonance Imaging*, 13(4), 534–546.
- Leape, L. L. (1994). Error in medicine. *JAMA: The Journal of the American Medical Association*, 272(23), 1851–1857. doi:10.1001/jama.1994.03520230061039.
- Leape, L. L., Brennan, T. A., Laird, N., Lawthers, A. G., Localio, A. R., Barnes, B. A., & Hiatt, H. (1991). The nature of adverse events in hospitalized patients. *The New England Journal of Medicine*, 324(6), 377–384. doi:10.1056/NEJM199102073240605.
- Leatherman, S., Berwick, D., Iles, D., et al. (2003). The business case for quality: Case studies and an analysis. *Health Affairs*, 22(2), 17–30.
- Leavitt, M., & Gallagher, L. (2006). The EHR seal of approval: CCHIT introduces product certification to spur EHR adoption. *Journal of AHIMA*, 77(5), 26–30; quiz 33–24.
- Ledley R. (1965) *Use fo Computers in Biology and Medicine*. New York: McGraw-Hill.
- Ledley, R. S., & Lusted, L. B. (1959). Probability, logic and medical diagnosis. *Science*, 130(3380), 892–930.
- Ledley, R. S., & Lusted, L. B. (1991). Reasoning foundations of medical diagnosis. *MD Computing*, 8(5), 300–315.
- Lee, D. H. (2003). Magnetic resonance angiography. *Advances in Neurology*, 92, 43–52.

- Lee, J. K. T. (2006). *Computed body tomography with MRI correlation*. Philadelphia: Lippincott Williams & Wilkins.
- Lee, J., & Mark, R. G. (2010). An investigation of patterns in hemodynamic data indicative of impending hypotension in intensive care. *Biomedical Engineering*, 9, 62. PMID 20973998.
- Lee, T., & Mongan, J. (2009). *Chaos and organization in healthcare*. Cambridge, MA: The MIT Press.
- Lee, Y., Kim, N., et al. (2009). Bayesian classifier for predicting malignant renal cysts on MDCT: Early clinical experience. *AJR. American Journal of Roentgenology*, 193(2), W106–W111.
- Lee, J. Y., Du, Y. E., Coki, O., Flynn, J. T., Starren, J., & Chiang, M. F. (2010). Parental perceptions toward digital imaging and telemedicine for retinopathy of prematurity management. *Graefes's Archive for Clinical and Experimental Ophthalmology*, 248, 141–147.
- Leeflang, M. M. G., Deeks, J. J., & Gatsonis, C. (2008). Bossuyt PMM on behalf of the Cochrane diagnostic test accuracy working group. Systematic reviews of diagnostic tests. *Annals of Internal Medicine*, 149, 889–897.
- Lehmann, T. M., Guld, M. O., et al. (2004). Content-based image retrieval in medical applications. *Methods of Information in Medicine*, 43(4), 354–361.
- Leiner, F., & Haux, R. (1996). Systematic planning of clinical documentation. *Methods of Information in Medicine*, 35, 25–34.
- Lenert, L. A., Michelson, D., Flowers, C., & Bergen, M. R. (1995). *IMPACT: An object-oriented graphical environment for construction of multimedia patient interviewing software* (pp. 319–323). Washington, D.C.: Proceedings of the Annual Symposium of Computer Applications in Medical Care.
- Lenfant, C. (2003). Shattuck lecture – clinical research to clinical practice – lost in translation? *The New England Journal of Medicine*, 349, 868–874.
- Leong, F. J., & Leong, A. S. (2003). Digital imaging applications in anatomic pathology. *Advances in Anatomic Pathology*, 10(2), 88–95.
- Leong, K. C., Chen, W. S., Leong, K. W., Mastura, I., Mimi, O., Sheikh, M. A., et al. (2006). The use of text messaging to improve attendance in primary care: A randomized controlled trial. *Family Practice*, 23(6), 699–705.
- LePendu, P., Musen, M. A., & Shah, N. H. (2011a). Enabling enrichment analysis with the human disease ontology. *Journal of Biomedical Informatics*, 44(Suppl 1), S31–S38.
- LePendu, P., Racunas, S.A., Iyer, S., et al. (2011b). *Annotation analysis for testing drug safety signals*. The 14th Bio-Ontologies SIG meeting at ISMB 2011, Vienna, Austria.
- Lesgold, A. (1984). Human skill in a computerized society: Complex skills and their acquisition. *Behavior Research Methods*, 16(2), 79–87. doi:10.3758/bf03202363.
- Lesgold, A., Rubinson, H., Feltovich, P., Glaser, R., Klopfer, D., & Wang, Y. (1988). Expertise in a complex skill: Diagnosing x-ray pictures. In M. T. H. Chi, R. Glaser, et al. (Eds.), *The nature of expertise* (pp. 311–342). Hillsdale: Lawrence Erlbaum Associates.
- Lesk, M. (2005). *Understanding digital libraries* (2nd ed.). San Francisco: Morgan Kaufmann.
- Lester, R. T., Ritvo, P., Mills, E. J., Kariri, A., Karanja, S., Chung, M. H., Jack, W., Habyarimana, J., Sadatsafavi, M., Najafzadeh, M., Marra, C. A., Estambale, B., Ngugi, E., Ball, T. B., Thabane, L., Gelmon, L. J., Kimani, J., Ackers, M., & Plummer, F. A. (2010). Effects of a mobile phone short message service on antiretroviral treatment adherence in Kenya (WelTel Kenya1): a randomised trial. *The Lancet*, 376(9755), 1838–1845.
- Leu, M. G., Cheung, M., Webster, T. R., Curry, L., Bradley, E. H., Fifield, J., et al. (2008). Centers speak up: The clinical context for health information technology in the ambulatory care setting. *Journal of General Internal Medicine*, 23(4), 372–378.
- Levine (1999). “Telestroke”: The Application of Telemedicine for Stroke. Steven R. Levine and Mark Gorman. *Stroke*, 30, 464–469, doi:10.1161/01.STR.30.2.464.
- Levine, S. R., & Gorman, M. (2009). “Telestroke”: the application of telemedicine for stroke. *Stroke*, 30, 464–469.
- Levitt, M. (1983). Molecular dynamics of native protein. I. Computer simulation of trajectories. *Journal of Molecular Biology*, 168(3), 595–617.
- Levy, M. A., & Rubin, D. L. (2008). Tool support to enable evaluation of the clinical response to treatment. *AMIA Annual Symposium Proceedings, 2008*, 399–403.
- Levy, M. A., & Rubin, D. L. (2011). Current and future trends in imaging informatics for oncology. *Cancer Journal*, 17(4), 203–210.
- Levy, M. A., O'Connor, M. J., et al. (2009). Semantic reasoning with image annotations for tumor assessment. *AMIA Annual Symposium Proceedings, 2009*, 359–363.
- Lexe, G., Monaco, J., et al. (2009). Towards improved cancer diagnosis and prognosis using analysis of gene expression data and computer aided imaging. *Experimental Biology and Medicine (Maywood, N.J.)*, 234(8), 860–879.
- Li, Q., Mark, R. G., & Clifford, G. D. (2009). Artificial arterial blood pressure artifact models and an evaluation of a robust blood pressure and heart rate estimator. *Biomedical Engineering Online*, 8, 13. PMID 19586547.
- Libicki, M. C. (1995). *Information technology standards: Quest for the common byte*. Boston: Digital Press.
- Lichtenbelt, B., Crane, R., et al. (1998). *Introduction to volume rendering*. Upper Saddle River: Prentice Hall.
- Lieberman, M. A. (1988). The role of self-help groups in helping patients and families cope with cancer. *CA: A Cancer Journal for Clinicians*, 38(3), 162–168.
- Lieberman, D. A. (2001). Management of chronic pediatric diseases with interactive health games: Theory and research findings. *The Journal of Ambulatory Care Management*, 24(1), 26–38.
- Lilly, C. M., Cody, S., Zhao, H., et al. (2011). Hospital mortality, length of stay, and preventable complica-

- tions among critically ill patients before and after Tele-ICU reengineering of critical care processes. *JAMA: The Journal of the American Medical Association*, 305, 2175–2183. doi: [10.1001/jama.2011.697](https://doi.org/10.1001/jama.2011.697). Epub 2011 May 16. PubMed PMID: 21576622.
- Lin, J., & Dyer, C. (2010). *Data-intensive text processing with MapReduce*. San Rafael: Morgan & Claypool Publishers.
- Lin, L., Isla, R., Doniz, K., Harkness, H., Vicente, K. J., & Doyle, D. J. (1998). Applying human factors to the design of medical equipment: Patient-controlled analgesia. *Journal of Clinical Monitoring and Computing*, 14(4), 253–263.
- Lin, N.D., Martins, S.B., Chan, A.S., Coleman, R.W., Bosworth, H.B., Oddone, E.Z., Shankar, R.D., Musen, M.A., Hoffman, B.B., & Goldstein, M.K. (2006). Identifying barriers to hypertension guideline adherence using clinician feedback at the point of care. *AMIA Annual Symposium Proceedings*, 494–498.
- Lindberg, D.A.B. (1965). *Collection, evaluation, and transmission of hospital laboratory data. Presented at the Seventh IBM Medical Symposium*, Poughkeepsie, NY.
- Lindberg, D. (1967). Collection, evaluation, and transmission of hospital laboratory data. *Methods of Information in Medicine*, 6(3), 97–107.
- Lindberg, D., & Humphreys, B. (2005). 2015 – The future of medical libraries. *The New England Journal of Medicine*, 352, 1067–1070.
- Lindberg, D. A. B., Humphreys, B. L., & McCray, A. T. (1993). The unified medical language system. *Methods of Information in Medicine*, 32, 281–291.
- Linder, J. A., Ma, J., Bates, D. W., Middleton, B., & Stafford, R. S. (2007). Electronic health record use and the quality of ambulatory care in the united states. *Archives of Internal Medicine*, 167(13), 1400–1405.
- Lindgren, H. (2008). Decision support system supporting clinical reasoning process – an evaluation study in dementia care. *Studies in Health Technology and Informatics*, 136, 315–320.
- Lindhurst, M. J., Sapp, J. C., Teer, J. K., et al. (2011). A mosaic activating mutation in AKT1 associated with the Proteus syndrome. *The New England Journal of Medicine*, 365(7), 611–619.
- Lipton, E., & Johnson, K. (2001, December 26). The anthrax trail; tracking bioterror's tangled course. *New York Times*, Section A, p. 1
- Littlejohns, P., Wyatt, J. C., & Garvican, L. (2003, April 19). Evaluating computerised health information systems: Hard lessons still to be learnt. *BMJ*, 326(7394), 860–863.
- Liu, J. L. Y., & Wyatt, J. C. (2011). The case for randomized controlled trials to assess the impact of clinical information systems. *Journal of the American Medical Informatics Association: JAMIA*, 18(2), 173–180.
- Liu, T., Lin, Y., Wen, X., Jorissen, R. N., & Gilson, M. K. (2007). BindingDB: A web-accessible database of experimentally determined protein-ligand binding affinities. *Nucleic Acids Research*, 35, D198–D201.
- Liu, Y. I., Kamaya, A., et al. (2009). A controlled vocabulary to represent sonographic features of the thyroid and its application in a Bayesian network to predict thyroid nodule malignancy. *Summit on Translational Bioinformatics*, 2009, 68–72.
- Liu, Y. I., Kamaya, A., et al. (2011). A Bayesian network for differentiating benign from malignant thyroid nodules using sonographic and demographic features. *AJR. American Journal of Roentgenology*, 196(5), W598–W605.
- Lorensen, W. E., & Cline, H. E. (1987). Marching cubes: A high resolution 3-D surface construction algorithm. *ACM SIGGRAPH Computer Graphics*, 21(4), 163–169.
- Lowe, D. (1999). Object recognition from local scale invariant features. In *Proceedings of the International Conference on Computer Vision* (pp. 1150–1157), Greece.
- Lowe, H.J., Antipov, I., et al. (1998). Towards knowledge-based retrieval of medical images. The role of semantic indexing, image content representation and knowledge-based retrieval. *Proceedings of the AMIA Symposium*, 882–886.
- Lown, B., Amarasingham, R., & Neuman, J. (1962). New method for terminating cardiac arrhythmias. Use of synchronous capacitor discharge. *JAMA: The Journal of the American Medical Association*, 182, 548–555. PMID 12921298.
- Lu, Z. (2011). PubMed and beyond: A survey of Web tools for searching biomedical literature. *Database (Oxford)*, 2011, baq036.
- Luce, R. E. (2008). A New Value Equation Challenge: The Emergence of eResearch and Roles for Research Libraries. In Council on Library and Information Resources (Ed.), *No Brief Candle: Reconceiving Research Libraries for the 21st Century* (pp. 42–50). Washington, D.C: Council on Library and Information Resources.
- Lundsgaarde, H. P. (1987). Evaluating medical expert systems. *Social Science & Medicine*, 24, 805–819.
- Lunshof, J. E., Bobe, J., Aach, J., et al. (2010). Personal genomes in progress: From the human genome project to the personal genome project. *Dialogues in Clinical Neuroscience*, 12, 47–60.
- Lupski, J. R., Reid, J. G., et al. (2010). Whole-genome sequencing in a patient with Charcot-Marie-tooth neuropathy. *The New England Journal of Medicine*, 362(13), 1181–1191.
- Lussier, Y., Shagina, L., & Friedman, C. (2001). Automating SNOMED coding using medical language understanding: a feasibility study. *Proceedings of the AMIA Symposium*, 418–422.
- Lusted, L. B. (1960). Logical analysis in roentgen diagnosis. *Radiology*, 74, 178–193.
- Lutz, S., & Henkind, S. J. (2000). Recruiting for clinical trials on the web. *Healthplan*, 41(5), 36–43.
- MacDonald, D. (1993). *Register, McConnell Brain Imaging Center*. Montreal: Neurological Institute. Montreal, Canada.

- MacDonald, D., Kabani, N., et al. (2000). Automated 3-D extraction of inner and outer surfaces of cerebral cortex from MRI. *NeuroImage*, 12(3), 340–356.
- Mackinnon, A. D., Billington, R. A., Adam, E. J., Dundas, D. D., & Patel, U. (2008). Picture archiving and communication systems lead to sustained improvements in reporting times and productivity: Results of a 5-year audit. *Clinical Radiology*, 63, 796–804.
- Macklin, R. (1992). Privacy and control of genetic information. In G. J. Annas & S. Elias (Eds.), *Gene mapping: Using law and ethics as guides* (pp. 157–172). New York: Oxford University Press.
- Mailman, M. D., Feolo, M., Jin, Y., et al. (2007). The NCBI dbGaP database of genotypes and phenotypes. *Nature Genetics*, 39, 1181–1186.
- Majchrowski, B. (2010). Medical software's increasing impact on healthcare and technology management. *Biomedical Instrumentation and Technology*, 44(1), 70–74.
- Major, K., Shabot, M. M., & Cunneen, S. (2002). Wireless clinical alerts and patient outcomes in the surgical intensive care unit. *American Surgery*, 68, 1057–1060.
- Malcolm, S., & Goodship, J. (Eds.). (2007). *Genotype to phenotype* (2nd ed.). Oxford: BIOS Scientific Publishers.
- Malin, B., & Sweeney, L. (2004). How (not) to protect genomic data privacy in a distributed network: Using trail re-identification to evaluate and design anonymity protection systems. *Journal of Biomedical Informatics*, 37, 179–192.
- Malin, B., Loukides, G., Benitez, K., & Clayton, E. W. (2011). Identifiability in biobanks: Models, measures, and mitigation strategies. *Human Genetics*, 130, 383–392.
- Mandl, K. D., & Kohane, I. S. (2008). Tectonic shifts in the health information economy. *The New England Journal of Medicine*, 358(16), 1732–1737.
- Mandl, K. D., & Kohane, I. S. (2009). No small change for the health information economy. *The New England Journal of Medicine*, 360(13), 1278–1281.
- Mandl, K. D., & Kohane, I. S. (2012). Escaping the EHR trap — the future of health IT. *The New England Journal of Medicine*, 366, 2240–2242.
- Mandl, K. D., Simons, W. W., Crawford, W. C., & Abbett, J. M. (2007). Indivo: A personally controlled health record for health information exchange and communication. *BMC Medical Informatics and Decision Making*, 7, 25. Research Support, N.I.H., Extramural.
- Mani, I. (2001). *Automatic summarization*. Amsterdam: John Benjamins.
- Manning, C., & Schütze, H. (1999). *Foundations of statistical natural language processing*. Cambridge, MA: MIT Press.
- Manolio, T. A., Collins, F. S., Cox, N. J., et al. (2009). Finding the missing heritability of complex diseases. *Nature*, 461, 747–753.
- Mant, J., & Hicks, N. (1995). Detecting differences in quality of care: The sensitivity of measures of process and outcome in treating acute myocardial infarction. *BMJ*, 311, 793–796.
- Marcetich, J., Rappaport, M., & Kotzin, S. (2004). *Indexing consistency in MEDLINE*. MLA 04 Abstracts (pp. 10–11). Washington, DC.
- Marcin, J. P., Nesbitt, T. S., Kallas, H. J., et al. (2004). *Journal of Pediatrics*, 144, 375–380.
- Marcus, M., Santorini, B., & Marcinkiewicz, M. (1993). Building a large annotated corpus of English: The Penn Treebank. *Computational Linguistics*, 19, 313–330.
- Margolis, D. J., Hoffman, J. M., et al. (2007). Molecular imaging techniques in body imaging. *Radiology*, 245(2), 333–356.
- Markle Foundation. (2006). *The connecting for health common framework*. Retrieved October 1, 2011. From <http://www.connectingforhealth.org/health>
- Markle Foundation, C.f.H.A.P.-P.C. (2004). *The personal health working group: Final report*. New York: Markle Foundation.
- Marks, L., & Power, E. (2002). Using technology to address recruitment issues in the clinical trial process. *Trends in Biotechnology*, 20(3), 105–109.
- Marks, R. G., Conlon, M., & Ruberg, S. J. (2001). Paradigm shifts in clinical trials enabled by information technology. *Statistics in Medicine*, 20(17–18), 2683–2696.
- Maroto, M., Reshef, R., Munsterberg, A. E., Koester, S., Goulding, M., & Lassar, A. B. (1997). Ectopic Pax-3 activates MyoD and Myf-5 expression in embryonic mesoderm and neural tissue. *Cell*, 89, 139–148.
- Marquet, G., Dameron, O., et al. (2007). Grading glioma tumors using OWL-DL and NCI Thesaurus. AMIA Annual Symposium Proceedings, 508–512.
- Marroquin, J. L., Vemuri, B. C., et al. (2002). An accurate and efficient Bayesian method for automatic segmentation of brain MRI. *IEEE Transactions on Medical Imaging*, 21(8), 934–945.
- Martin, R. F., & Bowden, D. M. (2001). *Primate brain maps: Structure of the macaque brain*. New York: Elsevier Science.
- Martin, R.F., Mejino, J.L.V., et al. (2001). Foundational model of neuroanatomy: implications for the Human Brain Project. *Proceedings of the AMIA Annual Fall Symposium*, 438–442. Washington, D.C.
- Marwede, D., Schulz, T., et al. (2008). Indexing thoracic CT reports using a preliminary version of a standardized radiological lexicon (RadLex). *Journal of Digital Imaging*, 21(4), 363–370.
- Massaro, T. A. (1993). Introducing physician order entry at a major academic medical center. *Academic Medicine*, 68, 20–30.
- Massoud, T. F., & Gambhir, S. S. (2003). Molecular imaging in living subjects: Seeing fundamental biological processes in a new light. *Genes & Development*, 17, 545–580.
- Masys, D. R. (2002). Effects of current and future information technologies on the health care workforce. *Health Affairs*, 21(5), 33–41.
- Masys, D. R., Jarvik, G. P., Abernethy, N. F., Anderson, N. R., Papanicolaou, G. J., Paltou, D. N., Hoffman, M. A., Kohane, I. S., & Levy, H. P. (2012). Technical desiderata for the integration of genomic data into electronic health records. *Journal of Biomedical Informatics*, 45(3), 419–422.
- Mathews, S. C., & Pronovost, P. J. (2011). The need for systems integration in health care. *JAMA: The Journal*

- of the American Medical Association, 305, 934–935. PMID 21364143.
- Mattern, C., Erickson, B., King, B., & Okrynski, T. (1999). Impact of electronic imaging on clinician behavior in the urgent care setting. *Journal of Digital Imaging, 12*(2 Suppl 1), 148–151.
- Mayes, T.J., Draper, S.W., McGregor, A.M., & Koatley, K. (1988). *Information flow in a user interface: The effect of experience and context on the recall of Mac-Write screens*. Paper presented at the Conference on People and Computers IV, Cambridge.
- McCarty, C. A., Chisholm, R. L., et al. (2011). The eMERGE Network: A consortium of biorepositories linked to electronic medical records data for conducting genomic studies. *BMC Medical Genomics, 4*, 13.
- McClellan, M., McKethan, A. N., Lewis, J. L., Roski, J., & Fisher, E. S. (2010). A national strategy to put accountable care into practice. *Health Affairs (Millwood), 29*(5), 982–990.
- McConnell, S. (1996). *Rapid development: Taming wild software schedules/Steve McConnell*. Redmond: Microsoft Press.
- McCullough, J. S., Casey, M., Moscovice, I., & Prasad, S. (2010). The effect of health information technology on quality in U.S. Hospitals. *Health Affairs (Millwood), 29*(4), 647–654.
- McDonald, C. J. (1976). Protocol-based computer reminders, the quality of care and the nonperfectionibility of man. *The New England Journal of Medicine, 295*(24), 1351–1355.
- McDonald, C. J. (1981). *Action-oriented decisions in ambulatory medicine*. Philadelphia: Mosby.
- McDonald, C. J. (Ed.). (1987a). *Images, signals, and devices* (M.D. Computing: Benchmark Papers). New York: Springer.
- McDonald, C. J. (Ed.). (1987b). *Tutorials* (M.D. Computing: Benchmark Papers). New York: Springer.
- McDonald, C. J. (1997). The barriers to electronic medical record systems and how to overcome them. *Journal of the American Medical Informatics Association: JAMIA, 4*(3), 213–221.
- McDonald, C. J., & Abhyankar, S. (2011). Clinical decision support and rich clinical repositories: A symbiotic relationship. Invited commentary. *Archives of Internal Medicine, 171*(10), 903–905.
- McDonald, M. H., & McDonald, C. J. (2012). Electronic medical records and preserving primary care physicians' time: Comment on "electronic health record-based messages to primary care providers". *Archives of Internal Medicine, 172*(3), 285–287.
- McDonald, C.J., Bhargava, B., Jeris, D.W. (1975). *A clinical information system (CIS) for ambulatory care*. Proceedings AFIPS National Computing Conference, Anaheim.
- McDonald, C.J., Wiederhold, G., Simborg, D., Hammond, W.E., Jelovsek, F., Schneider, K. (1984a). A discussion of the draft proposal for data exchange standards for clinical laboratory results. *Proceedings of the 8th Annual Symposium on Computer Applications in Medical Care, 406–413*.
- McDonald, C. J., Hui, S. L., Smith, D. M., et al. (1984b). Reminders to physicians from an introspective computer medical record. A two year randomized trial. *Annals of Internal Medicine, 100*(1), 130–138.
- McDonald, C. J., Overhage, J. M., Dexter, P., Takesue, B. Y., & Dwyer, D. M. (1997). A framework for capturing clinical data sets from computerized sources. *Annals of Internal Medicine, 127*(8), 675–682.
- McDonald, C. J., Overhage, J. M., Tierney, W. M., et al. (1999). The regenstrief medical record system: A quarter century experience. *International Journal of Medical Informatics, 54*(3), 225–253.
- McDonald, C. J., Huff, S. M., Suico, J. G., et al. (2003). LOINC, a universal standard for identifying laboratory observations: A 5-year update. *Clinical Chemistry, 49*(4), 624–633.
- McDonald, C. J., Overhage, J. M., Barnes, M., Schadow, G., Blevins, L., Dexter, P. R., & Mamlin, B. W. (2005). The Indiana network for patient care: A working local health information infrastructure (LHII). *Health Affairs (Millwood), 24*(5), 1214–1220.
- McGettigan, P., & Henry, D. (2006). Cardiovascular risk and inhibition of cyclooxygenase: A systematic review of the observational studies of selective and nonselective inhibitors of cyclooxygenase 2. *JAMA: The Journal of the American Medical Association, 296*(13), 1633–1644.
- McGlynn, E. A., Asch, S. M., Adams, J., et al. (2003). The quality of health care delivered to adults in the United States. *The New England Journal of Medicine, 348*, 2635–2645.
- McInerney, T., & Terzopoulos, D. (1997). Medical image segmentation using topologically adaptable surfaces. *Cvrmcd-Mrcas'97. Lecture Notes in Computer Science, 1205*, 23–32.
- McKibbin, K., & Fridsma, D. (2006). Effectiveness of clinician-selected electronic information resources for answering primary care physicians' information needs. *Journal of the American Medical Informatics Association: JAMIA, 13*, 653–659.
- McKibbin, K., Haynes, R., Dilks, C. W., Ramsden, M., Ryan, N., Baker, L., & Fitzgerald, D. (1990). How good are clinical MEDLINE searches? A comparative study of clinical end-user and librarian searches. *Computers and Biomedical Research, 23*(6), 583–593.
- McLachlan, G. J., & Peel, D. (2000). *Finite mixture models*. New York: Wiley.
- McManus, J., & Wood-Harper, T. (Understanding the sources of information systems project failure). *Management Services, 51*, 38–43.
- McNeer, J. F., Wallace, A. G., Wagner, G. S., Starmer, C. F., & Rosati, R. A. (1975). The course of acute myocardial infarction: Feasibility of early discharge of the uncomplicated patient. *Circulation, 51*, 410–413.
- McPhee, S. J., Bird, J. A., Fordham, D., Rodnick, J. E., & Osborn, E. H. (1991). Promoting cancer prevention activities by primary care physicians: Results of a randomized, controlled trial. *Journal of the American Medical Association, 266*(4), 538–544.
- Mead, N., & Bower, P. (2000). Patient-centredness: A conceptual framework and review of the empirical literature. *Social Science & Medicine, 51*(7), 1087–1110.

- Mechouche, A., Golbreich, C., et al. (2008). Ontology-based annotation of brain MRI images. *AMIA Annual Symposium Proceedings*, 460–464.
- Meckley, L. M., & Neumann, P. J. (2010). Personalized medicine: Factors influencing reimbursement. *Health Policy*, 94, 91–100.
- Mehta, T. S., Raza, S., et al. (2000). Use of Doppler ultrasound in the evaluation of breast carcinoma. *Seminars in Ultrasound, CT, and MR*, 21(4), 297–307.
- Meigs, J., Barry, M., Oesterling, J., & Jacobsen, S. (1996). Interpreting results of prostate-specific antigen testing for early detection of prostate cancer. *Journal of General Internal Medicine*, 11(9), 505–512.
- Mell, P., & Grance, T. (2011). *The NIST Definition of Cloud Computing*. NIST Special Publication 800–145, National Institute of Standards and Technology, Gaithersburg, MD.
- Melton, L. J., 3rd. (1996). History of the Rochester epidemiology project. *Mayo Clinic Proceedings*, 71, 266–274.
- Menachemi, N., Powers, T. L., & Brooks, R. G. (2011). Physician and practice characteristics associated with longitudinal increases in electronic health records adoption. *Journal of Healthcare Management*, 56(3), 183–198.
- Mervis, J. (2012). U.S. Science policy: Agencies rally to tackle big data. *Science*, 336, 22.
- Merzweiler, A., Knaup, P., Weber, R., Ehlerding, H., Haux, R., & Wiedemann, T. (2001). Recording clinical data—from a general set of record items to case report forms (CRF) for clinics. *Medinfo*, 10(Pt 1), 653–657.
- Meyer, B. C., Raman, R., Hemmen, T., et al. (2008). Efficacy of site-independent telemedicine in the STROKEDOC trial: A randomized, blinded, prospective trial. *Lancet Neurology*, 7, 787–795.
- Michaelis, J., Wellek, S., & Willems, J. L. (1990). Reference standards for software evaluation. *Methods of Information in Medicine*, 29, 289–297.
- Michel, A., Zorb, L., Dudeck, J. (1996). Designing a low-cost bedside workstation for intensive care units. In *Proceedings of the 1996 AMIA Annual Fall Symposium* (pp. 777–781), Washington, DC.
- Microsoft. (2012). Microsoft HealthVault Ecosystem Overview. <http://www.healthvault.com/Industry/ecosystem/application-providers/index.aspx>. Accessed 17 Dec 2012.
- Microsoft. (2012). <http://msdn.microsoft.com/en-us/healthvault/hh922966>. Accessed 17 December 2012.
- Middleton, B. (2009). The clinical decision support consortium. *Studies in Health Technology and Informatics*, 150, 26–30.
- Miles, W. (1982). *A history of the national library of medicine: The Nation's treasury of medical knowledge*. Bethesda: U.S. Department of Health and Human Services.
- Miller, R. A. (1989). Legal issues related to medical decision support systems. *International Journal of Clinical Monitoring and Computing*, 6, 75–80.
- Miller, R. A. (1990). Why the standard view is standard: People, not machines, understand patients' problems. *The Journal of Medicine and Philosophy*, 15, 581–591.
- Miller, R. A., Massarie, F. (1990). The demise of the Greek oracle model for medical diagnosis systems. *Methods of Information in Medicine*, 29, 1–2.
- Miller, R. A. (1997). Predictive models for primary caregivers: Risky business? *Annals of Internal Medicine*, 127(7), 565–567.
- Miller, G. C., & Britt, H. (1995). A new drug classification for computer systems: The ATC extension code. *International Journal of Bio-Medical Computing*, 40, 121–124.
- Miller, R. A., & Gardner, R. M. (1997a). Summary recommendations for the responsible monitoring and regulation of clinical software systems. *Annals of Internal Medicine*, 127(9), 842–845.
- Miller, R. A., & Gardner, R. M. (1997b). Recommendations for responsible monitoring and regulation of clinical software systems. *Journal of the American Medical Informatics Association: JAMIA*, 4, 442–457.
- Miller, R. A., & Goodman, K. W. (1998). Ethical challenges in the use of decision-support software in clinical practice. In K. W. Goodman (Ed.), *Ethics, computing, and medicine: Informatics and the transformation of health care* (pp. 102–115). Cambridge: Cambridge University Press.
- Miller, R. A., & Miller, S. M. (2007). Legal and regulatory issues related to the use of clinical software in health care delivery. In R. A. Greenes (Ed.), *Clinical decision support: The road ahead* (pp. 423–444). Boston: Elsevier.
- Miller, A. R., & Tucker, C. (2009). Privacy protection and technology diffusion: The case of electronic medical records. *Management Science*, 55, 1077–1093.
- Miller, R. A., Schaffner, K. F., & Meisel, A. (1985). Ethical and legal issues related to the use of computer programs in clinical medicine. *Annals of Internal Medicine*, 102, 529–536.
- Miller, R. A., Gardner, R. M., Johnson, K. B., & Hripcsak, G. (2005a). Clinical decision support and electronic prescribing systems: A time for responsible thought and action. *Journal of the American Medical Informatics Association: JAMIA*, 12(4), 403–409.
- Miller, R. A., Waitman, L. R., Chen, S., & Rosenbloom, S. T. (2005b). The anatomy of decision support during inpatient care provider order entry (CPOE): empirical observations from a decade of CPOE experience at Vanderbilt. *Journal of Biomedical Informatics*, 38(6), 469–485.
- Miller, H., Yasnoff, W., & Burde, H. (2009). *Personal health records: The essential missing element in twenty-first century healthcare*. Chicago: Health Information and Management Systems Society.
- Min, J.J., & Gambhir, S.S. (2008). Molecular imaging of PET reporter gene expression. *Handbook of Experimental Pharmacology*, (185 Pt 2), 277–303.
- Minsky, M. (1975). A framework for representing knowledge. In P. H. Winston (Ed.), *The psychology of computer vision*. New York: McGraw-Hill.
- Mittal, M. K., Dhuper, S., Siva, C., Fresen, J. L., Petruc, M., & Velazquez, C. R. (2010). Assessment of email communication skills of rheumatology fellows: A pilot study. *Journal of the American Medical Informatics Association: JAMIA*, 17(6), 702–706.

- Modayur, B., Prothero, J., et al. (1997). Visualization-based mapping of language function in the brain. *NeuroImage*, 6, 245–258.
- Modi, P., Rodriguez, E., & Chitwood, W. R., Jr. (2009). Robot-assisted cardiac surgery. *Interactive Cardiovascular and Thoracic Surgery*, 9, 500–505.
- Moed, H. (2007). The effect of open access on citation impact: An analysis of ArXiv's condensed matter section. *Journal of the American Society for Information Science and Technology*, 58, 2047–2054.
- Morel, G., Amalberti, R., & Chauvin, C. (2008). Articulating the differences between safety and resilience: The decision-making process of professional sea-fishing skippers. *Human Factors*, 50(1), 1–16.
- Mork, J. G., Bodenreider, O., Demner-Fushman, D., et al. (2010). Extracting Rx information from clinical narrative. *Journal of the American Medical Informatics Association: JAMIA*, 17, 536–539.
- Morris, A. H. (2000). Developing and implementing computerized protocols for standardization of clinical decisions. *Annals of Internal Medicine*, 132, 373–383. PMID 10691588.
- Morris, A. H. (2001). Rational use of computerized protocols in the intensive care unit. *Critical Care*, 5, 249–254. PMID 11737899.
- Morris, A. H. (2003). Treatment algorithms and protocolized care. *Current Opinion in Critical Care*, 9, 236–240. PMID 12771677.
- Morrison JL, Cai Q, Davis N, Yan Y, Berbaum ML, Ries M, Solomon G. (2010) Clinical and economic outcomes of the electronic intensive care unit: results from two community hospitals. *Crit Care Med*, 38(1), 2–8. doi: [10.1097/CCM.0b013e3181b78fa8](https://doi.org/10.1097/CCM.0b013e3181b78fa8). PubMed PMID: 19730249.
- Morrison, J. L., Cai, Q., Davis, N., et al. (2010). Clinical and economic outcomes of the electronic intensive care unit: Results from two community hospitals. *Critical Care Medicine*, 38, 2–8.
- Mort, M., Evani, U. S., Krishnan, V. G., et al. (2010). In silico functional profiling of human disease-associated and polymorphic amino acid substitutions. *Human Mutation*, 31, 335–346.
- Moses, L. E., Littenberg, B., & Shapiro, D. (1993). Combining independent studies of a diagnostic test into a summary ROC curve: Data-analytic approaches and some additional considerations. *Statistics in Medicine*, 12(4), 1293–1316.
- Mostashari, F. (2011). Moving forward on meaningful use. The ONC's Farzad Mostashari, MD, offers his perspectives on the road ahead. Interview by Mark Hagland. *Healthcare Informatics*, 28(3), 51–52.
- Motik, B., Grau, B. C., et al. (2008). OWL 2: The next step for OWL. *Journal of Web Semantics*, 6(4), 309–322.
- Motik, B., Shearer, R., et al. (2009). Hypertableau reasoning for description logics. *Journal of Artificial Intelligence Research*, 36, 165–228.
- Muller, H., Michoux, N., et al. (2004). A review of content-based image retrieval systems in medical applications-clinical benefits and future directions. *International Journal of Medical Informatics*, 73(1), 1–23.
- Mullett, C. J., Evans, R. S., Christenson, J. C., & Dean, J. M. (2001). Development and impact of a computerized pediatric anti-infective decision support program. *Pediatrics*, 108, 1–7. PMID 11581483.
- Multiple authors. (2010). Special issue on translational bioinformatics. *Journal of Biomedical Informatics*, 43(3), 355–357.
- Multiple authors. (2011a). JAMIA special issue on natural language processing. *Journal of the American Medical Informatics Association: JAMIA*, 18(5), 539–667.
- Multiple authors. (2011b). Special issue: Dealing with data [Series]. *Science*, 331(6018), 639–806.
- Munasinghe, R. L., Arsene, C., Abraham, T. K., Zidan, M., & Siddique, M. (2011). Improving the utilization of admission order sets in a computerized physician order entry system by integrating modular disease specific order subsets into a general medicine admission order set. *Journal of the American Medical Informatics Association: JAMIA*, 18(3), 322–326.
- Murphy, R. L. H., Block, P., Bird, K. T., & Yurchak, P. (1973). Accuracy of cardiac auscultation by microwave. *Chest*, 63, 578–581.
- Murphy, S.N., Mendis, M.E., Berkowitz, D.A., Kohane, I. S., & Chueh, H.C. (2006). *Integration of clinical and genetic data in the i2b2 architecture*. Paper presented at the AMIA annual symposium. Washington, DC.
- Murphy, S. N., Dubey, A., Embi, P. J., et al. (2012). Current state of information technologies for the clinical research enterprise across academic medical centers. *Clinical and Translational Science*, 5(3), 281–284.
- Murray, M. D., Harris, L. E., Overhage, J. M., Zhou, X. H., Eckert, G. J., Smith, F. E., Buchanan, N. N., Wolinsky, F. D., McDonald, C. J., & Tierney, W. M. (2004, March). Failure of computerized treatment suggestions to improve health outcomes of outpatients with uncomplicated hypertension: Results of a randomized controlled trial. *Pharmacotherapy*, 24(3), 324–337.
- Musen, M. A. (1997). Modeling for decision support. In J. van Bommel & M. Musen (Eds.), *Handbook of medical informatics* (pp. 431–448). Heidelberg: Springer.
- Musen, M. A. (1998). Domain ontologies in software engineering: Use of PROTÉGÉ with the EON architecture. *Methods of Information in Medicine*, 37(4–5), 540–550.
- Musen, M. A., Tu, S. W., Das, A. K., & Shahar, Y. (1996). EON: A component-based approach to automation of protocol-directed therapy. *Journal of the American Medical Informatics Association: JAMIA*, 3(6), 367–388.
- Musen, M. A., Noy, N. F., Shah, N. H., et al. (2011). The national center for biomedical ontology. *Journal of the American Medical Informatics Association: JAMIA*, 18(4), 441–448.
- Mutalik, P. G., Deshpande, A., & Nadkarni, P. M. (2001). Use of general-purpose negation detection to augment concept indexing of medical documents: A quantitative study using the UMLS. *Journal of the American Medical Informatics Association: JAMIA*, 8(6), 598–609.

- Mynatt, B., Leventhal, L., Instone, K., Farhat, J., & Rohlman, D. (1992). Hypertext or book: Which is better for answering questions? *Proceedings of Computer-Human Interface*, 92, 19–25.
- Nadkarni, P., Chen, R., & Brandt, C. (2001). UMLS concept indexing for production databases: A feasibility study. *Journal of the American Medical Informatics Association: JAMIA*, 8(1), 80–91.
- Nadkarni, P. M., Ohno-Machado, L., & Chapman, W. W. (2011). Natural language processing: An introduction. *Journal of the American Medical Informatics Association: JAMIA*, 18(5), 544–551.
- Nahn, V. D., Barnhill, R., Heermann-Do, K., Salzman, K. L., & Gimbel, R. W. (2011). The military health system's personal health record pilot with Microsoft HealthVault and Google Health. *Journal of the American Medical Informatics Association: JAMIA*, 18(1), 118–124.
- Nambisan, P. (2011). Information seeking and social support in online health communities: Impact on patients' perceived empathy. *Journal of the American Medical Informatics Association: JAMIA*, 18(3), 298–304.
- Napel, S. A., Beaulieu, C. F., et al. (2010). Automated retrieval of CT images of liver lesions on the basis of image similarity: Method and preliminary results. *Radiology*, 256(1), 243–252.
- National Committee on Vital and Health Statistics. (2001). Information for health: A strategy for building the National Health Information Infrastructure. Report and Recommendations from the National Committee on Vital and Health Statistics. Available at <http://www.ncvhs.hhs.gov/nhiilayo.pdf>. Accessed 17 Dec 2012.
- National Council for Prescription Drug Programs. (1994). *Data dictionary*. Scottsdale, AZ: National Council for Prescription Drug Programs.
- National e-Health Transition Authority (NEHTA). (2011). *NEHTA strategic plan 2011–2012*. Available at [http://www.nehta.gov.au/component/docman/doc\\_download/1338-nehta-strategic-plan-20112012](http://www.nehta.gov.au/component/docman/doc_download/1338-nehta-strategic-plan-20112012). Accessed 25 Aug 2011.
- National High Blood Pressure Education Program. (2004). *The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure*. National Heart, Lung, and Blood Institute, National Institutes of Health.
- National Institutes of Standards and Technology (NIST). (2005). *Guidelines for the selection and use of transport layer security (TLS) implementations* (NIST Special Publication 800–52). Gaithersburg: U.S. Department of Commerce. <http://csrc.nist.gov/publications/nistpubs/800-52/SP800-52.pdf>
- National Library of Medicine. (1999). *Medical subject headings – Annotated alphabetic list*. Bethesda: U.S. Department of Health and Human Services, Public Health Service.
- National Library of Medicine. (1999). *Next generation internet phase I awards*. Retrieved June 17, 2007, from <http://www.nlm.nih.gov/research/ngisumphase1.html>
- National Library of Medicine. (2003). *Scaleable information infrastructure awards*. Retrieved June 30, 2007, from <http://www.nlm.nih.gov/research/siiawards.html>
- National Research Council. (1997). *For the record: Protecting electronic health information*. Washington, D.C.: National Academy Press.
- National Research Council. (2001). Computer science and telecommunications board. *Networking health: Prescriptions for the internet*. Washington, DC: National Academy Press.
- National Research Council (U.S.). Committee on Enhancing the Internet for Health and Biomedical Applications: Technical Requirements and Implementation Strategies. (2000). *Networking health: Prescriptions for the internet*. Washington, D.C.: National Academy Press.
- National Research Council (US) Committee on Engaging the Computer Science Research Community in Health Care Informatics, Stead, W. W., & Lin, H. S. (2009). *Computational technology for effective health care: Immediate steps and strategic directions. The national academies collection: Reports funded by National Institutes of Health*. Washington (DC): National Academies Press (US).
- National Research Council of the National Academies. (2011). *Health Care Comes Home*. Washington (DC): National Academies Press (US). Washington, DC.
- National Science and Technology Council (U.S.). Interagency Working Group on Digital Data. (2009). *Harnessing the power of digital data for science and society: Report of the Interagency Working Group on Digital Data to the Committee on Science of the National Science and Technology Council*. Washington, D.C.: Interagency Working Group on Digital Data.
- National Science Foundation (U.S.), & Cyberinfrastructure Council (National Science Foundation). (2007). *Cyberinfrastructure vision for 21st century discovery* (pp. iii, 58 p.). Retrieved from <http://www.nsf.gov/pubs/2007/nsf0728/index.jsp>
- Nazi, K. M., Woods, S. S., & Woods, S. S. (2008). MyHealthVet PHR: a description of users and patient portal use. *AMIA ... Annual Symposium proceedings/AMIA Symposium. AMIA Symposium*, 1182.
- Nease, R. F., Jr., & Owens, D. K. (1994). A method for estimating the cost-effectiveness of incorporating patient preferences into practice guidelines. *Medical Decision Making*, 14(4), 382–392.
- Nease, R. F., Jr., & Owens, D. K. (1997). Use of influence diagrams to structure medical decisions. *Medical Decision Making*, 17(13), 263–275.
- Nease, R. F., Jr., Kneeland, T., O'Connor, G. T., Sumner, W., Lumpkins, C., Shaw, L., Pryor, D., & Sox, H. C. (1995). Variation in patient utilities for the outcomes of the management of chronic stable angina. Implications for clinical practice guidelines. *Journal of the American Medical Association*, 273(15), 1185–1190.
- Needleman, S. B., & Wunsch, C. D. (1970). A general method applicable to the search for similarities in the amino acid sequence of two proteins. *Journal of Molecular Biology*, 48(3), 443–453.



- NEHI and Massachusetts Technology Collaborative (2010, December). *Critical care, critical choices: the care for tele-ICU in intensive care*.
- Nelson, S.J., Brown, S.H., Erlbaum, M.S., Olson, N., Powell, T., Carlsen, B., Carter, J., Tuttle, M.S., & Hole, W.T. (2002). A semantic normal form for clinical drugs in the UMLS: Early experience with the VANDF. *Proceedings of the AMIA Fall Symposium*, 557–561.
- Nelson, N. C., Evans, R. S., Samore, M. H., & Gardner, R. M. (2005). Detection and prevention of medication errors using real-time nurse charting. *Journal of the American Medical Informatics Association: JAMIA*, 12, 390–397. PMID 15802486.
- Nelson, S. J., Zeng, K., Kilbourne, J., Powell, T., & Moore, R. (2011). Normalized names for clinical drugs: RxNorm at 6 years. *Journal of the American Medical Informatics Association: JAMIA*, 18, 441–448.
- Neville, A. J. (2009). Problem-based learning and medical education forty years on. A review of its effects on knowledge and clinical performance. *Medical Principles and Practice*, 18, 1–9.
- New York Academy of Medicine (1961). *Standard nomenclature of diseases and operations*. (5th ed.). New York: McGraw-Hill.
- Newell, A. (1990). *Unified theories of cognition*. Cambridge, MA: Harvard University Press.
- Newell, A., & Simon, H. A. (1972). *Human problem solving*. Englewood Cliffs: Prentice-Hall.
- Ng, A. Y., M. Jordan, et al. (2001). On spectral clustering: analysis and an algorithm. In *Advances in Neural Information Processing Systems (NIPS 13)*.
- Ng, S. B., Buckingham, K. J., Lee, C., et al. (2010). Exome sequencing identifies the cause of a mendelian disorder. *Nature Genetics*, 42, 30–35.
- NHS Centre for Coding and Classification. (1994). *Read Codes (Version 3)*. (April ed.). London: NHS Management Executive, Department of Health.
- Nicholson, D. (2006). *An evaluation of the quality of consumer health information on Wikipedia*. Portland: Capstone, Oregon Health & Science University. Retrieved from [http://www.ohsu.edu/dmice/people/students/theses/2006/upload/Nicholson\\_CapstoneFinal06.pdf](http://www.ohsu.edu/dmice/people/students/theses/2006/upload/Nicholson_CapstoneFinal06.pdf)
- Nicolae, D. L., Gamazon, E., Zhang, W., et al. (2010). Trait-associated SNPs are more likely to be eQTLs: Annotation to enhance discovery from GWAS. *PLoS Genetics*, 6, e1000888.
- Nielsen, J. (1993). *Usability engineering*. Boston: Academic Press.
- Nielsen, J. (1994). *Usability inspection methods*. Paper presented at the conference companion on human factors in computing systems, Boston.
- Nielsen, J., & Landauer, T.K. (1993, April 24–29). A mathematical model of the finding of usability problems. In *Proceedings of the ACM INTERCHI'93 Conference* (pp. 206–13), Amsterdam.
- Nielsen, B., Albregtsen, F., et al. (2008). Statistical nuclear texture analysis in cancer research: A review of methods and applications. *Critical Reviews in Oncogenesis*, 14(2–3), 89–164.
- Nissenbaum, H. F. (2010). *Privacy in context: Technology, policy, and the integrity of social life*. Stanford: Stanford Law Books.
- Noble, M., Bruening, W., Uhl, S., & Schoelles, K. (2009). Computer-aided detection mammography for breast cancer screening: Systematic review and meta-analysis. *Archives of Gynecology and Obstetrics*, 279(6), 881–890.
- Nolte, E., & McKee, C. M. (2008). Measuring the health of nations: Updating an earlier analysis. *Health Affairs (Millwood)*, 27(1), 58–71.
- Norman, D. A. (1986). Cognitive engineering. In D. A. Norman & S. W. Draper (Eds.), *User centered system design: New perspectives on human-computer interaction* (pp. 31–61). Hillsdale: Lawrence Erlbaum Associates.
- Norman, D. A. (1988). *The psychology of everyday things*. New York: Basic Books.
- Norman, D. A. (1993). *Things that make us smart: Defending human attributes in the age of the machine*. Reading: Addison-Wesley Pub. Co.
- Novack, D. H., Plumer, R., Smith, R. L., et al. (1979). Changes in physicians' attitudes toward telling the cancer patient. *JAMA: The Journal of the American Medical Association*, 241, 897–900.
- Nowak, E., Jurie, F., et al. (2006). "Sampling strategies for bag-of-features image classification." computer vision – Eccv 2006, Pt 4. *Proceedings*, 3954, 490–503.
- NSF-NIH Interagency Initiative. (2012). Core techniques and technologies for advancing big data science and engineering (BIGDATA). <http://grants.nih.gov/grants/guide/notice-files/NOT-GM-12-109.html>. Accessed 24 Nov 2012 and [http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=504767](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504767). Accessed 24 Nov 2012.
- O'Carroll, P. W., Yasnoff, W. A., Ward, M. E., Ripp, L. H., & Martin, E. L. (Eds.). (2003). *Public health informatics and information systems*. New York: Springer.
- O'Connell, E.M., Teich, J.M., Pedraza, L.A., Thomas, D. (1996). A comprehensive inpatient discharge system. *Proceedings of the 1996 AMIA Annual Fall Symposium*, 699–703.
- O'Connor, A. M., Rostom, A., Fiset, V., Tetroe, J., Entwistle, V., Llewellyn-Thomas, H., et al. (1999). Decision aids for patients facing health treatment or screening decisions: Systematic review. *BMJ*, 319(7212), 731–734.
- O'Connor, A.M., Bennett, C.L., Stacey, D., Barry, M., Col, N.F., Eden, K.B., et al. (2009). Decision aids for people facing health treatment or screening decisions. *Cochrane Database of Systematic Reviews*, (3), CD001431.
- Obeid, J., Gabriel, D., & Sanderson, I. (2010). A biomedical research permissions ontology: Cognitive and knowledge representation considerations. In *Proceedings of the 2010 workshop on Governance of Technology, Information and Policies* (pp. 9–13). Austin: ACM.
- Ohmann, C., & Kuchinke, W. (2009). Future developments of medical informatics from the viewpoint of networked clinical research: Interoperability and

- integration. *Methods of Information in Medicine*, 48(1), 45–54.
- Ohno-Machado, L. (2012). Big science, big data, and a big role for biomedical informatics. *Journal of the American Medical Informatics Association: JAMIA*, 19, e1.
- Ohno-Machado, L., Wang, S.J., et al. (1999). Decision support for clinical trial eligibility determination in breast cancer. *Proceedings of the AMIA Symposium*, 340–344.
- Olsen, L., Grossman, C., & McGinnis, J. M. (Eds.). (2011). *Learning what works: Infrastructure required for comparative effectiveness research*. Washington: The National Academics Press.
- Olson, S. (2007, July/August). Who's your daddy? *The Atlantic*.
- Omenn, G. S. (2006). Grand challenges and great opportunities in science, technology, and public policy. *Science*, 314, 1696–1704.
- Ong, K. (2011). *Medical informatics: An executive primer, second edition*. Chicago: Healthcare and Management Information Systems Society.
- Ong, M. S., & Coiera, E. (2011, June). A systematic review of failures in handoff communication during intrahospital transfers. *Joint Commission Journal on Quality and Patient Safety*, 37(6), 274–284.
- Oniki, T. A., Clemmer, T. P., & Pryor, T. A. (2003). The effect of computer-generated reminders on charting deficiencies in the ICU. *Journal of the American Medical Informatics Association: JAMIA*, 10, 177–187.
- Openchowski, M. W. (1925). The effect of the unit record system and improved organization on hospital economy and efficiency. *Archives of Surgery*, 10(3), 925–934.
- Organization for Human Brain Mapping. (2001). *Annual Conference on Human Brain Mapping*. Brighton.
- Ormond, K. E., Wheeler, M. T., Hudgins, L., et al. (2010). Challenges in the clinical application of whole-genome sequencing. *Lancet*, 375, 1749–1751.
- Ornstein, C. (2003, January 22). Hospital heeds doctors, suspends use of software. *Los Angeles Times*.
- Osborn, C. Y., Mayberry, L. S., Mulvaney, S. A., & Hess, R. (2010). Patient web portals to improve diabetes outcomes: A systematic review. *Current Diabetes Reports*, 10(6), 422–435.
- Osborn, C. Y., Rosenbloom, S. T., Stenner, S. P., Anders, S., Muse, S., Johnson, K. B., et al. (2011). MyHealthAtVanderbilt: Policies and procedures governing patient portal functionality. *Journal of the American Medical Informatics Association : JAMIA*, 18(Suppl 1), i18–i23.
- Osheroff, J., Pifer, E., Sittig, D., & Jenders, R. (2004). *Clinical decision support implementers' workbook*. Chicago: HIMSS.
- Osheroff, J. A., Teich, J. M., Middleton, B., Steen, E. B., Wright, A., & Detmer, D. E. (2007). A roadmap for national action on clinical decision support. *Journal of the American Medical Informatics Association: JAMIA*, 14(2), 141–145.
- Oster, S., Langella, S., Hastings, S., et al. (2008). CaGrid 1.0: An enterprise grid infrastructure for biomedical research. *Journal of the American Medical Informatics Association: JAMIA*, 15(2), 138–149.
- Overby, C. L., Tarczy-Hornoch, P., Hoath, J. I., Kalet, I. J., & Veenstra, D. L. (2010). Feasibility of incorporating genomic knowledge into electronic medical records for pharmacogenomic clinical decision support. *BMC Bioinformatics*, 11(Suppl 9), S10.
- Overhage, J. M., Suico, J., & McDonald, C. J. (2001). Electronic laboratory reporting: Barriers, solutions and findings. *Journal of Public Health Management and Practice*, 7(6), 60–66.
- Overhage, J. M., Grannis, S., & McDonald, C. J. (2008). A comparison of the completeness and timeliness of automated electronic laboratory reporting and spontaneous reporting of notifiable conditions. *American Journal of Public Health*, 98(2), 344–350.
- Overington, J. (2009). ChEMBL. An interview with John Overington, team leader, chemogenomics at the European Bioinformatics Institute Outstation of the European Molecular Biology Laboratory (EMBL-EBI). Interview by Wendy A. Warr. *Journal of Computer-Aided Molecular Design*, 23, 195–198.
- Owens, D. K. (1998). Patient preferences and the development of practice guidelines. *Spine*, 23(9), 1073–1079.
- Owens, D. K., & Nease, R. F., Jr. (1993). Development of outcome-based practice guidelines: A method for structuring problems and synthesizing evidence. *The Joint Commission Journal on Quality Improvement*, 19(7), 248–263.
- Owens, D. K., & Nease, R. F., Jr. (1997). A normative analytic framework for development of practice guidelines for specific clinical populations. *Medical Decision Making*, 17(4), 409–426.
- Owens, D., Harris, R., Scott, P., & Nease, R. F., Jr. (1995). Screening surgeons for HIV infection: A cost-effectiveness analysis. *Annals of Internal Medicine*, 122(9), 641–652.
- Owens, D. K., Holodniy, M., Garber, A. M., Scott, J., Sonnad, S., Moses, L., Kinoshian, B., & Schwartz, J. S. (1996a). The polymerase chain reaction for the diagnosis of HIV infection in adults: A meta-analysis with recommendations for clinical practice and study design. *Annals of Internal Medicine*, 124(9), 803–815.
- Owens, D. K., Holodniy, M., McDonald, T. W., Scott, J., & Sonnad, S. (1996b). A meta-analytic evaluation of the polymerase chain reaction (PCR) for diagnosis of human immunodeficiency virus (HIV) infection in infants. *Journal of the American Medical Association*, 275(17), 1342–1348.
- Owens, D. K., Shachter, R. D., & Nease, R. F., Jr. (1997). Representation and analysis of medical decision problems with influence diagrams. *Medical Decision Making*, 17(3), 241–262.
- Ozbolt, J. (2000). Terminology standards for nursing: Collaboration at the summit. *Journal of the American Medical Informatics Association: JAMIA*, 7, 517–522.
- Ozbolt, J. (2003). Reference terminology for therapeutic goals: A new approach. *Proceedings of the AMIA Fall Symposium, Journal of the American Medical*

- Informatics Association, Symposium Supplement, 2003*, 504–508.
- Ozbolt, J. G., Schultz, S., Swain, M. A. P., Abraham, I. L., & Stein, K. F. (1984). Developing expert systems for nursing practice. In G. S. Cohen (Ed.), *Proceedings of the eighth annual symposium on computer applications in medical care* (pp. 654–657). Silver Spring: IEEE Computer Society.
- Ozbolt, J., Brennan, G., & Hatcher, I. (2001). PathworX: An informatics tool for quality improvement. *Proceedings of the AMIA Fall Symposium, Journal of the American Medical Informatics Association, Symposium Supplement, 2001*, 518–522.
- Özdas, A., Speroff, T., Waitman, L. R., Ozbolt, J., Butler, J., & Miller, R. A. (2006). Integrating “best of care” protocols into clinicians’ workflow via care provider order entry: Impact on quality of care indicators for acute myocardial infarction. *Journal of the American Medical Informatics Association: JAMIA*, 13(2), 188–196.
- Ozdas, A., Miller, R. A., & Waitman, L. R. (2008). Care Provider Order Entry (CPOE): A perspective on factors leading to success or to failure. *Yearbook of Medical Informatics, 2007*, 128–137. Review. Erratum in: *Yearbook of Medical Informatics, 2008*:19.
- Ozkaynak, M., Brennan, P. F., Hanauer, D. A., Johnson, S., Aarts, J., Zheng, K., & Haque, S. N. (2013, March 28). Patient-centered care requires a patient-oriented workflow model. *Journal of the American Medical Informatics Association: JAMIA*, 20(e1), e14–e16.
- Paddock, S. W. (1994). To boldly glow. Applications of laser scanning confocal microscopy in developmental biology. *BioEssays*, 16(5), 357–365.
- Padkin, A., Rowan, K., & Black, N. (2001). Using high quality clinical databases to complement the results of randomised controlled trials: The case of recombinant human activated protein C. *BMJ*, 323(7318), 923–926.
- Pagliari, C., Detmer, D., & Singleton, P. (2007). Potential of electronic personal health records. *BMJ*, 335(7615), 330–333.
- Palda, V. A., & Detsky, A. S. (1997). Perioperative assessment and management of risk from coronary artery disease. *Annals of Internal Medicine*, 127(4), 313–328.
- Palfrey, J., Gasser, U. (2010). *Born digital: Understanding the first generation of digital natives*. New York: Basic Books; Robertson, J. (2011). *Insulin pumps, monitors vulnerable to hacking*. Retrieval 15 Aug 2011: <http://www.ap.org/>
- Palmer, M., Gildea, D., & Kingsbury, P. (2005). The proposition bank: An annotated corpus of semantic roles. *Computational Linguistics*, 31(1), 71–105.
- Palotie, A., Widen, E., & Ripatti, S. (2013). From genetic discovery to future personalized health research. *New Biotechnology*, 30(3), 291–295.
- Park, T. (2011). Opening access to high-value data sets. In L. A. Olsen, R. S. Saunders, & J. M. McGinnis (Eds.), *Patients charting the course: Citizen engagement and the learning health system* (pp. 74–87). Washington: National Academies Press.
- Park, J. C., Kim, H. S., & Kim, J. J. (2001). Bidirectional incremental parsing for automatic pathway identification with combinatorial categorial grammar. *Proceedings of the Pacific Symposium on Biomcomputing*, 6, 396–407.
- Parrish, F., Do, N., Bouhaddou, O., & Warnekar, P. (2006). Implementation of RxNorm as a terminology mediation standard for exchanging pharmacy medication between federal agencies. *AMIA Annual Symposium Proceedings*, 1057.
- Paskin, N. (2006). *The DOI handbook*. Oxford: International DOI Foundation. Retrieved from [http://www.doi.org/handbook\\_2000/DOIHandbook-v4-4.pdf](http://www.doi.org/handbook_2000/DOIHandbook-v4-4.pdf)
- Patel, V. L., & Cohen, T. (2008). New perspectives on error in critical care. *Current Opinion in Critical Care*, 14(4), 456–459.
- Patel, V. L., & Groen, G. J. (1986). Knowledge based solution strategies in medical reasoning. *Cognitive Science*, 10(1), 91–116.
- Patel, V. L., & Groen, G. J. (1991a). Developmental accounts of the transition from medical student to doctor: Some problems and suggestions. *Medical Education*, 25(6), 527–535.
- Patel, V. L., & Groen, G. J. (1991b). The general and specific nature of medical expertise: A critical look. In K. A. Ericsson & J. Smith (Eds.), *Toward a general theory of expertise: Prospects and limits* (pp. 93–125). New York: Cambridge University Press.
- Patel, V. L., & Kaufman, D. R. (1998). Medical informatics and the science of cognition. *Journal of the American Medical Informatics Association: JAMIA*, 5(6), 493–502.
- Patel, V. L., & Zhang, J. (2007). Cognition and patient safety in healthcare. In F. T. Durso, R. S. Nickerson, S. Dumais, S. Lewandowsky, & T. Perfect (Eds.), *Handbook of applied cognition* (2nd ed., pp. 307–331). New York: Wiley.
- Patel, V. L., Groen, G. J., & Frederiksen, C. H. (1986). Differences between students and physicians in memory for clinical cases. *Medical Education*, 20, 3–9.
- Patel, V. L., Groen, G. J., & Arocha, J. F. (1990). Medical expertise as a function of task-difficulty. *Memory and Cognition*, 18(4), 394–406.
- Patel, V.L., Arocha, J.F., & Kaufman, D.R. (1994). Diagnostic reasoning and medical expertise. In Medin, D.L. (Ed.), *The psychology of learning and motivation: Advances in research and theory*, Vol. 31 (Vol. 19970101, pp. 187–252 ix, 366pp.). San Diego: Academic Press, Inc.
- Patel, V. L., Ramoni, M. F., et al. (1997). Cognitive models of directional inference in expert medical reasoning. In P. J. Feltovich & K. M. Ford (Eds.), *Expertise in context: Human and machine* (pp. 67–99). Cambridge: The MIT Press.
- Patel, V. L., Kushniruk, A. W., Yang, S., & Yale, J. F. (2000). Impact of a computer-based patient record system on data collection, knowledge organization,

- and reasoning. *Journal of the American Medical Informatics Association*, 7(6), 569–585.
- Patel, V. L., Arocha, J. F., & Kaufman, D. R. (2001). Review? A primer on aspects of cognition for medical informatics. *Journal of the American Medical Informatics Association: JAMIA*, 8(4), 324–343.
- Patel, V. L., Branch, T., & Arocha, J. F. (2002a). Errors in interpreting quantities as procedures: The case of pharmaceutical labels. *International Journal of Medical Informatics*, 65(3), 193–211.
- Patel, V. L., Kaufman, D. R., & Arocha, J. F. (2002b). Emerging paradigms of cognition in medical decision-making. *Journal of Biomedical Informatics*, 35(1), 52–75.
- Patel, V. L., Arocha, J. F., & Zhang, J. (2005). Thinking and reasoning in medicine. In K. J. Holyoak (Ed.), *Cambridge handbook of thinking and reasoning* (pp. 727–750). Cambridge: Cambridge University Press.
- Patel, A., Schieble, T., Davidson, M., Tran, M. C., Schoenberg, C., Delphin, E., et al. (2006). Distraction with a hand-held video game reduces pediatric preoperative anxiety. *Paediatric Anaesthesia*, 16(10), 1019–1027.
- Patel, V. L., Zhang, J., Yoskowitz, N. A., Green, R., & Sayan, O. R. (2008). Translational cognition for decision support in critical care environments: A review. *Journal of Biomedical Informatics*, 41, 413–431.
- Patel, V. L., Yoskowitz, N. A., Arocha, J. F., & Shortliffe, E. H. (2009). Cognitive and learning sciences in biomedical and health instructional design: A review with lessons for biomedical informatics education. *Journal of Biomedical Informatics*, 42, 176–197.
- Patel, V. L., Arocha, J. F., & Zhang, J. (2010). Medical reasoning and thinking. In K. J. Holyoak & R. G. Morrison (Eds.), *Oxford handbook of thinking and reasoning*. Oxford: Oxford University Press.
- Patel, V. L., Cohen, T., Murarka, T., et al. (2011). Recovery at the edge of error: Debunking the myth of the infallible expert. *Journal of Biomedical Informatics*, 44(3), 413–424.
- Patient Centered Medical Home 2011. Retrieved July 17, 2011, from <http://www.nqca.org/>.
- Patient Centered Medical Homes Resource Center. Retrieved July 17, 2011, from [http://www.pcmh.ahrq.gov/portal/server.pt/community/pcmh\\_home/1483](http://www.pcmh.ahrq.gov/portal/server.pt/community/pcmh_home/1483).
- Patton, M. Q. (1999, December). Enhancing the quality and credibility of qualitative analysis. *Health Services Research*, 34(5 Pt 2), 1189–1208.
- Pauker, S.G., Gorry, G.A., Kassirer, J.P., & Schwartz, W.B. (1976). Towards the simulation of clinical cognition: Taking a present illness by computer. *Amer J Med*, 60(7):981–996.
- Pauker, S. G., & Kassirer, J. P. (1980). The threshold approach to clinical decision making. *The New England Journal of Medicine*, 34(5 Pt 2), 1189–1208.
- Pauker, S. G., & Kassirer, J. P. (1981). Clinical decision analysis by computer. *Archives of Internal Medicine*, 141(13), 1831–1837.
- Pavel, M., Jimison, H., Hayes, T., Larimer, N., Hagler, S., Vimegnon, Y., et al. (2010). Optimizing medication reminders using a decision-theoretic framework. *Studies in Health Technology and Informatics*, 160(Pt 2), 791–795.
- Pawson, R., & Tilley, N. (1997). *Realistic evaluation*. London: Sage Press.
- Paxinos, G., & Watson, C. (1986). *The rat brain in stereotaxic coordinates*. San Diego: Academic Press.
- Payne, S. J. (2003). Users' mental models: The very ideas. In J. M. Carroll (Ed.), *HCI models, theories, and frameworks: Toward a multidisciplinary science* (1st ed., pp. 135–156). San Francisco: Morgan Kaufmann.
- Payne, P. R., Johnson, S. B., Starren, J. B., Tilson, H. H., & Dowdy, D. (2005). Breaking the translational barriers: The value of integrating biomedical informatics and translational research. *Journal of Investigative Medicine*, 53(4), 192–200.
- Payne, P. R., Embi, P. J., & Sen, C. K. (2009). Translational informatics: Enabling high-throughput research paradigms. *Physiological Genomics*, 39(3), 131–140.
- Payne, P. R., Embi, P. J., & Niland, J. (2010). Foundational biomedical informatics research in the clinical and translational science era: A call to action. *Journal of the American Medical Informatics Association: JAMIA*, 17(6), 615–616.
- Payton, F., Pare, G., LeRouge, C., & Madhu, R. (2011). Health care IT: Process, people, patients and interdisciplinary considerations. *Journal of the Association for Information Systems*, 12(2/3), 1–13.
- Peabody, G. (1922). The physician and the laboratory. *Boston Medical Surgery Journal*, 187, 324.
- Pearce, C., Arnold, M., Phillips, C., Trumble, S., & Dwan, K. (2011). The patient and the computer in the primary care consultation. *Journal of the American Medical Informatics Association: JAMIA*, 18(2), 138–142.
- Peleg, M., Tu, S., Bury, J., Ciccarese, P., Fox, J., Greenes, R. A., Hall, R., Johnson, P. D., Jones, N., Kumar, A., Miksch, S., Quaglini, S., Seyfang, A., Shortliffe, E. H., & Stefanelli, M. (2003). Comparing computer-interpretable guideline models: A case-study approach. *Journal of the American Medical Informatics Association: JAMIA*, 10, 52–68.
- Pencina, M. J., D'Agostino, R. B., Sr., D'Agostino, R. B., Jr., & Vasan, R. S. (2008). Evaluating the added predictive ability of a new marker: From area under the ROC curve to reclassification and beyond. *Statistics in Medicine*, 27, 157–172; discussion 207–112.
- Perkins, D. N., Schwartz, S., & Simmons, R. (1990). A view from programming. In M. Smith (Ed.), *Toward a unified theory of problem solving: Views from content domains* (pp. 45–67). Hillsdale: Lawrence Erlbaum Associates.
- Perkins, G., Renken, C., et al. (1997). Electron tomography of neuronal mitochondria: Three-dimensional structure and organization of cristae and membrane contacts. *Journal of Structural Biology*, 119(3), 260–272.
- Perreault, L. E., & Metzger, J. B. (1999). A pragmatic framework for understanding clinical decision support. *Healthcare Information Management*, 13(2), 5–21.

- Perry, M. (2003). Distributed cognition. In J. M. Carroll (Ed.), *HCI models, theories, and frameworks: Toward a multidisciplinary science* (pp. 193–223). San Francisco: Morgan Kaufmann Publishers.
- Pestian, J. P., & Matykiewicz, P. (2008). Classification of suicide notes using natural language processing. *Proceedings of the ACL BioNLP*, 96–97.
- Pestian, J. P., Brew, C., Matykiewicz, P., Hovermale, D. J., Johnson, N., Cohen, K. B., & Duch, W. (2007). A shared task involving multi-label classification of clinical free text. *Proceedings of the Workshop on BioNLP*, Association for Computational Linguistics Stroudsburg, PA: 97–104.
- Pestotnik, S. L. (2005). Expert clinical decision support systems to enhance antimicrobial stewardship programs: Insights from the Society of Infectious Diseases Pharmacists. *Pharmacotherapy*, 25(8), 1116–1125.
- Peterson, W., Birdsall, T. (1953). The Theory of Signal Detectability. (Technical Report No. 13.): Electronic Defense Group, University of Michigan, Ann Arbor.
- Petratos, G. N., Kim, Y., Evans, R. S., & Gardner, R. M. (2010). Comparing the effectiveness of computerized adverse drug event monitoring systems to enhance clinical decision support for hospitalized patients. *Applied Clinical Informatics*, 1, 293–303.
- Peute, L. W., Aarts, J., Bakker, P. J., & Jaspers, M. W. (2009). Anatomy of a failure: A sociotechnical evaluation of a laboratory physician order entry system implementation. *International Journal of Medical Informatics*, 79(4), e58–e70.
- Pevsner, P. (2009). *Bioinformatics and functional genomics*. Hoboken, NJ: Wiley.
- Pew Internet and American Life Project. Health Topics. (2011). <http://pewinternet.org/Reports/2011/HealthTopics.aspx>. Accessed 21 Nov 2011.
- Pew Internet and American Life Project. Peer-to-peer Healthcare. (2011). <http://pewinternet.org/Presentations/2011/Aug/NIH-Mind-the-Gap.aspx>. Accessed 21 Nov 2011.
- Pham, D. L., Xu, C. Y., et al. (2000). Current methods in medical image segmentation. *Annual Review of Biomedical Engineering*, 2, 315.
- Pham, H. H., Schrag, D., O'Malley, A. S., Wu, B., & Bach, P. B. (2007). Care patterns in medicare and their implications for pay for performance. *The New England Journal of Medicine*, 356(11), 1130–1139.
- Phansalkar, S., Desai, A. A., Bell, D., et al. (2012a). High-priority drug-drug interactions for use in electronic health records. *Journal of the American Medical Informatics Association: JAMIA*, 19(5), 735–743.
- Phansalkar, S., van der Sijs, H., Tucker, A. D., et al. (2012b). Drug-drug interactions that should be non-interruptive in order to reduce alert fatigue in electronic health records. *Journal of the American Medical Informatics Association: JAMIA*, 20(3), 489–493.
- Pickering, B. W., Herasevich, V., & Gajic, A. A. (2010). Novel representation of clinical information in the ICU – developing user interfaces which reduce information overload. *Applied Clinical Informatics*, 1, 116–131. PMID – NONE [Patent applied for!!].
- Pinsky, P. F., Miller, A., Kramer, B. S., Church, T., Reding, D., Prorok, P., Gelmann, E., Schoen, R. E., Buys, S., Hayes, R. B., & Berg, C. D. (2007, April 15). Evidence of a healthy volunteer effect in the prostate, lung, colorectal, and ovarian cancer screening trial. *American Journal of Epidemiology*, 165(8), 874–881.
- Plunkett, R. J., (1952). Standard Nomenclature of Diseases and Operations – 4th ed., American Medical Association. New York: McGraw-Hill
- Pluye, P., & Grad, R. (2004). How information retrieval technology may impact on physician practice: An organizational case study in family medicine. *Journal of Evaluation in Clinical Practice*, 10, 413–430.
- Polifka, J. E., & Friedman, J. M. (2002). Teratogen update: Azathioprine and 6-mercaptopurine. *Teratology*, 65(5), 240–261.
- Pollack, A. (2011, July 29). Ruling upholds gene patent in cancer test. *The New York Times*. New York City: The New York Times Company.
- Polson, P. G., Lewis, C., Rieman, J., & Wharton, C. (1992). Cognitive walkthroughs – a method for theory-based evaluation of user interfaces. *International Journal of Man-machine Studies*, 36(5), 741–773.
- Poon, K. B. (2005). *Fusing multiple heart rate signals to reduce alarms in adult intensive care unit*. Master of Science Thesis from Department of Medical Informatics, University of Utah. Salt Lake City, UT.
- Poon, E. G., Kuperman, G. J., Fiskio, J., & Bates, D. W. (2002). Real-time notification of laboratory data requested by users through alphanumeric pagers. *Journal of the American Medical Informatics Association: JAMIA*, 9, 217–222.
- Poon, E. G., Keohane, C. A., Yoon, C. S., Ditmore, M., Bane, A., Levzion-Korach, O., et al. (2010). Effect of bar-code technology on the safety of medication administration. *The New England Journal of Medicine*, 362(18), 1698–1707.
- Pople, H. (1982). Heuristic methods for imposing structure on ill-structured problems: The structuring of medical diagnosis. In Szolovits P. (ed.), *Artificial Intelligence in Medicine*. Boulder, CO: Westview Press.
- Porter, M., & Teisberg, E. (2006). *Redefining healthcare: Creating value-based competition on results*. Cambridge, MA: Harvard Business School Press.
- Pouratian, N., Sheth, S. A., et al. (2003). Shedding light on brain mapping: Advances in human optical imaging. *Trends in Neurosciences*, 26(5), 277–282.
- Prastawa, M., Gilmore, J., et al. (2004). Automatic segmentation of neonatal brain MRI. *Medical Image Computing and Computer-Assisted Intervention – Miccai 2004, Pt 1. Proceedings*, 3216, 10–17.
- Preece, J., Rogers, Y., & Sharp, H. (2007). *Interaction design: Beyond human-computer interaction* (2nd ed.). West Sussex: Wiley.
- President's Council of Advisors on Science and Technology. (2010). *Realizing the full potential of health information technology to improve healthcare for Americans: The path forward* (p. 40). Washington, DC: Executive Office of the President. Available at <http://www.whitehouse.gov/sites/default/files/micro>

- [sites/ostp/pcast-health-it-report.pdf](#). Accessed 12 Aug 2011.
- President's Information Technology Advisory Committee. (2001, February). Panel on Transforming Health Care. *Transforming health care through information technology*. Available at <http://www.itrd.gov/pubs/pitac/pitac-hc-9feb01.pdf>. Accessed 17 Dec 2012.
- Pressler, T. R., Yen, P. Y., Ding, J., Liu, J., Embi, P. J., & Payne, P. R. (2012). Computational challenges and human factors influencing the design and use of clinical research participant eligibility pre-screening tools. *BMC Medical Informatics and Decision Making*, 12, 47.
- Prochaska, J. O., & DiClemente, C. C. (2005). The trans-theoretical approach. In J. C. Norcross & M. R. Goldfried (Eds.), *Handbook of psychotherapy integration* (2nd ed., pp. 147–171). New York: Oxford University Press. <http://en.wikipedia.org/wiki/Special:BookSources/0195165799>. ISBN 0195165799.
- Prothero, J. S., & Prothero, J. W. (1986). Three-dimensional reconstruction from serial sections IV. The reassembly problem. *Computers and Biomedical Research*, 19(4), 3610373.
- Pruitt, K.D., Maglott, D.R. (2001). RefSeq and LocusLink: NCBI gene-centered resources. *Nucleic Acids Research*, 29(1), 137–140. Available at <http://www.ncbi.nlm.nih.gov/LocusLink/>
- Pryor, T. A. (1988). The HELP medical record system. *MD Computing*, 5(5), 22–33.
- Pryor, T. A. (1989). Computerized nurse charting. *International Journal of Clinical Monitoring and Computing*, 6, 173–179. PMID 2592844.
- Pryor, T. A., & Hripscak, G. (1993). The Arden syntax for medical logic modules. *International Journal of Clinical Monitoring and Computing*, 10(4), 215–224.
- Pryor, T. A., Gardner, R. M., Clayton, P. D., & Warner, H. R. (1983). The HELP system. *Journal of Medical Informatics*, 7(2), 87–102.
- Public Health Informatics Institute. (2011). *Collaborative requirements development methodology*. Decatur: Public Health Informatics Institute.
- Pysz, M. A., Gambhir, S. S., et al. (2010). Molecular imaging: Current status and emerging strategies. *Clinical Radiology*, 65(7), 500–516.
- Qin, J., Li, R., et al. (2010). A human gut microbial gene catalogue established by metagenomic sequencing. *Nature*, 464(7285), 59–65.
- Qiu, G. (2002). Indexing chromatic and achromatic patterns for content-based colour image retrieval. *Pattern Recognition*, 35(8), 1675–1686.
- Quake, S. (2011). Personal communication.
- Rahimi, B., Vimarlund, V., & Timpka, T. (2009). Health information system implementation: A qualitative meta-analysis. *Journal of Medical Systems*, 33(5), 359–368.
- Rahmani, R., Goldman, S. A., et al. (2008). Localized content-based image retrieval. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 30(11), 1902–1912.
- Ralston, J. D., Carrell, D., Reid, R., Anderson, M., et al. (2007). Patient web services integrated with a shared medical record: Patient use and satisfaction. *Journal of the American Medical Informatics Association: JAMIA*, 14(6), 798.
- Ralston, J. D., Carrell, D., Reid, R., Anderson, M., Moran, M., & Hereford, J. (2007). Patient web services integrated with a shared medical record: Patient use and satisfaction. *Journal of the American Medical Informatics Association*, 14(6), 798–806. Epub 2007 Aug 21. Erratum in: *Journal of the American Medical Informatics Association*. 2008;15(2):265.
- Ramnarayan, P., Kapoor, R. R., Coren, M., Nanduri, V., Tomlinson, A. L., Taylor, P. M., Wyatt, J. C., & Britto, J. F. (2003, November–December). Measuring the impact of diagnostic decision support on the quality of clinical decision making: Development of a reliable and valid composite score. *Journal of the American Medical Informatics Association: JAMIA*, 10(6), 563–572.
- Ramsaroop, P., & Ball, M. (2000). The “bank of health”: a model for more useful patient health records. *MD Computing*, 17, 45–48.
- Ransohoff, D. F., & Feinstein, A. R. (1978). Problems of spectrum and bias in evaluating the efficacy of diagnostic tests. *The New England Journal of Medicine*, 299(17), 926–930.
- Rausch, T., & Jackson, J. (2007). *Using clinical workflows to improve medical devices/system development*. Paper presented at the Joint Workshop on High-Confidence Medical Devices, Software, and Systems and Medical Device Plug-and-Play Interoperability. Cambridge, MA.
- Ray, P. (2011). Multimodality molecular imaging of disease progression in living subjects. *Journal of Biosciences*, 36(3), 499–504.
- Ray, P., & Gambhir, S. S. (2007). Noninvasive imaging of molecular events with bioluminescent reporter genes in living subjects. *Methods in Molecular Biology*, 411, 131–144.
- Read, J. D. (1990). Computerizing medical language. In H. DeGlanville & J. Roberts (Eds.), *Current perspectives in health computing HC90* (pp. 203–208). Computing: British Journal of Health Care.
- Read, J. D., & Benson, T. J. (1986). Comprehensive coding. *British Journal of Health Care Computing*, 3, 622–625.
- Reason, J. T. (1990). *Human error*. Cambridge/New York: Cambridge University Press.
- Rector, A. L., Nowlan, W. A., et al. (1993). Goals for concept representation in the GALEN project. In C. Safran (Ed.), *Proceedings of the 17th annual symposium on Computer Applications in Medical Care (SCAMC 93)* (pp. 414–418). New York: McGraw Hill.
- Rector, A. L., Glowinski, A. J., Nowlan, W. A., & Rossimori, A. (1995). Medical-concept models and medical records: An approach based on GALEN and PEN & PAD. *Journal of the American Medical Informatics Association: JAMIA*, 2(1), 19–35.
- Redd, W. H., Jacobsen, P. B., Die-Trill, M., Dermatis, H., McEvoy, M., & Holland, J. C. (1987). Cognitive/attentional distraction in the control of conditioned nausea in pediatric cancer patients receiving chemotherapy. *Journal of Consulting and Clinical Psychology*, 55(3), 391–395.

- Reiner, B. I., Siegel, E. L., & Hooper, F. J. (2002). Accuracy of interpretation of CT scans: Comparing PACS monitor displays and hard-copy images. *AJR. American Journal of Roentgenology*, *179*, 1407–1410.
- Reiser, S. (1991). The clinical record in medicine. Part 1: Learning from cases. *Annals of Internal Medicine*, *114*(10), 902–907.
- Research Support, U.S. Gov't, P.H.S. (2006). *Journal of the American Medical Informatics Association: JAMIA*, *13*(1), 91–95.
- Research Support, U.S. Gov't, P.H.S. (2007). *BMC medical informatics and decision making*, *7*, 25.
- Research Support, U.S. Gov't, P.H.S. (2008). *The New England Journal of Medicine*, *358*(16), 1732–1737.
- Research Support, U.S. Gov't, P.H.S. (2010). *Journal of medical Internet research*, *12*(2), e14.
- Research Support, U.S. Gov't, P.H.S. (2011). *PloS one*, *6*(4), e19256.
- Rhee, S. Y., Wood, V., Dolinski, K., & Draghici, S. (2008). Use and misuse of the gene ontology annotations. *Nature Reviews Genetics*, *9*, 509–515.
- Ribaric, S., Todorovski, L., et al. (2001). Presentation of dermatological images on the internet. *Computer Methods and Programs in Biomedicine*, *65*(2), 111–121.
- Ricci, M. A., Caputo, M., Amour, J., et al. (2003). Telemedicine reduces discrepancies in rural trauma care. *Telemedicine Journal and E-Health*, *9*, 3–11.
- Ricci, F., Rokach, L., Shapira, B., & Kantor, P. B. (Eds.). (2011). *Recommender systems handbook*. New York/London: Springer.
- Richardson, J. S. (1981). The anatomy and taxonomy of protein structure. *Advances in Protein Chemistry*, *34*, 167–339.
- Richesson, R. L., & Krischer, J. (2007, November–December). Data standards in clinical research: Gaps, overlaps, challenges and future directions. *Journal of the American Medical Informatics Association: JAMIA*, *14*(6), 687–696.
- Richter, G. M., Williams, S. L., Starren, J., Flynn, J. T., & Chiang, M. F. (2009). Telemedicine for retinopathy of prematurity diagnosis: Evaluation and challenges. *Survey of Ophthalmology*, *54*, 671–685.
- Rigby, M., Forsström, J., Ruth, R., & Wyatt, J. (2001). Verifying quality and safety in health informatics services. *BMJ*, *323*, 552–556.
- Rimoldi, H. J. (1961). The test of diagnostic skills. *Journal of Medical Education*, *36*, 73–79.
- Rindflesch, T.C., Tanabe, L., Weinstein, J.N., & Hunter, L. (2000). EDGAR: extraction of drugs, genes and relations from the biomedical literature. *Proceedings of the Pacific Symposium Biocomputing*, 517–528.
- Ritchie, C. J., Edwards, W. S., et al. (1996). Three-dimensional ultrasonic angiography using power-mode Doppler. *Ultrasound in Medicine and Biology*, *22*(3), 277–286.
- Ritchie, M. D., Denny, J. C., Crawford, D. C., et al. (2010). Robust replication of genotype-phenotype associations across multiple diseases in an electronic medical record. *American Journal of Human Genetics*, *86*, 560–572.
- Riva, A., Mandl, K. D., Oh, D. H., Nigrin, D. J., Butte, A., Szolovits, P., et al. (2001). The personal internetworked notary and guardian. *International Journal of Medical Informatics*, *62*(1), 27–40.
- Robertson, J. (2011, August 4). Insulin pumps, monitors vulnerable to hacking. Associated Press via various media, e.g., *The Washington Times*. Retrieval 1 Aug 2012: <http://www.washingtontimes.com/news/2011/aug/4/insulin-pumps-monitors-vulnerable-to-hacking/?page=all>
- Robinson, P. J. (1997). Radiology's Achilles' heel: Error and variation in the interpretation of the Rontgen image. *The British Journal of Radiology*, *70*(839), 1085–1098.
- Robinson, A., & Thomson, R. (2001). Variability in patient preferences for participating in medical decision making: Implication for the use of decision support tools. *Quality in Health Care: QHC*, *10*(Suppl 1), i34–i38.
- Rocca-Serra, P., Brandizi, M., Maguire, E., et al. (2010). ISA software suite: Supporting standards-compliant experimental annotation and enabling curation at the community level. *Bioinformatics*, *26*, 2354–2356.
- Roden, D. M., Pulley, J. M., Basford, M. A., Bernard, G. R., Clayton, E. W., Balsler, J. R., & Masys, D. R. (2008, September). Development of a large-scale de-identified DNA biobank to enable personalized medicine. *Clinical Pharmacology and Therapeutics*, *84*(3), 362–369.
- Rodríguez-Campos, L. (2012, November). Advances in collaborative evaluation. *Evaluation and Program Planning*, *35*(4), 523–528.
- Rogers, Y. (2004). New theoretical approaches for HCI. *Annual Review of Information Science and Technology*, *38*, 87–143.
- Rogers, W. J., Canto, J. G., Lambrew, C. T., Tiefenbrunn, A. J., Kinkaid, B., Shultz, D. A., Frederick, P. D., & Every, N. (2000). Temporal trends in the treatment of over 1.5 million patients with myocardial infarction in the US from 1990 thru 1999: The National Registry of Myocardial Infarction 1, 2 and 3. *Journal of the American College of Cardiology*, *36*, 2056–2063. PMID 11127441.
- Rohlfing, T., & Maurer, C. R., Jr. (2003). Nonrigid image registration in shared-memory multiprocessor environments with application to brains, breasts, and bees. *IEEE Transactions on Information Technology in Biomedicine*, *7*(1), 16–25.
- Romano, M. J., & Stafford, R. S. (2011). Electronic health records and clinical decision support systems: Impact on national ambulatory care quality. *Archives of Internal Medicine*, *171*(10), 897–903.
- Rose, M. T. (1989). *The open book: A practical perspective on OSI*. Upper Saddle River: Prentice Hall.
- Rosen, G. (1993). *History of public health*. Baltimore: Johns Hopkins University Press.
- Rosen, G.D., Williams, A.G., et al. (2000). The mouse brain library @ [www.mbl.org](http://www.mbl.org). *International Mouse Genome Conference*, *14*, 166.
- Rosenbloom, S. T., Geissbuhler, A. J., Dupont, W. D., Giuse, D. A., Talbert, D. A., Tierney, W. M., Plummer, W. D., Stead, W. W., & Miller, R. A. (2005). *Effect of CPOE User Interface Design on User-Initiated Access*

- to Educational and Patient Information during Clinical Care *Journal of the American Medical Informatics Association: JAMIA*, 12(4), 458–473.
- Rosencrance, L. (2006, November 13). Problems abound for Kaiser e-health records management system. *Computerworld*, 40(46), 1–3.
- Rosenfeld, B. A., Dorman, T., Breslow, M. J., et al. (2000). Intensive care unit telemedicine: Alternate paradigm for providing continuous intensivist care. *Critical Care Medicine*, 28, 3925–3931.
- Ross, B., & Bluml, S. (2001). Magnetic resonance spectroscopy of the human brain. *Anatomical Record (New Anat)*, 265(2), 54–84.
- Ross, D. T., Scherf, U., Eisen, M. B., et al. (2000). Systematic variation in gene expression patterns in human cancer cell lines. *Nature Genetics*, 24, 227–235.
- Rosse, C. (2000). Terminologia anatomica; considered from the perspective of next-generation knowledge sources. *Clinical Anatomy*, 14, 120–133.
- Rosse, C., & Mejino, J. L. V. (2003). A reference ontology for bioinformatics: The foundational model of anatomy. *Journal of Bioinformatics*, 36(6), 478–500.
- Rosse, C., Mejino, J. L., et al. (1998a). Motivation and organizational principles for anatomical knowledge representation: The digital anatomist symbolic knowledge base. *Journal of the American Medical Informatics Association: JAMIA*, 5(1), 17–40.
- Rosse, C., Shapiro, L.G., et al. (1998b). The Digital Anatomist foundational model: principles for defining and structuring its concept domain. *Proceedings, American Medical Informatics Association Fall Symposium* (pp. 820–824), Orlando.
- Roth, E. M., Patterson, E. S., & Mumaw, R. J. (2002). Cognitive engineering: Issues in user-centered system design. In J. J. Marciniak (Ed.), *Encyclopedia of software engineering*. New York: Wiley.
- Rothenberg, J. (1999). *Ensuring the longevity of digital information*, from <http://www.clir.org/pubs/archives/ensuring.pdf>
- Rotman, B. L., Sullivan, A. N., McDonald, T. W., Brown, B. W., DeSmedt, P., Goodnature, D., Higgins, M. C., Suermondt, H. J., Young, C., & Owens, D. K. (1996). A randomized controlled trial of a computer-based physician workstation in an outpatient setting: Implementation barriers to outcome evaluation. *Journal of the American Medical Informatics Association: JAMIA*, 3(5), 340–8. PMID: 8880681 [PubMed - indexed for MEDLINE].
- Rozenblum, R., Jang, Y., Zimlichman, E., Salzberg, C., Tamblyn, M., Buckeridge, D., Forster, A., Bates, D. W., & Tamblyn, R. (2011). A qualitative study of Canada's experience with the implementation of electronic health information technology. *CMAJ: Canadian Medical Association journal*, 183(5), E281–E288.
- RSNA. (2009). *RSNA to create image sharing network with NIBIB grant*. Retrieved June 24, 2011, from [http://www.rsna.org/Publications/rsnanews/November-2009/1109\\_announcements.cfm](http://www.rsna.org/Publications/rsnanews/November-2009/1109_announcements.cfm). Accessed 27 Jan 13.
- Rubin, D. L. (2008). Creating and curating a terminology for radiology: Ontology modeling and analysis. *Journal of Digital Imaging*, 21(4), 355–362.
- Rubin, D. L. (2011, October). Measuring and improving quality in radiology: Meeting the challenge with informatics. *Radiographics*, 31(6), 1511–1527.
- Rubin, D. L., & Napel, S. (2010). Imaging informatics: toward capturing and processing semantic information in radiology images. *Yearbook of Medical Informatics*, 34–42.
- Rubin, D.L., Gennari, J., & Musen, M.A. (2000). Knowledge representation and tool support for critiquing clinical trial protocols. *Proceedings of the AMIA Symposium*, 724–728.
- Rubin, D. L., Bashir, Y., et al. (2004). Linking ontologies with three-dimensional models of anatomy to predict the effects of penetrating injuries. *Conference Proceedings: IEEE Engineering in Medicine and Biology Society*, 5, 3128–3131.
- Rubin, D. L., Bashir, Y., et al. (2005). Using an ontology of human anatomy to inform reasoning with geometric models. *Studies in Health Technology and Informatics*, 111, 429–435.
- Rubin, D.L., Grossman, D., et al. (2006a). Ontology-based representation of simulation models of physiology. *AMIA Annual Symposium Proceedings*, 664–668.
- Rubin, D. L., Dameron, O., et al. (2006b). Using ontologies linked with geometric models to reason about penetrating injuries. *Artificial Intelligence in Medicine*, 37(3), 167–176.
- Rubin, D.L., Rodriguez, C., et al. (2008). iPad: Semantic annotation and markup of radiological images. *AMIA Annual Symposium Proceedings*, 626–630.
- Rubin, D. L., Talos, I. F., et al. (2009a). Computational neuroanatomy: Ontology-based representation of neural components and connectivity. *BMC Bioinformatics*, 10(Suppl 2), S3.
- Rubin, D. L., Supekar, K., et al. (2009b). Annotation and Image Markup: Accessing and Interoperating with the Semantic Content in Medical Imaging. *IEEE Intelligent Systems*, 24(1), 57–65.
- Rubin, D. L., Flanders, A., et al. (2011). Ontology-assisted analysis of Web queries to determine the knowledge radiologists seek. *Journal of Digital Imaging*, 24(1), 160–164.
- Rudin, R. S. (2010). The litmus test for health information exchange success: Will small practices participate?: comment on "health information exchange". *Archives of Internal Medicine*, 170(7), 629–630.
- Rudin, R. S., Salzberg, C. A., Szolovits, P., Volk, L. A., Simon, S. R., & Bates, D. W. (2011). Care transitions as opportunities for clinicians to use data exchange services: how often do they occur? *Journal of the American Medical Informatics Association: JAMIA*, 18(6), 853–858.
- Ruiz, M.E. (2006). Combining image features, case descriptions and UMLS concepts to improve retrieval of medical images. *AMIA Annual Symposium Proceedings*, 674–678.



- Rusk, N. (2010). Expanding HapMap. *Nature Methods*, 7, 780–781.
- Saccavini, C., & Greco, F. (2004). *Health Current Account Project*. Presented at EuroPAC MIR (Session 7.19).
- Saeed, M., Lieu, C., Raber, G., & Mark, R. G. (2002). MIMIC II: A massive temporal ICU patient database to support research in intelligent patient monitoring. *Computers in Cardiology*, 29, 641–644.
- Saeed, M., Villarreal, M., Reisner, A. T., Clifford, G., Lethman, L. W., Moody, G., Heldt, T., Kyaw TH Moody, B., & Mark, R. G. (2011). Multiparameter intelligent monitoring in intensive care II: A public-access intensive care unit database. *Critical Care Medicine*, 39, 952–960. PMID 21283005.
- Saffle, J. R., Edelman, L., Theurer, L., et al. (2009). Telemedicine evaluation of acute burns is accurate and cost-effective. *The Journal of Trauma*, 67, 358–365.
- Safran, C., Porter, D., Lightfoot, J., Rury, C. D., Underhill, L. H., Bleich, H. L., & Slack, W. V. (1989). ClinQuery: A system for online searching of data in a teaching hospital. *Annals of Internal Medicine*, 111(9), 751–756.
- Safran, C., Rury, C., Rind, D., & Taylor, W. C. (1991). A computer-based outpatient medical record for a teaching hospital. *MD Computing*, 8, 291–299.
- Safran, C., Shabot, M. M., Munger, B. S., Holmes, J. H., Steen, E. B., Lumpkin, J. R., & Detmer, D. E. (2009, March–April). AMIA board of directors. Program requirements for fellowship education in the subspecialty of clinical informatics. *Journal of the American Medical Informatics Association: JAMIA*, 16, 158–166. PMID 19074295.
- Sager, N. (1972). Syntactic formatting of science information. *Proceedings of the AFIPS* (pp. 791–800). In Kittredge, R., & Lehrberger, J., (Eds.), Reprinted in *Sublanguage: Studies of language in restricted semantic domains* (pp. 9–26). Berlin (1982): Walter de Gruyter.
- Sager, N. (1978). Natural language information formatting: The automatic conversion of texts to a structured data base. In M. C. Yovits (Ed.), *Advances in computers* (Vol. 17, pp. 89–162). New York: Academic Press.
- Sager, N. (1981). *Natural language information processing: A computer grammar of english and its applications*. Reading: Addison-Wesley.
- Sager, N., Friedman, C., & Lyman, M. (1987). *Medical language processing – computer management of narrative data*. Reading: Addison-Wesley.
- Saleem, J. J., Russ, A. L., Justice, C. F., Hagg, H., Ebright, P. R., Woodbridge, P. A., & Doebbeling, B. N. (2009a). Exploring the persistence of paper with the electronic health record. *International Journal of Medical Informatics*, 78(9), 618–628.
- Saleem, J., Russ, A., Sanderson, P., Johnson, T., Zhang, J., & Sittig, D. (2009b). Current challenges and opportunities for better integration of human factors research with development of clinical information systems. *Yearbook of Medical Informatics*, 2009, 48–58.
- Saleem, J. J., Russ, A. L., Neddo, A., Blades, P. T., Doebbeling, B. N., & Foresman, B. H. (2011). Paper persistence, workarounds, and communication breakdowns in computerized consultation management. *International Journal of Medical Informatics*, 80(7), 466–479.
- Salomon, G., Perkins, D. N., & Globerson, T. (1991). Partners in cognition: Extending human intelligence with intelligent technologies. *Educational Researcher*, 20(3), 2–9. doi:10.3102/0013189x020003002.
- Salpeter, S. R., Sanders, G. D., Salpeter, E. E., & Owens, D. K. (1997). Monitored isoniazid prophylaxis for low-risk tuberculin reactors older than 35 years of age: A risk-benefit and cost-effectiveness analysis. *Annals of Internal Medicine*, 127(12), 1051–1061.
- Salton, G. (1991). Developments in automatic text retrieval. *Science*, 253, 974–980.
- Salton, G., & McGill, M. (1983). *Introduction to modern information retrieval*. New York: McGraw-Hill.
- Salton, G., Fox, E., & Wu, H. (1983). Extended Boolean information retrieval. *Communications of the ACM*, 26, 1022–1036.
- Saltz, J., Hastings, S., Langella, S., Oster, S., Kurc, T., Payne, P., & Chue Hong, N. (2008). A roadmap for caGrid, an enterprise grid architecture for biomedical research. *Studies in Health Technology and Informatics*, 138, 224–237.
- Samantaray, R., Njoku, V. O., Brunner, J. W., Raghavan, V., Kendall, M. L., & Shih, S. C. (2011). Promoting electronic health record adoption among small independent primary care practices. *The American Journal of Managed Care*, 17(5), 353–358.
- Sander, C. (2000). Genomic medicine and the future of health care. *Science*, 287(5460), 1977–1978.
- Sanders, G. D., Hagerty, C. G., Sonnenberg, F. A., Hlatky, M. A., & Owens, D. K. (1999). Distributed dynamic decision support using a web-based interface for prevention of sudden cardiac death. *Medical Decision Making*, 19(2), 157–166.
- Sanders, G. D., Hlatky, M. A., & Owens, D. K. (2005). Cost effectiveness of the implantable cardioverter defibrillator (ICD) in primary prevention of sudden death. *The New England Journal of Medicine*, 353, 1471–1478.
- Sandor, S., & Leahy, R. (1997). Surface-based labeling of cortical anatomy using a deformable atlas. *IEEE Transactions on Medical Imaging*, 16(1), 41–54.
- Sansone, S. A., Fan, T., et al. (2007). The metabolomics standards initiative. *Nature Biotechnology*, 25(8), 846–848.
- Sansone, S. A., Rocca-Serra, P., et al. (2008). The first RSBI (ISA-TAB) workshop: "can a simple format work for complex studies?". *OMICS A Journal of Integrative Biology*, 12(2), 143–149.
- Saria, S., Rajani, A. K., Gould, J., Koller, D., & Penn, A. A. (2010). Integration of early physiological responses predicts later illness severity in preterm infants. *Science Translational Medicine*, 2(48), 48ra65.
- Sarkar, I. N., & Payne, P. R. (2011). The joint summits on translational science: Crossing the translational chasm. *Journal of Biomedical Informatics*, 44(Suppl 1), S1–S2.

- Sarkar, I. N., & Starren, J. (2002). Desiderata for personal electronic communications in clinical systems. *Journal of the American Medical Informatics Association: JAMIA*, 9, 209–216.
- Sarkar, I. N., Butte, A. J., Lussier, Y. A., et al. (2011a). Translational bioinformatics: Linking knowledge across biological and clinical realms. *Journal of the American Medical Informatics Association: JAMIA*, 18, 354–357.
- Sarkar, U., Karter, A. J., Liu, J. Y., Adler, N. E., Nguyen, R., Lopez, A., et al. (2011b). Social disparities in internet patient portal use in diabetes: Evidence that the digital divide extends beyond access. *Journal of the American Medical Informatics Association: JAMIA*, 18(3), 318–321.
- Satava, R. M. (2007). The future of surgical simulation and surgical robotics. *Bulletin of the American College of Surgeons*, 92(3), 13–19.
- Saunders, C. J., Miller, N. A., Soden, S. E., et al. (2012). Rapid whole-genome sequencing for genetic disease diagnosis in neonatal intensive care units. *Science Translational Medicine*, 4(154), 154ra135.
- Sayers, E., Barrett, T., Benson, D., Bolton, E., Bryant, S., Canese, K., & DiCuccio, M. (2011). Database resources of the national center for biotechnology information. *Nucleic Acids Research*, 39(suppl1), D38–D51.
- Scaife, M., & Rogers, Y. (1996). External cognition: How do graphical representations work? *International Journal of Human Computer Studies*, 45(2), 185–213.
- Scalbert, A., Brennan, L., et al. (2009). Mass-spectrometry-based metabolomics: Limitations and recommendations for future progress with particular focus on nutrition research. *Metabolomics*, 5(4), 435–458.
- Schadt, E. E. (2012). The changing privacy landscape in the era of big data. *Molecular Systems Biology*, 8, 612.
- Schaefer, C. F., Anthony, K., Krupa, S., et al. (2009). PID: The pathway interaction database. *Nucleic Acids Research*, 37, D674–D679.
- Schaltenbrand, G., & Warren, W. (1977). *Atlas for stereotaxy of the human brain*. Stuttgart: Thieme.
- Schedlbauer, A., Prasad, V., Mulvaney, C., Phansalkar, S., Stanton, W., Bates, D. W., & Avery, A. J. (2009). What evidence supports the use of computerized alerts and prompts to improve clinicians' prescribing behavior? *Journal of the American Medical Informatics Association: JAMIA*, 16(4), 531–538.
- Scheuner, M. T., Sieverding, P., & Shekelle, P. G. (2008). Delivery of genomic medicine for common chronic adult diseases: A systematic review. *JAMA: The Journal of the American Medical Association*, 299(11), 1320–1334.
- Schimmel, A. M., Fisher, Y. L., et al. (2011). Optical coherence tomography in the diagnosis and management of diabetic macular edema: Time-domain versus spectral-domain. *Ophthalmic Surgery, Lasers & Imaging*, 42(4), S41–S55.
- Schmidt, H. G., & Rikers, R. M. (2007). How expertise develops in medicine: Knowledge encapsulation and illness script formation. *Medical Education*, 41(12), 1133–1139. doi:10.1111/j.1365-2923.2007.02915.x. MED2915 [pii].
- Schnall, R., Gordon, P., Camhi, E., & Bakken, S. (2011a). Perceptions of factors influencing use of an electronic record for case management of persons living with HIV. *AIDS Care*, 23(3), 357–365.
- Schnall, R., Cimino, J. J., Currie, L. M., & Bakken, S. (2011b). Information needs of case managers caring for persons living with HIV. *Journal of the American Medical Informatics Association: JAMIA*, 18(3), 305–308.
- Schnipper, J. L., Gandhi, T. K., Wald, J. S., Grant, R. W., Poon, E. G., Volk, L. A., et al. (2008a). Design and implementation of a web-based patient portal linked to an electronic health record designed to improve medication safety: The Patient Gateway medications module. *Informatics in Primary Care*, 16(2), 147–155.
- Schnipper, J. L., Linder, J. A., Palchuk, M. B., Einbinder, J. S., Li, Q., Postilnik, A., & Middleton, B. (2008b). "Smart forms" in an electronic medical record: Documentation-based clinical decision support to improve disease management. *Journal of the American Medical Informatics Association: JAMIA*, 15(4), 513–523.
- Schultz, J. R., Cantrill, S. V., & Morgan, K. G. (1971). *AFIPS Conference Proceedings*, 38, 239–264.
- Schultz, E. B., Price, C., et al. (1997). Symbolic anatomic knowledge representation in the read codes version 3: Structure and application. *Journal of the American Medical Informatics Association: JAMIA*, 4, 38–48.
- Schwamm, L. H., Holloway, R. G., Amarenco, P., Audebert, H. J., Bakas, T., Chumbler, N. R., Handschu, R., Jausch, E. C., Knight, W. A., 4th, Levine, S. R., Mayberg, M., Meyer, B. C., Meyers, P. M., Skalabrin, E., & Wechsler, L. R. (2009). American heart association stroke council; interdisciplinary council on peripheral vascular disease. *Stroke*, 40, 2616–2634.
- Schwartz, W. B. (1970). Medicine and the computer: The promise and problems of change. *The New England Journal of Medicine*, 283(23), 1257–1264.
- Schwartz, D., & Collins, F. (2007). Medicine. Environmental biology and human disease. *Science*, 316, 695–696.
- Schwartz, R. J., Weiss, K. M., & Buchanan, A. V. (1985). Error control in medical data. *MD Computing*, 2(2), 19–25.
- Scott, G. P., Shah, P., Wyatt, J. C., Makubate, B., & Cross, F. W. (2011, August 11). Making electronic prescribing alerts more effective: Scenario-based experimental study in junior doctors. *Journal of the American Medical Informatics Association: JAMIA*, 18(6), 789–798.
- Seal, R. L., Gordon, S. M., Lush, M. J., et al. (2011). Genenames.org: The HGNC resources in 2011. *Nucleic Acids Research*, 39, D514–D519.
- Seidenari, S., Pellacani, G., et al. (2003). Computer description of colours in dermoscopic melanocytic lesion images reproducing clinical assessment. *British Journal of Dermatology*, 149(3), 523–529.

- Sekimizu, T., Park, H. S., & Tsujii, J. (1998). Identifying the interaction between genes and gene products based on frequently seen verbs in Medline abstracts. *Genome Informatics Ser Workshop on Genome Informatics, 9*, 62–71.
- Senathirajah, Y., & Bakken, S. (2009). Architectural and usability considerations in the development of a Web 2.0-Based EHR. *Student Health Technology Informatics, 143*, 315–321.
- Sensor Systems Inc. (2001). *MedEx*. from <http://medx.sensor.com/products/medx/index.html>
- Shabo, A. (2005). The implications of electronic health record for personalized medicine. *Biomedical papers of the Medical Faculty of the University Palacký, Olomouc, Czechoslovakia, 149*(2), suppl 251–8.
- Shabo, A. (2006). A global socio-economic-medico-legal model for the sustainability of longitudinal health records. *Methods of Information in Medicine, 45*, 240–245 (Part 1), 498–505 (Part 2).
- Shabot, M. M. (1995). Computers in the intensive care unit: Was pogo correct? *Journal of Intensive Care Medicine, 10*, 211–212.
- Shabot, M. M., & Gardner, R. M. (Eds.). (1994). *Decision support systems in critical care*. Boston: Springer.
- Shah, N. H., & Musen, M.A. (2008). UMLS-Query: a perl module for querying the UMLS. *AMIA Annual Symposium Proceedings*, Washington, DC: 652–656.
- Shah, N. R., Seger, A. C., Seger, D. L., Fiskio, J. M., Kuperman, G. J., Blumenfeld, B., Recklet, E. G., et al. (2006). Improving acceptance of computerized prescribing alerts in ambulatory care. *Journal of the American Medical Informatics Association: JAMIA, 13*(1), 5–11.
- Shah, N. H., Rubin, D. L., Espinosa, I., et al. (2007). Annotation and query of tissue microarray data using the NCI thesaurus. *BMC Bioinformatics, 8*, 296.
- Shah, N. H., Jonquet, C., Chiang, A. P., et al. (2009a). Ontology-driven indexing of public datasets for translational bioinformatics. *BMC Bioinformatics, 10*(Suppl 2), S1.
- Shah, S. H., Crosslin, D.R., Nelson, S., et al. (2009b). Metabolomic profiles are associated with baseline insulin resistance and improvement in insulin resistance with weight loss in the WLM trial. *Circulation*.
- Shahar, Y., & Musen, M. A. (1996). Knowledge-based temporal abstractions in clinical domains. *Artificial Intelligence in Medicine, 8*(3), 267–298.
- Shapiro, L. G., & Stockman, G. C. (2001). *Computer vision*. Upper Saddle River: Prentice Hall.
- Shea, S., Starren, J., Weinstock, R. S., et al. (2002). Columbia University's informatics for diabetes education and telemedicine (IDEATel) project: Rationale and design. *Journal of the American Medical Informatics Association: JAMIA, 9*(1), 49–62.
- Shea, S., Weinstock, R. S., Teresi, J. A., et al. (2009). 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: JAMIA, 16*(4), 446–456.
- Shekelle, P.G., Morton, S.C., et al. (2006). Costs and benefits of health information technology. *Evidence Reports Technology Assessment (Full Report), (132)*, 1–71.
- Shekelle, P. G., Pronovost, P. J., Wachter, R. S., et al. (2011). Advancing the science of patient safety. *Annals of Internal Medicine, 154*(10), 693–696.
- Sherifali, D., Greb, J. L., Amirthavasar, G., Hunt, D., Haynes, R. B., Harper, W., Holbrook, A., Capes, S., Goeree, R., O'Reilly, D., Pullenayegum, E., & Gerstein, H. C. (2011). Effect of computer-generated tailored feedback on glycemic control in people with diabetes in the community: A randomized controlled trial. *Diabetes Care, 34*(8), 1794–1798.
- Sherry, S. T., Ward, M. H., Kholodov, M., Baker, J., Phan, L., Smigielski, E. M., & Sirotkin, K. (2001). DbSNP: The NCBI database of genetic variation. *Nucleic Acids Research, 29*, 308–311.
- Shi, J. B., & Malik, J. (2000). Normalized cuts and image segmentation. *IEEE Transactions on Pattern Analysis and Machine Intelligence, 22*(8), 888–905.
- Shiffman, R. N., Karras, B. T., Agrawal, A., Chen, R., Marengo, L., & Nath, S. (2000). GEM: A proposal for a more comprehensive guideline document model using XML. *Journal of the American Medical Informatics Association: JAMIA, 7*(5), 488–498.
- Shih, S. C., McCullough, C. M., Wang, J. J., Singer, J., & Parsons, A. S. (2011). Health information systems in small practices. Improving the delivery of clinical preventive services. *Am J Prev Med, 41*(6), 603–609. doi: [10.1016/j.amepre.2011.07.024](https://doi.org/10.1016/j.amepre.2011.07.024).
- Shim, E.-J., Lee, K.-S., Park, J.-H., & Park, J.-H. (2011). Comprehensive needs assessment tool in cancer (CNAT): the development and validation. *Supportive Care in Cancer, 19*(12), 1957–1968.
- Shirky, C. (2010). *Cognitive surplus: Creativity and generosity in a connected age*. New York: Penguin Press.
- Shneiderman, B. (1998). *Designing the user interface: Strategies for effective human-computer-interaction* (3rd ed.). Reading: Addison Wesley Longman.
- Shortell, S. M., Gillies, R. R., Anderson, D. A., et al. (2000). *Remaking healthcare in America: The evolution of organized delivery* (2nd ed.). San Francisco: Jossey-Bass.
- Shortliffe, E. H., Buchanan, B. G. (1975). A model of inexact reasoning in medicine. *Mathematical Biosciences, 23*(3), 351–379.
- Shortliffe, E. H. (1976). *Computer-based medical consultations: MYCIN*. New York: Elsevier/North Holland.
- Shortliffe, E. H. (1993). Doctors, patients, and computers: Will information technology dehumanize health-care delivery? *Proceedings of the American Philosophical Society, 137*(3), 390–398.
- Shortliffe, E. H. (1994). Dehumanization of patient care. Are computers the problem or the solution? *Journal of the American Medical Informatics Association: JAMIA, 1*, 76–78.
- Shortliffe, E.H. (1998a). The Next Generation Internet and health care: A civics lesson for the informatics

- community. *Proceedings of the AMIA Annual Fall Symposium* (pp. 8–14), Orlando.
- Shortliffe, E. H. (1998b). *The evolution of health-care records in the era of the Internet, Proceedings of Medinfo 98*. Seoul/Amsterdam: IOS Press.
- Shortliffe, E. H. (2000). Networking health: Learning from others, taking the lead. *Health Affairs*, 19(6), 9–22.
- Shortliffe, E. H. (2005). Strategic action in health information technology: Why the obvious has taken so long. *Health Affairs*, 24, 1222–1233.
- Shortliffe, E. H. (2010). Biomedical informatics in the education of physicians. *Journal of the American Medical Association*, 304(11), 1227–1228.
- Shortliffe, T. (2012). *The Future of Biomedical Informatics: A Perspective from Academia*. Keynote Presentation, Medical Informatics Europe 2012, Pisa, Italy.
- Shortliffe, E. H., & Blois, M. S. (2001). The computer meets medicine and biology: Emergence of a discipline. In E. H. Shortliffe & L. E. Perreault (Eds.), *Medical informatics: Computer applications in health care and biomedicine* (2nd ed., pp. 3–40). New York: Springer.
- Shortliffe, E.H., Sondik, E. (2004). *The informatics infrastructure: Anticipating its role in cancer surveillance*. Proceedings of the C-Change Summit on Cancer Surveillance and Information: The Next Decade, Phoenix
- Shortliffe, E. H., Buchanan, B. G., & Feigenbaum, E. (1979). Knowledge engineering for medical decision making: a review of computer-based clinical decision aids. *Proceedings of the IEEE*, 67, 1207–1224.
- Shortliffe, E. H., Califano, A., & Hunter, L. (2009). New JBI emphasis on translational bioinformatics. *Journal of Biomedical Informatics*, 42, 199–200.
- Shubin, H., & Weil, M. H. (1966). Efficient monitoring with a digital computer of cardiovascular function in seriously ill patients. *Annals of Internal Medicine*, 65(3), 453–460.
- Shuldiner, A. R., O'Connell, J. R., Bliden, K. P., et al. (2009). Association of cytochrome P450 2C19 genotype with the antiplatelet effect and clinical efficacy of clopidogrel therapy. *JAMA: The Journal of the American Medical Association*, 302, 849–857.
- Siebert, U., Alagoz, O., Bayoumi, A. M., Jahn, B., Owens, D. K., Cohen, D., et al. (2012). State-transition modeling: A report of the ISPOR-SMDM modeling good research practices task force-3. *Medical Decision Making*, 32, 690–700.
- Siebig, S., Kuhls, S., Imhoff, M., Gather, U., Scholmerich, J., & Wrede, C. E. (2010). Intensive care unit alarms – how many do we need? *Critical Care Medicine*, 38, 451–456. PMID 20016379.
- Siegler, E. L. (2010). The evolving medical record. *Annals of Internal Medicine*, 153(10), 671–677.
- Siek, K. A., Khan, D. U., Ross, S. E., Haverhals, L. M., Meyers, J., & Cali, S. R. (2011). Designing a personal health application for older adults to manage medications: A comprehensive case study. *Journal of Medical Systems*, 35(5), 1099–1121.
- Silberg, W., Lundberg, G., & Musacchio, R. (1997). Assessing, controlling, and assuring the quality of medical information on the internet: Caveat lector et viewer – let the reader and viewer beware. *Journal of the American Medical Association*, 277, 1244–1245.
- Simborg, D. W., Chadwick, M., Whiting-O'Keefe, Q. E., Tolchin, S. G., Kahn, S. A., & Bergan, E. S. (1983). Local area networks and the hospital. *Computers and Biomedical Research*, 16(3), 247–259.
- Simon, H. A. (1980). The behavioral and social sciences. *Science*, 209(4452), 72–78.
- Simon, D. P., & Simon, H. A. (1978). Individual differences in solving physics problems. In R. S. Siegler (Ed.), *Children's thinking: What develops?* (Vol. 11, pp. 325–348). Hillsdale: Lawrence Erlbaum Associates.
- Simon, R., Brennecke, R., Hess, O., Meier, B., Reiber, H., & Zeelenberg, C. (1994). Report of the ESC task force on digital imaging in cardiology. Recommendations for digital imaging in angiocardiology. *European Heart Journal*, 15, 1332–1334.
- Simonaitis, L., Belsito, A., Warvel, J., Hui, S., & McDonald, C. J. (2006). Extensible stylesheet language formatting objects (XSL-FO): a tool to transform patient data into attractive clinical reports. *AMIA Annual Symposium Proceedings, 2006*, 719–723.
- Singer, E. (2011). A family learns the secrets of its genomes. *MIT Technology Review*.
- Singh, A., Massoud, T. F., et al. (2008). Molecular imaging of reporter gene expression in prostate cancer: An overview. *Seminars in Nuclear Medicine*, 38(1), 9–19.
- Sirota, M., Dudley, J. T., Kim, J., et al. (2011). Discovery and preclinical validation of drug indications using compendia of public gene expression data. *Science Translational Medicine*, 3, 96ra77.
- Sistrom, C., Dang, P., Weilburg, J., Dreyer, K., Rosenthal, D., & Thrall, J. (2009). Effect of computerized order entry with integrated decision support on the growth of outpatient procedure volumes: Seven-year time series analysis. *Radiology*, 251, 147–155.
- Sittig, D. F. (1994). Grand challenges in medical informatics? *Journal of the American Medical Informatics Association: JAMIA*, 1(5), 412–413.
- Sittig, D., & Singh, H. (2009). Eight rights of safe electronic health record use. *JAMA: The Journal of the American Medical Association*, 302(10), 1111–1113.
- Sittig, D. F., & Singh, H. (2011). Defining health information technology-related errors: new developments since to err is human. *Archives of Internal Medicine*, 171(14), 1281–1284.
- Sittig, D. F., Krall, M., Kaalaas-Sittig, J., & Ash, J. S. (2005). Emotional aspects of computer-based provider order entry: A qualitative study. *Journal of the American Medical Informatics Association: JAMIA*, 12(5), 561–567.
- Sittig, D. F., Wright, A., Osheroff, J. A., et al. (2008). Grand challenges in clinical decision support. *Journal of Biomedical Informatics*, 41(2), 387–392.
- Sittig, D. F., Wright, A., Meltzer, S., Simonaitis, L., Evans, R. S., Nichol, W. P., Ash, J. S., & Middleton, B.

- (2011). Comparison of clinical knowledge management capabilities of commercially-available and leading internally-developed electronic health records. *BMC Medical Informatics and Decision Making*, 11, 13. PMID 21329520.
- Sivic, J., & Zisserman, A. (2003). Video Google: A text retrieval approach to object matching in videos. *Proceedings of the International Conference on Computer Vision*, 2, 1470–1477.
- Skinner, B. F. (1938). *The behavior of organisms*. New York: Appleton-Century-Crofts.
- Slack, W. V., & Bleich, H. L. (1999). The CCC system in two teaching hospitals: A progress report. *International Journal of Medical Informatics*, 54(3), 183–196.
- Slack, W. V., Hicks, G. P., Reed, C. E., & Van Cura, L. J. (1966). A computer-based medical-history system. *The New England Journal of Medicine*, 274(4), 194–198. PubMed PMID: 5902618.
- Slack, W. V., Peckham, B. M., Van Cura, L. J., & Carr, W. F. (1967). A computer-based physical examination system. *JAMA: The Journal of the American Medical Association*, 200(3), 224–228.
- Slagle, J. M., Gordon, J. S., Harris, C. E., Davison, C. L., Culpepper, D. K., Scott, P., et al. (2010). MyMediHealth – designing a next generation system for child-centered medication management. *Journal of Biomedical Informatics*, 43(5 Suppl), S27–S31.
- Sloboda, J. (1991). Musical expertise. In K. A. Ericsson & J. Smith (Eds.), *Toward a general theory of expertise: Prospects and limits* (pp. 153–171). New York: Cambridge University Press.
- Slutsky, J. R., & Clancy, C. M. (2010). Patient-centered comparative effectiveness research: Essential for high-quality care. *Archives of Internal Medicine*, 170(5), 403–404.
- Smelcer, J., Miller-Jacobs, H., et al. (2009). Usability of electronic medical records. *Journal of Usability Studies*, 4(2), 70–84.
- Smeulders, A. W. M., Worring, M., et al. (2000). Content-based image retrieval at the end of the early years. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 22(12), 1349–1380.
- Smith, L. (1985). Medicine as an art. In J. Wyngaarden & L. Smith (Eds.), *Cecil textbook of medicine*. Philadelphia: W. B. Saunders.
- Smith, A. (2011, July). *Smartphone adoption and usage*. Washington, D.C: Pew Internet and American Life Project.
- Smith, T., & Waterman, M. (1981). Identification of common molecular subsequences. *Journal of Molecular Biology*, 147(1), 195–197.
- Smith, M.K., Welty, C., et al. (2004). *OWL web ontology language guide*, <http://www.w3.org/TR/owl-guide/>
- Smith, P. C., Araya-Guerra, R., Bublitz, C., Parnes, B., Dickinson, L. M., Vorst, R. V., Westfall, J. M., & Pace, W. D. (2005). Missing clinical information during primary care visits. *JAMA: The Journal of the American Medical Association*, 293(5), 565–571.
- Smith, B., Ashburner, M., Rosse, C., et al. (2007). The OBO foundry: Coordinated evolution of ontologies to support biomedical data integration. *Nature Biotechnology*, 25, 1251–1255.
- Smith, M. Q., Staley, C. A., et al. (2009). Multiplexed fluorescence imaging of tumor biomarkers in gene expression and protein levels for personalized and predictive medicine. *Current Molecular Medicine*, 9(8), 1017–1023.
- Sobradillo, P., Pozo, F., & Agusti, A. (2011). P4 medicine: The future around the corner. *Archivos de Bronconeumología*, 47, 35–40.
- Sohrab, M. A., Smith, R. T., et al. (2011). Imaging characteristics of dry age-related macular degeneration. *Seminars in Ophthalmology*, 26(3), 156–166.
- Sollins, K., & Masinter, L. (1994). *Functional requirements for uniform resource names: Internet Engineering Task Force*. Retrieved from <http://www.w3.org/Addressing/rfc1737.txt>
- Solomon, M., Liu, Y., et al. (2011). Optical imaging in cancer research: Basic principles, tumor detection, and therapeutic monitoring. *Medical Principles and Practice*, 20(5), 397–415.
- Sommerville, I. (2002). *Software engineering*. Reading, MA: Addison Wesley.
- Sonnenberg, F. A., & Beck, J. R. (1993). Markov models in medical decision making: A practical guide. *Medical Decision Making*, 13(4), 322–338.
- Sordo, M., Boxwala, A. A., Ogunyemi, O., & Greenes, R. A. (2004). Description and status update on GELLO: A proposed standardized object-oriented expression language for clinical decision support. *Studies in Health Technology and Informatics*, 107, 164–168.
- Soto, G. E., Young, S. J., et al. (1994). Serial section electron tomography: A method for three-dimensional reconstruction of large structures. *NeuroImage*, 1, 230–243.
- Southon, F. C., Sauer, C., & Grant, C. N. (1997). Information technology in complex health services: Organizational impediments to successful technology transfer and diffusion. *Journal of the American Medical Informatics Association: JAMIA*, 4(2), 112–24. PMID: 9067877 [PubMed - indexed for MEDLINE].
- Sox, H. (2009). Medical journal editing: who shall pay? *Annals of Internal Medicine*, 151, 68–69.
- Sox, H. C., Blatt, M. A., Higgins, M. C., & Marton, K. I. (1988). *Medical decision making*. Boston: Butterworth Publisher.
- Spackman, K. A. (2000). SNOMED RT and SNOMEDCT. Promise of an international clinical terminology. *MD Computing*, 17(6), 29.
- Spackman, K. A. (2004). SNOMED CT milestones: Endorsements are added to already-impressive standards credentials. *Healthcare Informatics*, 21(54), 56.
- Spackman, K.A., Campbell, K.E., & Cote, R.A. (1997a). SNOMED RT: a reference terminology for health care. *Proceedings of the AMIA Annual Fall Symposium*, 640–644.
- Spackman, K. A., Campbell, K. E., et al. (1997b). SNOMED-RT: A reference terminology for health care. In D. R. Masys (Ed.), *Proceedings, AMIA annual*

- fall symposium* (pp. 640–644). Philadelphia: Hanley and Belfus.
- Spiegelhalter, D. J. (1983). Evaluation of medical decision-aids, with an application to a system for dyspepsia. *Statistics in Medicine*, 2, 207–216.
- Spilker, B. (1991). *Guide to clinical trials*. New York: Raven Press.
- Spitzer, V. M., & Whitlock, D. G. (1998). The visible human dataset: The anatomical platform for human simulation. *Anatomical Record*, 253(2), 49–57.
- Spyns, P. (1996). Natural language processing in medicine: An overview. *Methods of Information in Medicine*, 35, 285–301.
- Srinivasan, P., Rindflesch, T. (2002). Exploring text mining from MEDLINE. *Proceedings of the AMIA Symposium*, pp. 722–726.
- Sriram, K. B., Larsen, J. E., Yang, I. A., Bowman, R. V., & Fong, K. M. (2011). Genomic medicine in non-small cell lung cancer: Paving the path to personalized care. *Respirology (Carlton, Vic.)*, 16(2), 257–263.
- Staffa, J. A., Chang, J., & Green, L. (2002). Cerivastatin and reports of fatal rhabdomyolysis [Letter]. *The New England Journal of Medicine*, 346(7), 539–540.
- Stallings, W. (1987a). *The open systems interconnection (OSI) model and OSI-related standards* (Vol. 1). New York: Macmillian.
- Stallings, W. (1987b). *Handbook of computer-communications standards*. New York: Macmillan.
- Stallings, W. (1997). *Data and computer communications*. Englewood Cliffs: Prentice-Hall.
- Stanfill, M., Williams, M., Fenton, S., Jenders, R., & Hersh, W. (2010). A systematic literature review of automated clinical coding and classification systems. *Journal of the American Medical Informatics Association: JAMIA*, 17, 646–651.
- Starr, P. (1982). *The Social Transformation of American Medicine*. New York: Basic Books.
- Starr, P. (1983). *The Social Transformation of American Medicine*. *Basic Books*.
- Starren, J., & Johnson, S. B. (2000). An object-oriented taxonomy of medical data presentations. *Journal of the American Medical Informatics Association: JAMIA*, 7(1), 1–20.
- Starren, J., Hripcsak, G., Sengupta, S., Abbruscato, C. R., Knudson, P. E., Weinstock, R. S., & Shea, S. (2002). Columbia University's informatics for diabetes education and telemedicine (IDEATel) project: Technical implementation. *Journal of the American Medical Informatics Association: JAMIA*, 9(1), 25–36.
- State of Washington Health Care Authority. (2006). *Washington State health information infrastructure: Final report and roadmap for state action*. Available at <http://www.hca.wa.gov/documents/legreports/finalreport.pdf>. Accessed 21 Jul 2013.
- Stead, W. W. (2010). Electronic health records. *Studies in Health Technology and Informatics*, 153, 119–143.
- Stead, W. W., & Hammond, W. E. (1988). Computer-based medical records: The centerpiece of TMR. *MD Computing*, 5(5), 48–62.
- Stead, W. W., & Lin, H. S. (Eds.). (2009). *Computational technology for effective health care: Intermediate steps and strategic directions*. Washington, DC: National Academies Press.
- Stead, W. W., & Lorenzi, N. M. (1999). Health informatics: Linking investment to value. *Journal of the American Medical Informatics Association: JAMIA*, 6, 341–348.
- Stead, W., Haynes, R. B., Fuller, S., et al. (1994). Designing medical informatics research and library projects to increase what is learned. *Journal of the American Medical Informatics Association*, 1, 28–34.
- Stead, W. W., Borden, R., Bourne, J., Giuse, D., Giuse, N., Harris, T. R., Miller, R. A., & Olsen, A. J. (1996). The Vanderbilt University fast track to IAIMS: From planning to implementation. *Journal of the American Medical Informatics Association: JAMIA*, 3, 308–317.
- Stead, W. W., Patel, N. R., & Starmer, J. M. (2008). Closing the loop in practice to assure the desired performance. *Transactions of the American Clinical and Climatological Association*, 119, 185–194; discussion 194–185.
- Stead, W. W., Searle, J. R., Fessler, H. E., Smith, J. W., & Shortliffe, E. H. (2011). Biomedical informatics: Changing what physicians need to know and how they learn. *Academic Medicine: Journal of the Association of American Medical Colleges*, 86(4), 429–434.
- Stearns, M. Q., Price, C., Spackman, K. A., & Wang, A. Y. (2001). SNOMED clinical terms: Overview of the development process and project status. *Proceedings of the AMIA Symposium*, 662–666.
- Stein, L. D. (2010). The case for cloud computing in genome informatics. *Genome Biology*, 11, 207.
- Stein, P. D., Fowler, S. E., Goodman, L. R., Gottschalk, A., Hales, C. A., et al. (2006). Multidetector computed tomography for acute pulmonary embolism. *The New England Journal of Medicine*, 354, 2317–2327.
- Stein, D.M., Vawdrey, D.K., Stetson, P.D., & Bakken, S. (2010). An analysis of team checklists in physician signout notes. *American Medical Informatics Association Annual Symposium Proceedings*, 767–771.
- Steinbrook, R. (2008). Personally controlled online health data – the next big thing in medical care? *New England Journal of Medicine*, 358(16), 1653–1656.
- Steinbrook, R. (2009). Health care and the American Recovery and Reinvestment Act. *The New England Journal of Medicine*, 360(11), 1057–1060.
- Stensaas, S. S., & Millhouse, O.E. (2001). *Atlases of the brain*. From [http://medstat.med.utah.edu/kw/brain\\_atlas/credits.htm](http://medstat.med.utah.edu/kw/brain_atlas/credits.htm)
- Stenson, P. D., Mort, M., Ball, E. V., et al. (2009). The human gene mutation database: 2008 update. *Genome Medicine*, 1, 13.
- Sternberg, R. J., & Horvath, J. A. (Eds.). (1999). *Tacit knowledge in professional practice: Researcher and practitioner*. Mahwah: Lawrence Erlbaum Associates.
- Stevens, R. H., Lopo, A. C., & Wang, P. (1996). Artificial neural networks can distinguish novice and expert strategies during complex problem solving. *Journal of the American Medical Informatics Association: JAMIA*, 3, 131–138.

- Steyerberg, E. W., Pencina, M. J., Lingsma, H. F., et al. (2011). Assessing the incremental value of diagnostic and prognostic markers: A review and illustration. *European Journal of Clinical Investigation*, 42(2), 216–228.
- Storey, J. D., & Tibshirani, R. (2003). Statistical significance for genomewide studies. *Proceedings of the National Academy of Sciences of the United States of America*, 100(16), 9440–9445.
- Strahan, R., & Schneider-Kolsky, M. (2010). Voice recognition versus transcriptionist: Error rates and productivity in MRI reporting. *Journal of Medical Imaging and Radiation Oncology*, 54(5), 411–414.
- Straus, S., Richardson, W., Glasziou, P., & Haynes, R. (2005). *Evidence based medicine: How to practice and teach EBM* (3rd ed.). New York: Churchill Livingstone.
- Stremikis, D. (2009, January). *Health information technology: Key lever in health system transformation*. From the President, pp. 1–5.
- Strom, B. L. (2006). How the US drug safety system should be changed. *JAMA: The Journal of the American Medical Association*, 295(17), 2072–2075.
- Strom, B. L., Schinnar, R., Aberra, F., Bilker, W., Hennessy, S., Leonard, C. E., & Pifer, E. (2010). Unintended effects of a computerized physician order entry nearly hard-stop alert to prevent a drug interaction: A randomized controlled trial. *Archives of Internal Medicine*, 170(17), 1578–1583.
- Subramaniam, B., Hennessey, J. G., et al. (1997). Software and methods for quantitative imaging in neuroscience: The Kennedy Krieger Institute Human Brain Project. In S. H. Koslow & M. F. Huerta (Eds.), *Neuroinformatics: An overview of the human brain project* (pp. 335–360). Mahwah: Lawrence Erlbaum.
- Subramanian, A., Tamayo, P., Mootha, V. K., et al. (2005). Gene set enrichment analysis: A knowledge-based approach for interpreting genome-wide expression profiles. *Proceedings of the National Academy of Sciences of the United States of America*, 102, 15545–15550.
- Suchman, L. A. (1987). Understanding computers and cognition – a new foundation for design – Winograd, T., Flores, F. *Artificial Intelligence*, 31(2), 227–232.
- Sumner, W., Nease Jr., R.F., Littenberg, B. (1991). U-titer: A utility assessment tool. In *Proceedings of the 15th annual symposium on Computer Applications in Medical Care* (pp. 701–705), Washington, DC.
- Sun, J. X., Reisner, A. T., Saeed, M., Heldt, T., & Mark, R. G. (2009). The cardiac output from pressure algorithms trial. *Critical Care Medicine*, 37, 72–80. PMID 19112280.
- Sundsten, J.W., Conley, D.M., et al. (2000). Digital Anatomist web-based interactive atlases. From <http://www9.biostr.washington.edu/da.html>
- Sung, N. S., Crowley, W. F., Jr., Genel, M., et al. (2003). Central challenges facing the national clinical research enterprise. *JAMA: The Journal of the American Medical Association*, 289(10), 1278–1287.
- Sussman, S. Y. (2001). *Handbook of program development for health behavior research & practice*. Thousand Oaks: Sage.
- Swanson, D. (1988). Historical note: Information retrieval and the future of an illusion. *Journal of the American Society for Information Science*, 39, 92–98.
- Swanson, L. W. (1992). *Brain maps: Structure of the rat brain*. Amsterdam/New York: Elsevier.
- Swanson, L. W. (1999). *Brain maps: Structure of the rat brain*. New York: Elsevier Science.
- Sweeney, L. (1997). Weaving technology and policy together to maintain confidentiality. *The Journal of Law, Medicine & Ethics*, 25, 98–110.
- Swets, J. A. (1973). The relative operating characteristic in psychology. *Science*, 182, 990.
- Szczepura, A., & Kankaanpaa, J. (1996). *Assessment of health care technologies*. London: Wiley.
- Szolovits, P., & Pauker, S. G. (1979). Computers and clinical decision making: Whether, how much, and for whom? *Proceedings of the IEEE*, 67, 1224–1226.
- Szolovits, P., Doyle, J., Long, W.J., Kohane, I., Pauker, S.G. (1994). *Guardian angel: Patient-Centered Health Information Systems* (Technical Report MIT/LCS/TR-604), Boston: Massachusetts Institute of Technology Laboratory for Computer Science.
- Tai, B. C., & Seldrup, J. (2000). A review of software for data management, design and analysis of clinical trials. *Annals of the Academy of Medicine, Singapore*, 29(5), 576–581.
- Talairach, J., & Tournoux, P. (1988). *Co-planar stereotaxic atlas of the human brain*. New York: Thieme Medical Publishers.
- Talmon, J., Ammenwerth, E., Brender, J., de Keizer, N., Nykänen, P., & Rigby, M. (2009). STARE-HI—statement on reporting of evaluation studies in health informatics. *International Journal of Medical Informatics*, 7, 1–9.
- Talos, I. F., Rubin, D. L., et al. (2008). A prototype symbolic model of canonical functional neuroanatomy of the motor system. *Journal of Biomedical Informatics*, 41(2), 251–263.
- Tamersoy, A., Loukides, G., Nergiz, M. E., Saygin, Y., & Malin, B. (2012). Anonymization of longitudinal electronic medical records. *IEEE Transactions on Information Technology in Biomedicine*, 16, 413–423.
- Tanenbaum, A. S. (1987). *Computer networks* (2nd ed.). Englewood Cliffs: Prentice Hall.
- Tanenbaum, A. (1996). *Computer networks* (3rd ed.). Englewood Cliffs: Prentice-Hall.
- Tang, P.C. (2003). *Key Capabilities of an Electronic Health Record System* (Letter Report). Committee on Data Standards for Patient Safety. Board on Health Care Services, Institute of Medicine.
- Tang, P. C., & McDonald, C. J. (2001). Computer-based patient-record systems. In E. H. Shortliffe & L. E. Perreault (Eds.), *Medical informatics: Computer applications in health care and biomedicine* (2nd ed., pp. 327–358). New York: Springer.
- Tang, P. C., & Patel, V. L. (1994). Major issues in user interface design for health professional workstations: Summary and recommendations. *International Journal of Biomedical Computing*, 34(104), 130–148.

- Tang, P. C., Annevelink, J., Suermondt, H. J., & Young, C. Y. (1994a). Semantic integration in a physician's workstation. *International Journal of Bio-Medical Computing*, 35(1), 47–60.
- Tang, P.C., Fafchamps, D., Shortliffe, E.H. (1994b). Traditional medical records as a source of clinical data in the outpatient setting. *Proceedings of the Annual Symposium Computer Applications in Medical Care*, 575–579.
- Tang, P.C., Jaworski, M.A., Fellencer, C.A., Kreider, N., LaRosa, M.P., & Marquardt, W.C. (1996). Clinician information activities in diverse ambulatory care practices. *Proceedings: a conference of the American Medical Informatics Association 1 ... AMIA Annual Fall Symposium. AMIA Fall Symposium*, 12–16.
- Tang, P., Newcomb, C., Gorden, S., & Kreider, N. (1997). Meeting the information needs of patients: results from a patient focus group. *Proceedings of the 1997 AMIA Annual Fall Symposium* (pp. 672–676), Nashville.
- Tang, P. C., LaRosa, M. P., & Gorden, S. M. (1999a). Use of computer-based records, completeness of documentation, and appropriateness of documented clinical decisions. *Journal of the American Medical Informatics Association: JAMIA*, 6(3), 245–251.
- Tang, P. C., Marquardt, W. C., Boggs, B., et al. (1999b). NetReach: Building a clinical infrastructure for the enterprise. In J. M. Overhage (Ed.), *Fourth annual proceedings of the Davies CPR recognition symposium* (pp. 25–68). Chicago: McGraw-Hill.
- Tang, P. C., Ash, J. S., Bates, D. W., Overhage, J. M., & Sands, D. Z. (2006). Personal health records: Definitions, benefits, and strategies for overcoming barriers to adoption. *Journal of the American Medical Informatics Association: JAMIA*, 13(2), 121–126.
- Tang, P. C., Ralston, M., Arrigotti, M. F., Qureshi, L., & Graham, J. (2007). Comparison of methodologies for calculating quality measures based on administrative data versus clinical data from an electronic health record system: Implications for performance measures. *Journal of the American Medical Informatics Association: JAMIA*, 14, 10–15.
- Tarczy-Hornoch, P., Markey, M. K., Smith, J. A., & Hiruki, T. (2007). Bio\*medical informatics and genomic medicine: Research and training. *Journal of Biomedical Informatics*, 40, 1–4.
- Tate, K.E., Gardner, R.M., & Scherting, K. (1995). Nurses, pagers, and patient-specific criteria: Three keys to improved critical value reporting. *Proceedings of the Annual Symposium on Computer Applications in Medical Care*, 154–8. PMID 8563258.
- Tatonetti, N. P., Fernald, G. H., & Altman, R. B. (2011a). A novel signal detection algorithm for identifying hidden drug-drug interactions in adverse event reports. *Journal of the American Medical Informatics Association: JAMIA*, 19(1), 79–85.
- Tatonetti, N. P., Denny, J. C., Murphy, S. N., et al. (2011b). Detecting drug interactions from adverse-event reports: Interaction between paroxetine and pravastatin increases blood glucose levels. *Clinical Pharmacology and Therapeutics*, 90, 133–142.
- Taylor, H. (2010). "Cyberchondriacs" on the rise? *Those who go online for healthcare information continues to increase*. Rochester: Harris Interactive. Retrieved from <http://www.harrisinteractive.com/vault/HI-Harris-Poll-Cyberchondriacs-2010-08-04.pdf>
- Taylor, C. F., Field, D., Sansone, S. A., Aerts, J., et al. (2008). Promoting coherent minimum reporting guidelines for biological and biomedical investigations: The MIBBI project. *Nature Biotechnology*, 26, 889–896.
- Teich, J. M., Kuperman, G. J., & Bates, D. W. (1997). Clinical decision support: Making the transition from the hospital to the community network. *Healthcare Information Management*, 11(4), 27–37.
- Teich, J. M., Glaser, J. P., Beckley, R. F., et al. (1999). The Brigham integrated computing system (BICS): Advanced clinical systems in an academic hospital environment. *International Journal of Medical Informatics*, 54(3), 197–208.
- Teich, J. M., Merchia, P. R., Schmitz, J. L., et al. (2000). Effects of computerized physician order entry on prescribing practices. *Archives of Internal Medicine*, 160(18), 2741–2747.
- Tenenbaum, J., James, A., & Paulyson-Nuñez, K. (2012). An altered treatment plan based on direct to consumer (DTC) genetic testing: Personalized medicine from the patient/pin-cushion perspective. *Journal of Personalized Medicine*, 2(4), 192–200.
- The FlyBase Consortium. (2003). The FlyBase database of the *Drosophila* genome projects and community literature. *Nucleic Acids Research*, 31, 172–175. Available at <http://flybase.org/>
- The Gene Ontology Consortium. (2003). Gene ontology: tool for the unification of biology. *Nature Genetics*, 25, 25–29. Available at <http://www.geneontology.org/>
- Thomas, E. J., Lucke, J. F., Wueste, L., Weavind, L., & Patel, B. (2009). *JAMA: The Journal of the American Medical Association*, 302, 2671–2678.
- Thompson, C. B., Snyder-Halpern, R., & Staggers, N. (1999). Clinical informatics case studies: Analysis, processes, and techniques. *Computers in Nursing*, 17(5), 203–206.
- Thompson, E. T., & Hayden, A. C. (1961). Standard Nomenclature of Diseases and Operations, 5th ed., American Medical Association. New York: McGraw-Hill.
- Thompson, J. P., & Mahajan, R. P. (2006). Monitoring the monitors – beyond risk management. *British Journal of Anaesthesia*, 97, 1–3. PMID 16769701.
- Thorisson, G. A., Smith, A. V., Krishnan, L., & Stein, L. D. (2005). The international HapMap project web site. *Genome Research*, 15, 1592–1593.
- Tierney, W. M., Miller, M. E., Overhage, J. M., & McDonald, C. J. (1993). Physician inpatient order writing on microcomputer workstations: Effects on resource utilization. *Journal of the American Medical Association*, 269(3), 379–383.
- Toga, A. W. (2001). UCLA Laboratory for Neuro Imaging (LONI). From <http://www.loni.ucla.edu/>
- Toga, A. W., Ambach, K. L., et al. (1994). High-resolution anatomy from in situ human brain. *NeuroImage*, 1(4), 334–344.



- Toga, A. W., Santori, E. M., et al. (1995). A 3-D digital map of rat brain. *Brain Research Bulletin*, 38(1), 77–85.
- Toga, A. W., Frackowiak, R. S. J., et al. (Eds.). (2001). *Neuroimage: A journal of brain function*. New York: Academic Press.
- Tommasi, T., Caputo, B., et al. (2010). Overview of the CLEF 2009 medical image annotation track. In *Proceedings of the 10th international conference on cross-language evaluation forum: Multimedia experiments* (pp. 85–93). Corfu: Springer.
- Toomre, D., & Bewersdorf, J. (2010). A new wave of cellular imaging. *Annual Review of Cell and Developmental Biology*, 26, 285–314.
- Torda, P., Han, E. S., & Scholle, S. H. (2010). Easing the adoption and use of electronic health records in small practices. *Health Affairs (Millwood)*, 29(4), 668–675.
- Torrance, G. W., & Feeny, D. (1989). Utilities and quality-adjusted life years. *International Journal of Technology Assessment in Health Care*, 5(4), 559–575.
- Trafton, J., Martins, S., Michel, M., Lewis, E., Wang, D., Combs, A., Scates, N., Tu, S., & Goldstein, M. K. (2010). Evaluation of the acceptability and usability of a decision support system to encourage safe and effective use of opioid therapy for chronic, noncancer pain by primary care providers. *Pain Medicine*, 11(4), 575–585.
- Trotti, A., Colevas, A. D., & Setser, A. (2003). CTCAE v3.0: Development of a comprehensive grading system for the adverse effects of cancer treatment. *Seminars in Radiation Oncology*, 13(3), 176–181.
- Trusheim, M. R., Berndt, E. R., & Douglas, F. L. (2007). Stratified medicine: Strategic and economic implications of combining drugs and clinical biomarkers. *Nature Reviews Drug Discovery*, 6, 287–293.
- Tsarkov, D., & Horrocks, I. (2006). FaCT++ description logic reasoner: System description. *Automated Reasoning, Proceedings*, 4130, 292–297.
- Tu, H. T., & Cohen, G. R. (2008). Striking jump in consumers seeking health care information. *Tracking Report*, (20), 1–8.
- Tufte, E. (2006). *Beautiful evidence*. Cheshire: Graphics Press. ISBN 978-0-9613921-7-8.
- Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science*, 185, 1124–1131.
- Tysyer, D.A. (1997). Database legal protection. *Bitlaw*. Retrieval 1 Aug 2012: <http://www.bitlaw.com/copy-right/database.html>
- Ullman-Cullere, M. H., & Mathew, J. P. (2011). Emerging landscape of genomics in the electronic health record for personalized medicine. *Human Mutation*, 32(5), 512–516. doi:10.1002/humu.21456.
- Uzuner, O. (2009). Recognizing obesity and comorbidities in sparse data. *Journal of the American Medical Informatics Association: JAMIA*, 16(4), 561–570.
- Uzuner, O., Goldstein, I., Luo, Y., & Kohane, I. (2008). Identifying patient smoking status from medical discharge records. *Journal of the American Medical Informatics Association: JAMIA*, 15(1), 14–24.
- Uzuner, O., Solti, I., & Cadag, E. (2010). Extracting medication information from clinical text. *Journal of the American Medical Informatics Association: JAMIA*, 17(5), 514–518.
- Uzuner, O., South, B. R., Shen, S., & Duvall, S. L. (2011). 2010 i2b2/VA challenge on concepts, assertions, and relations in clinical text. *Journal of the American Medical Informatics Association: JAMIA*, 18(5), 552–556.
- Valdes, I. (2008). *Free and open source software in healthcare 1.0. American Medical Informatics Association Open Source Working Group White Paper*. Available at: <http://www.scribd.com/doc/14109414/AMIA-Free-and-Open-Source-Software-in-Healthcare-10>. Accessed 2 Jan 2012.
- van Bommel, J. H. (1997). A changing world of grand challenges. *International Journal of Medical Informatics*, 44(1), 53–55.
- van der Lei, J., Musen, M. A., van der Does, E., Man in 't Veld, A. J., & van Bommel, J. H. (1991). Comparison of computer-aided and human review of general practitioners' management of hypertension. *The Lancet*, 338(8781), 1504–1508.
- van der Sijs, H., Aarts, J., Vulto, A., & Berg, M. (2006). Overriding of drug safety alerts in computerized physician order entry. *Journal of the American Medical Informatics Association: JAMIA*, 13(2), 138–147.
- Van Essen, D. C., & Drury, H. A. (1997). Structural and functional analysis of human cerebral cortex using a surface-based atlas. *Journal of Neuroscience*, 17(18), 7079–7102.
- Van Essen, D. C., Drury, H. A., et al. (2001). An integrated software suite for surface-based analysis of cerebral cortex. *Journal of American Medical Association*, 8(5), 443–459.
- van Gennip, E. M., & Talmon, J. L. (Eds.). (1995). *Assessment and evaluation of information technologies in medicine*. Amsterdam: IOS Press.
- Van Leemput, K., Maes, F., et al. (1999). Automated model-based tissue classification of MR images of the brain. *IEEE Transactions on Medical Imaging*, 18(10), 897–908.
- Van Noorden, S. (2002). Advances in immunocytochemistry. *Folia Histochemica et Cytobiologica*, 40(2), 121–124.
- van Walraven, C., Taljaard, M., Bell, C. M., Etchells, E., Zarnke, K. B., Stiell, I. G., & Forster, A. J. (2008). Information exchange among physicians caring for the same patient in the community. *Canadian Medical Association Journal*, 179(10), 1013–1018.
- Van Way, C. W., Murphy, J. R., Dunn, E. L., & Elerding, S. C. (1982). A feasibility study of computer-aided diagnosis in appendicitis. *Surgery Gynecol & Obstet*, 155, 685–688.
- Van't Veer, L. J., Dai, H., van de Vijver, M. J., et al. (2002). Gene expression profiling predicts clinical outcome of breast cancer. *Nature*, 415(6871), 484–485.
- Vandemheen, K. L., Aaron, S. D., Poirier, C., Tullis, E., & O'Connor, A. (2010). Development of a decision aid for adult cystic fibrosis patients considering referral for lung transplantation. *Progress in Transplantation*, 20(1), 81–87.
- van Rijsbergen, C. (1979). *Information retrieval*. London: Butterworth.

- Vapnik, V. N. (2000). *The nature of statistical learning theory*. New York: Springer.
- Varma, M., & Zisserman, A. (2003). Texture classification: Are filter banks necessary? In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, Madison, Wisconsin*, 2, (pp. 691–698).
- Vawdrey, D. K., Gardner, R. M., Evans, R. S., Orme, J. F., Jr., Clemmer, T. P., Greenway, L., & Drews, F. A. (2007). Assessing the data quality in manual data entry of ventilator settings. *Journal of the American Medical Informatics Association: JAMIA*, 14, 295–303. PMID 17329731.
- Vawdrey, D., Wilcox, L., Collins, S., Bakken, S., Feiner, S., & Boyer, A. (2011, October 22–26). A tablet computer application for patients to participate in their hospital care. *Proceedings of the 2011 AMIA Annual Fall Symposium*, 1428–1435.
- Venter, J. C., Adams, M. D., Myers, E. W., et al. (2001). The sequence of the human genome. *Science*, 291, 1304–1351.
- Via, M., Gignoux, C., & Burchard, E. G. (2010). The 1000 genomes project: new opportunities for research and social challenges. *Genome Medicine*, 2, 3.
- Vicente, K. J. (1999). *Cognitive work analysis: Toward safe, productive & healthy computer-based work*. Mahwah: Lawrence Erlbaum Associates Publishers.
- Vigoda, M. M., & Lubarsky, D. A. (2006). Failure to recognize loss of incoming data in an anesthesia record-keeping system may have increased medical liability. *Anesthesia and Analgesia*, 102, 1798–1802.
- Vincze, V., Szarvas, G., Farkas, R., Mora, G., & Csirik, J. (2008). The BioScope corpus: Biomedical texts annotated for uncertainty, negation, and their scopes. *BMC Bioinformatics*, 9(S11), S9.
- Vogel, L. H. (2003). Finding value from information technology investments: Exploring the elusive ROI in healthcare. *Journal for Health Information Management*, 17(4), 20–28.
- Vogel, L. H. (2006, September 1) Everyone gets to play. *CIO*.
- von Dijk, T. A., & Kintsch, W. (1983). *Strategies of discourse comprehension*. New York: Academic Press.
- Voorhees, E., & Harman, D. (Eds.). (2005). *TREC: Experiment and evaluation in information retrieval*. Cambridge, MA: MIT Press.
- Voorhees, E., & Hersh, W. (2012). Overview of the TREC 2012 Medical Records Track. *The Twenty-First Text REtrieval Conference proceedings (TREC 2012)*. Gaithersburg: National Institute for Standards and Technology.
- Voorhees, E., & Tong, R. (2011). Overview of the TREC 2011 Medical Records Track. *The Twentieth Text REtrieval Conference proceedings (TREC 2011)*. Gaithersburg: National Institute for Standards and Technology. Gaithersburg, MD.
- Vreeman, D. J., McDonald, C. J., & Huff, S. M. (2010). Representing patient assessments in LOINC®. *American Medical Informatics Association Annual Symposium Proceedings, 2010*, 832–836.
- Wachter, S. B., Agutter, J., Syroid, N., Drews, F., Weinger, M. B., & Westenskow, D. (2003). The employment of an iterative design process to develop a pulmonary graphical display. *Journal of the American Medical Informatics Association: JAMIA*, 10(4), 363–372.
- Wadman, M. (2007). Experts call for active surveillance of drug safety. *Nature*, 446(7134), 358–359.
- Wagner, M. M., Dato, V., Dowling, J. N., & Allswede, M. (2003). Representative threats for research in public health surveillance. *Journal of Biomedical Informatics*, 36(3), 177–188.
- Wald, J.S., Grant, R.W., Schnipper, J.L., Gandhi, T.K., Poon, E.G., Businger, A.C., et al. (2009). Survey analysis of patient experience using a practice-linked PHR for type 2 diabetes mellitus. *Proceedings of the 2009 AMIA Annual Symposium*, 678–682.
- Walker, J., Pan, E., Johnston, D., Adler-Milstein, J., Bates, D. W., & Middleton, B. (2004). *The value of health-care information exchange and Interoperability*. Boston: Center for Information Technology Leadership, Partners Healthcare.
- Walker, J., Pan, E., Johnston, D., Adler-Milstein, J., Bates, D. W., and Middleton, B. (2005). The value of health care information exchange and interoperability. *Health Aff (Millwood)*, Suppl Web Exclusives: W5–10–W5–18.
- Wang, J. Z., Wiederhold, G., et al. (1997). Content-based image indexing and searching using Daubechies' wavelets. *International Journal on Digital Libraries*, 1(4), 311–328.
- Wang, S. J., Middleton, B., Prosser, L. A., Bardou, C. G., Spurr, C. D., Carchidi, P. J., Kittler, A. F., Goldszer, R. C., Fairchild, D. G., Sussman, A. J., Kuperman, G. J., & Bates, D. W. (2003). A cost-benefit analysis of electronic medical records in primary care. *American Journal of Medicine*, 114(5), 397–403.
- Wang, X., Hripsak, G., Markatou, M., & Friedman, C. (2009a). Active computerized pharmacovigilance using natural language processing, statistics, and electronic health records: A feasibility study. *Journal of the American Medical Informatics Association: JAMIA*, 16(3), 328–337.
- Wang, Y., Xiao, J., Suzek, T. O., et al. (2009b). PubChem: A public information system for analyzing bioactivities of small molecules. *Nucleic Acids Research*, 37, W623–W633.
- Wang, Y., Bolton, E., Dracheva, S., Karapetyan, K., Shoemaker, B. A., Suzek, T. O., Wang, J., Xiao, J., Zhang, J., & Bryant, S. H. (2010). An overview of the PubChem BioAssay resource. *Nucleic Acids Research*, 38, D255–D266.
- Ward, J. R., & Clarkon, P. J. (2007). Human factors engineering and the design of medical devices. In P. Carayon (Ed.), *Handbook of human factors and ergonomics in health care and patient safety* (pp. 367–382). Mahwah: Lawrence Erlbaum Associates.
- Ware, C. (2003). Design as applied perception. In J. M. Carroll (Ed.), *HCI models, theories, and frameworks:*

- Toward a multidisciplinary science* (pp. 11–26). San Francisco: Morgan Kaufmann Publishers.
- Warner, H. R. (1972). A computer-based patient information system for patient care. In G. A. Bekey & M. D. Schwartz (Eds.), *Hospital information systems* (pp. 293–332). New York: Marcel Dekker.
- Warner, H. R. (1979). *Computer-assisted medical decision-making*. New York: Academic Press.
- Warner, H. R., Swan, H. J., Connolly, D. C., Tompkins, R. G., & Wood, E. H. (1953). Quantitation of beat-to-beat changes in stroke volume from the aortic pulse contour in man. *Journal of Applied Physiology*, 5, 495–507. PMID 13034677.
- Warner, H. R., Toronto, A. F., & Veasy, L. (1964). Experience with Bayes' theorem for computer diagnosis of congenital heart disease. *Annals of the New York Academy of Science*, 115, 2–16.
- Warner, H. R., Gardner, R. M., & Toronto, A. F. (1968). Computer-based monitoring of cardiovascular function in postoperative patients. *Circulation*, 37 (4 Suppl), II68–II74.
- Wasson, J. H., Sox, H. C., Neff, R. K., & Goldman, L. (1985). Clinical prediction rules: Applications and methodological standards. *The New England Journal of Medicine*, 313, 793–799.
- Weeber, M., Mork, J., & Aronson, A. (2001). Developing a test collection for biomedical word sense disambiguation. *Proceedings of the AMIA Symposium*, 746–750.
- Weed, L. L. (1968). Medical records that guide and teach. *The New England Journal of Medicine*, 278(12), 652–657.
- Weed, L. L. (1975). *Your health care and how you can manage it*. Burlington: PROMIS Laboratory, University of Vermont.
- Wei, L., Altman, R.B. (1998). Recognizing protein binding sites using statistical descriptions of their 3D environments. *Proceedings of the pacific symposium on Biocomputing '98* (pp. 497–508), Singapore.
- Weibel, S., & Koch, T. (2000). *The Dublin Core Metadata Initiative: mission, current activities, and future directions*. *D-Lib Magazine*, 6. Retrieved from <http://www.dlib.org/dlib/december00/weibel/12weibel.html>
- Weil, T. P. (2001). *Health networks: Can they be the solution?* Ann Arbor: University of Michigan Press.
- Weill, P., & Ross, J. W. (2004). *IT governance: How top performers manage IT decision rights for superior performance*. Boston: Harvard Business School Press.
- Weinfurt, P. T. (1990). Electrocardiographic monitoring: An overview. *Journal of Clinical Monitoring*, 6(2), 132–138.
- Weingart, S. N., Toth, M., Sands, D. Z., Aronson, M. D., Davis, R. B., & Phillips, R. S. (2003). Physicians' decisions to override computerized drug alerts in primary care. *Archives of Internal Medicine*, 163(21), 2625–2631.
- Weingart, S. N., Rind, D., Tofias, Z., & Sands, D. Z. (2006). Who uses the patient internet portal? The PatientSite experience. *J Am Med Inform Assoc*, 13, (1), 91–95.
- Weinger, M.B., & Slagle, J. (2001). Human factors research in anesthesia patient safety. *Proceedings of the AMIA Symposium*, 756–760. doi:D010001242 [pii].
- Weinstein, M. C., & Fineberg, H. (1980). *Clinical decision analysis*. Philadelphia: W. B. Saunders.
- Weinstock, R. S., Izquierdo, R., Goland, R., Palmas, W., Teresi, J. A., Eimicke, J. P., & Consortium, I. D. (2010). Lipid treatment in ethnically diverse underserved older adults with diabetes mellitus: Statin use, goal attainment, and health disparities in the informatics for diabetes education and telemedicine project. *Journal of American Geriatrics Society*, 58(2), 401–402.
- Weir, C. R., Hammond, K. W., Embi, P. J., et al. (2011). An exploration of the impact of computerized patient documentation on clinical collaboration. *International Journal of Medical Informatics*, 80(8), e62–e71.
- Weiser, M. (1993a). Some computer science issues in ubiquitous computing. *Communications of the ACM*, 36(7), 75–84.
- Weiser, M. (1993b). Ubiquitous computing. *Computer*, 26(10), 71–72.
- Weissleder, R., & Mahmood, U. (2001). Molecular imaging. *Radiology*, 219, 316–333.
- Weitzman, E. R., Kaci, L., & Mandl, K. D. (2010). Sharing medical data for health research: The early personal health record experience. *J Med Internet Res*, 12(2), e14.
- Weitzman, E. R., Adida, B., Kelemen, S., & Mandl, K. D. (2011a). Sharing data for public health research by members of an international online diabetes social network. *PLoS One*, 6(4), e19256.
- Weitzman, E. R., Cole, E., Kaci, L., & Mandl, K. D. (2011b). Social but safe? Quality and safety of diabetes-related online social networks [Research Support, N.I.H., Extramural]. *Journal of the American Medical Informatics Association: JAMIA*, 18(3), 292–297.
- Weizenbaum, J. (1966). A computer program for the study of natural language communication between man and machine. *Communications of the ACM*, 9(1), 36–45.
- Wellcome Department of Cognitive Neurology. (2001). Statistical parametric mapping. From <http://www.fil.ion.ucl.ac.uk/spm/>
- Wennberg, J. (2010). *Tracking medicine: A Researcher's quest to understand health care*. Oxford: Oxford University Press.
- Wennberg, J., & Gittelsohn, A. (1973). Small area variations in health care delivery. *Science*, 182(117), 1102–1108.
- Were, M. C., Shen, C., Tierney, W. M., Mamlin, J. J., Biondich, P. G., Li, X., Kimaiyo, S., & Mamlin, B. W. (2011). Evaluation of computer-generated reminders to improve CD4 laboratory monitoring in sub-Saharan Africa: A prospective comparative study. *Journal of the American Medical Informatics Association: JAMIA*, 18(2), 150–155.

- Wessels, J. T., Yamauchi, K., et al. (2010). Advances in cellular, subcellular, and nanoscale imaging in vitro and in vivo. *Cytometry. Part A*, 77(7), 667–676.
- Westbrook, J., Coiera, E., & Gosling, A. (2005). Do online information retrieval systems help experienced clinicians answer clinical questions? *Journal of the American Medical Informatics Association: JAMIA*, 12, 315–321.
- Weston, A. D., & Hood, L. (2004). Systems biology, proteomics, and the future of health care: Toward predictive, preventative, and personalized medicine. *Journal of Proteome Research*, 3, 179–196.
- Whelan, T., Levine, M., Willan, A., Gafni, A., Sanders, K., Mirsky, D., et al. (2004). Effect of a decision aid on knowledge and treatment decision making for breast cancer surgery: A randomized trial. *JAMA: The Journal of the American Medical Association*, 292(4), 435–441.
- White, B.Y., & Frederiksen, J.R. (1990). Causal model progressions as a foundation for intelligent learning environments. In W.J. Clancey & E. Soloway (Eds.), *Artificial intelligence and learning environments Special issues of "Artificial Intelligence: An International Journal"* (pp. 99–157).
- Whiting-O'Keefe, Q. E., Simborg, D. W., Epstein, W. V., & Warger, A. (1985). A computerized summary medical record system can provide more information than the standard medical record. *Journal of the American Medical Association*, 254(9), 1185–1192.
- Wickland, E. (2011, August 18). *Australia taps Accenture, Oracle, Orion Health for national PHR project. Health Information Technology News*. Available at <http://www.healthcareitnews.com/news/australia-taps-accenture-oracle-orion-health-national-phr-project>. Accessed 25 Aug 2011.
- Wicks, P., Vaughan, T. E., Massagli, M. P., & Heywood, J. (2011). Accelerated clinical discovery using self-reported patient data collected online and a patient-matching algorithm. *Nature Biotechnology*, 29(5), 411–414.
- Wiederhold, G. (1981). *Databases for health care*. New York: Springer.
- Wiederhold, G., & Clayton, P. D. (1985). Processing biological data in real time. *M.D. Computing*, 2(6), 16–25.
- Wild, D. J. (2009). Grand challenges for cheminformatics. *Journal of Cheminformatics*, 1, 1.
- Wildemuth, B., deBlied, R., Friedman, C., & File, D. (1995). Medical students' personal knowledge, searching proficiency, and database use in problem solving. *Journal of the American Society for Information Science*, 46, 590–607.
- Willmann, J. K., van Bruggen, N., et al. (2008). Molecular imaging in drug development. *Nature Reviews Drug Discovery*, 7(7), 591–607.
- Willson, D. (1994). Survey of nurse perception regarding the utilization of bedside computers. *Proceedings of the Annual Symposium on Computer Applications in Medical Care*, 553–557. PMID 7949989.
- Willson, D., Nelson, N. C., Rosebrock, B. J., Hujcs, M. T., Wilner, D. G., & Buxton, R. B. (1994). Using an integrated point of care system: A nursing perspective. *Topics in Health Information Management*, 14, 24–29. PMID 19134757.
- Wilson, T. (1990). *Confocal microscopy*. San Diego: Academic Press Ltd.
- Wing, J. M., & Barr, V. (2011). Jeannette M. Wing @ PCAST; Barbara Liskov keynote. *Communications of the ACM*, 54(9), 10–11.
- Winograd, T. (1972). Understanding natural language. *Cognitive Psychology*, 3(1), 1–191.
- Wishart, D. S. (2008). Metabolomics: A complementary tool in renal transplantation. *Contributions to Nephrology*, 160, 76–87.
- Wishart, D. S. (2011). Advances in metabolite identification. *Bioanalysis*, 3, 1769–1782.
- Wong, B.A., Rosse, C., et al. (1999). Semi-automatic scene generation using the Digital Anatomist Foundational Model. *Proceedings, American Medical Informatics Association Fall Symposium* (pp. 637–641), Washington, D.C.
- Woods, W. (1973). Progress in NLU – an application to lunar geology. *Proceeding of AFIPS*, 42, 441–450.
- Woods, C. R., & Kemper, K. J. (2009). Curriculum resource use and relationships with educational outcomes in an online curriculum. *Academic Medicine*, 84(9), 1250–1258.
- Woods, R. P., Cherry, S. R., et al. (1992). Rapid automated algorithm for aligning and reslicing PET images. *Journal of Computer Assisted Tomography*, 16, 620–633.
- Woods, R. P., Mazziotta, J. C., et al. (1993). MRI-PET registration with automated algorithm. *Journal of Computer Assisted Tomography*, 17, 536–546.
- Woods, D. D., Patterson, E. S., & Cook, R. I. (2007). Behind human error: Taming complexity to improve patient safety. In P. Carayon (Ed.), *Handbook of human factors and ergonomics in health care and patient safety* (pp. 459–476). Mahwah: Lawrence Erlbaum Associates.
- Wootton R, (Ed.). (2009). *Telehealth in the developing world*. London: Royal Society of Medicine Press. Available at: <http://web.idrc.ca/openebooks/396-6/>. Accessed 6 Oct 2011.
- World Health Organization. (1992). *International classification of diseases index. Tenth revision. Volume (Tabular list, Vol. 1)*. Geneva: The World Health Organization.
- WorldWideWeb Consortium. (W3C Recommendation 10 Feb 2004). *OWLWeb Ontology Language Reference*. Cambridge, MA.
- Worthey, E. A., Mayer, A. N., Syverson, G. D., et al. (2011). Making a definitive diagnosis: Successful clinical application of whole exome sequencing in a child with intractable inflammatory bowel disease. *Genetics in Medicine*, 13(3), 255–262.
- Wrenn, J. O., Stein, D. M., Bakken, S., & Stetson, P. D. (2010). Quantifying clinical narrative redundancy in an electronic health record. *Journal of the American Medical Informatics Association: JAMIA*, 17(1), 49–53.
- Wright, P. C., Fields, R. E., & Harrison, M. D. (2000). Analyzing human-computer interaction as distributed

- cognition: The resources model. *Human Computer Interaction*, 15(1), 1–41.
- Wright, A., Sittig, D. F., Ash, J. S., Sharma, S., Pang, J. E., & Middleton, B. (2009). Clinical decision support capabilities of commercially-available clinical information systems. *Journal of the American Medical Informatics Association: JAMIA*, 16(5), 637–644.
- Wright, A., Sittig, D. F., Ash, J. S., Feblowitz, J., et al. (2011). Development and evaluation of comprehensive clinical decision support taxonomy: Comparison of front-end tools in commercial and internally developed electronic health records. *Journal of the American Medical Informatics Association: JAMIA*, 18, 232–242. PMID 21415065.
- WTCCC. (2007). Genome-wide association study of 14,000 cases of seven common diseases and 3,000 shared controls. *Nature*, 447, 661–678.
- Wubbelt, P., Fernandez, G., & Heymer, J. (2000). Clinical trial management and remote data entry on the internet based on XML case report forms. *Studies in Health Technology and Informatics*, 77, 333–337.
- Wyatt, J., & Spiegelhalter, D. (1990). Evaluating medical expert systems: What to test and how? *Medical Informatics (Lond)*, 15, 205–217.
- Wyatt, J., & Wyatt, S. (2003). When and how to evaluate clinical information systems? *International Journal of Medical Informatics*, 69, 251–259.
- Wyatt, J. C., Batley, R. P., & Keen, J. (2010, October). GP preferences for information systems: Conjoint analysis of speed, reliability, access and users. *Journal of Evaluation in Clinical Practice*, 16(5), 911–915.
- Yakushiji, A., Tateisi, Y., Miyao, Y., & Tsujii, J. (2001). Event extraction from biomedical papers using a full parser. *Proceedings of the Pacific Symposium Biocomputing*, 6, 408–419.
- Yamin, C. K., Emani, S., Williams, D. H., Lipsitz, S. R., Karson, A. S., Wald, J. S., & Bates, D. W. (2011). The digital divide in adoption and use of a personal health record. *Archives of Internal Medicine*, 171(6), 568–574.
- Yan, J., & Gu, W. (2009). Gene expression microarrays. In Y. Lu & R. I. Mahato (Eds.), *Cancer research pharmaceutical perspectives of cancer therapeutics* (pp. 645–672). New York: Springer.
- Yasnoff, W. A. (2006). Health record banking: A practical approach to the national health information infrastructure. Available at <http://williamyasnoff.com/?p=26>. Accessed 17 Dec 2012.
- Yasnoff, W. A., & Miller, P. L. (2003). Decision support and expert systems in public health. In P. W. O’Carroll, W. A. Yasnoff, M. E. Ward, L. H. Ripp, & E. L. Martin (Eds.), *Public health informatics and information systems* (pp. 494–512). New York: Springer.
- Yasnoff, W. A., O’Carroll, P. W., Koo, D., Linkins, R. W., & Kilbourne, E. M. (2000). Public health informatics: Improving and transforming public health in the information age. *Journal of Public Health Management and Practice*, 6(6), 67–75.
- Yasnoff, W. A., Humphreys, B. L., Overhage, J. M., Detmer, D. E., Brennan, P. F., Morris, R. W., Middleton, B., Bates, D. W., & Fanning, J. P. (2004). A consensus action agenda for achieving the national health information infrastructure. *Journal of the American Medical Informatics Association: JAMIA*, 11(4), 332–338.
- Yasnoff, W. A., Sweeney, L., & Shortliffe, E. H. (2013). Putting health IT on the path to success. *Journal of the American Medical Association*, 309(10), 989–990.
- Yildirim, M. A., Goh, K. I., Cusick, M. E., et al. (2007). Drug-target network. *Nature Biotechnology*, 25, 1119–1126.
- Yoo, T. S. (2004). *Insight into images: Principles and practice for segmentation, registration, and image analysis*. Wellesley: A K Peters.
- Youngner, S. J. (1988). Who defines futility? *Journal of the American Medical Association*, 260, 2094–2095.
- Yu, F., & Ip, H. H. (2008). Semantic content analysis and annotation of histological images. *Computers in Biology and Medicine*, 38(6), 635–649.
- Yu, V. L., Buchanan, B. G., Shortliffe, E. H., Wraith, S. M., Davis, R., Scott, A. C., & Cohen, S. N. (1979a). Evaluating the performance of a computer-based consultant. *Computer Programs in Biomedicine*, 9(1), 95–102.
- Yu, V. L., Fagan, L. M., Wraith, S. M., Clancey, W. J., Scott, A. C., Hannigan, J., Blum, R. L., Buchanan, B. G., & Cohen, S. N. (1979b). Antimicrobial selection by a computer. A blinded evaluation by infectious disease experts. *Journal of the American Medical Association*, 242(12), 1279–1282.
- Zalis, M. E., Barish, M. A., et al. (2005). CT colonography reporting and data system: A consensus proposal. *Radiology*, 236(1), 3–9.
- Zarin, D. A. (2011). Letter: The ClinicalTrials.gov results database. *The New England Journal of Medicine*, 364(22), 2170.
- Zarin, D., Tse, T., Williams, R., Califf, R., & Ide, N. (2011). The ClinicalTrials.gov results database-update and key issues. *The New England Journal of Medicine*, 364, 852–860.
- Zerhouni, E. A. (2006). Clinical research at a crossroads: The NIH roadmap. *Journal of Investigative Medicine*, 54, 171–173.
- Zhang, J. (1997). The nature of external representations in problem solving. *Cognitive Science*, 21(2), 179–217.
- Zhang, J. J., & Norman, D. A. (1994). Representations in distributed cognitive tasks. *Cognitive Science*, 18(1), 87–122.
- Zhang, Y., & Szolovitz, P. (2008). Patient-specific learning in real time for adaptive monitoring in critical care. *Journal of Biomedical Informatics*, 41, 452–460. PMID 18463000.
- Zhang, J., & Walji, M. F. (2011). TURF: Toward a unified framework of EHR usability. *Journal of Biomedical Informatics*, 44(6), 1056–1067.
- Zhang, Y. Y., Brady, M., et al. (2001). Segmentation of brain MR images through a hidden Markov random field model and the expectation-maximization algorithm. *IEEE Transactions on Medical Imaging*, 20(1), 45–57.
- Zhang, J., Patel, V. L., Johnson, K. A., & Malin, J. (2002). Designing human-centered distributed information systems. *IEEE Intelligent Systems*, 17(5), 42–47.

- Zhang, J., Patel, V.L., Johnson, T.R., & Shortliffe, E.H. (2004). A cognitive taxonomy of medical errors. *Journal of Biomedical Informatics*, 37(3), 193–204.
- Zhang, J., Johnson, T. R., Patel, V. L., Paige, D. L., & Kubose, T. (2003). Using usability heuristics to evaluate patient safety of medical devices. *Journal of Biomedical Informatics*, 36(1–2), 23–30. S1532046403000601 [pii].
- Zhang, J., Patel, V. L., Johnson, T. R., & Shortliffe, E. H. (2004). A cognitive taxonomy of medical errors. *Journal of Biomedical Informatics*, 37(3), 193–204.
- Zhang, H., Fiszman, M., Shin, D., Miller, C. M., Roseblat, G., & Rindfleisch, T. C. (2011). Degree centrality for semantic abstraction summarization of therapeutic studies. *Journal of Biomedical Informatics*, 44(5), 830–838.
- Zheng, B., Sumkin, J., Good, W., Maitz, G., Chang, Y., & Gur, D. (2000). Applying computer-assisted detection schemes to digitized mammograms after JPEG data compression: An assessment. *Academic Radiology*, 7(8), 595–602.
- Zhenyu, H., Yanjie, Z., et al. (2009). *Combining text retrieval and content-based image retrieval for searching a large-scale medical image database in an integrated RIS/PACS environment*, SPIE. Bellingham, WA.
- Zhou, L., Soran, C. S., Jenter, C. A., Volk, L. A., Orav, E. J., Bates, D. W., et al. (2009). The relationship between electronic health record use and quality of care over time. *Journal of the American Medical Informatics Association: JAMIA*, 16(4), 457–464.
- Zhu, J., Zhang, B., & Schadt, E. E. (2008). A systems biology approach to drug discovery. *Advances in Genetics*, 60, 603–635.
- Zhu, V. J., Overhage, M. J., Egg, J., Downs, S. M., & Grannis, S. J. (2009). An empiric modification to the probabilistic record linkage algorithm using frequency-based weight scaling. *Journal of the American Medical Informatics Association: JAMIA*, 16(5), 738–745.
- Zhu, Q., Ge, D., Maia, J. M., et al. (2011). A genome-wide comparison of the functional properties of rare and common genetic variants in humans. *American Journal of Human Genetics*, 88, 458–468.
- Zielstorff, R. D., Hudgings, C. L., & Grobe, S. J. (1993). *Next-generation nursing information systems: Essential characteristics for professional practice*. Washington, DC: American Nurses Publishing.
- Zijdenbos, A. P., Evans, A. C., et al. (1996). Automatic quantification of multiple sclerosis lesion volume using stereotactic space. Proc. In *4th International conference on visualization in biomedical computing. Hamburg* (pp. 439–448).
- Zoll, P. M., Linenthal, A. J., Gibson, W., Paul, M. H., & Norman, L. R. (1956). Termination of ventricular fibrillation in man by externally applied countershock. *The New England Journal of Medicine*, 254, 727–732. PMID 13309666.
- Zong, W., Moody, G. B., & Mark, R. G. (2004). Reduction of false arterial blood pressure alarms using signal quality assessment and relationship between the electrocardiogram and arterial blood pressure. *Medical & Biological Engineering & Computing*, 42, 698–706. PMID 15503972.
- Zuriff, G. E. (1985). *Behaviorism: A conceptual reconstruction*. New York: Columbia University Press.
- Zweigenbaum, P. (1994). MENELAS: An access system for medical records using natural language. *Computer Methods and Programs in Biomedicine*, 45(1–2), 117–120.
- Zweigenbaum, P., & Courtois, P. (1998). Acquisition of lexical resources from SNOMED for medical language processing. *Proceedings of Medinfo*, 9(Pt 1), 586–590.
- Ledley R. (1965) *Use of Computers in Biology and Medicine*. New York: McGraw-Hill.
- Association of American Medical Colleges (1984). *Physicians for the twenty-first century (Report of the Project Panel on the General Professional Education of the Physician and College Preparation for Medicine)*. *J Med Educ* 59(11):(Part 2) 1–208.