biomedical and health informatics

Biomedical and Health Informatics Lecture Series

Tuesday, February 26, 2013
12:00 - 12:50 p.m., Room T-635

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"Should safety of health information technology be regulated?"

Jos Aarts is a Senior Research Scientist at the Institute of Health Policy and Management and the Department of Medical Informatics of Erasmus University Rotterdam in the Netherlands. He is a visiting research fellow at the University of Pennsylvania, Philadelphia and an adjunct assistant professor at the University of Victoria in Canada. His research interests are electronic prescribing and decision support systems, impact of health IT on clinical work practices and workflow, and safety of HIT. His PhD thesis was on the implementation of computerized physician order entry (CPOE) systems in Dutch and American hospitals. His research papers on CPOE have appeared in Health Affairs, the Journal of American Medical Informatics Association, the International Journal of Medical Informatics, Methods of Information in Medicine and BMC Medical Informatics and Decision Making. Dr. Aarts has been a visiting scientist at Oregon Health and Science University, Portland, Ore, the University of New South Wales and the University of Sydney in Australia. He has also published a number of papers on health informatics curriculum development. He is chair of Working Group Human and Organizational Factors of Medical Informatics of the European Federation for Medical Informatics. He is elected chair of AMIA's People and Organizational Issues Working Group. He is on the editorial boards of the International Journal of Medical Informatics, and Health Technology and Policy. Dr. Aarts was chair of the Scientific Program Committee of Medical Informatics Europe 2011 held in Oslo, Norway. He is an elected Fellow of the American College of Medical Informatics.

Health information technology (HIT) has been hailed as a beneficial technology that improves professional decision-making, reduces errors and increases patient safety. However, a number of studies have shown that HIT may induce errors and even increased mortality. These studies have been contested for their veracity and research methodologies. It is however clear that HIT is part of health care as a complex sociotechnical system. A complex sociotechnical system consists of highly intertwined parts and according to Charles Perrow system complexity makes failures inevitable. A report of the Institute of Medicine in 2011 addressed the question how HIT impacts patient safety and suggested a number of steps to improve its quality. The questions addressed in this presentation are the following. What do we know about HIT incidents and accidents and how do we know? The second question will address and compare HIT safety initiatives in several Western countries. The final question will address the need for regulation of HIT safety. In trying to answer this question, the problem of legal liability will be discussed.

Further reading

[1] Committee on Patient Safety and Health Information Technology. Health IT and patient safety: building safer systems for better care. Washington, DC: National Academies Press; 2012.

[2] Aarts J. Towards safe electronic health records: a socio-technical perspective and the need for incident reporting. Health Policy Technol. 2012;1(1):8-15.

[3] Magrabi F, Ong MS, Runciman W, Coiera E. Using FDA reports to inform a classification for health information technology safety problems. J Am Med Inform Assoc. 2012;19(1):45-53.

[4] Magrabi F, Aarts J, Nohr C, Baker M, Harrison S, Pelayo S, et al. A comparative review of patient safety initiatives for national health information technology. Int J Med Inform. 2012 Dec 18.

[5] Hoffmann S, Podgurski A. Finding a cure: the case for regulation and oversight of electronic health record systems. Harv J Law Technol. 2008;22(1):103-65.

[6] Special issue: Clinical support systems for drug-drug interactions: implementing effective systems, limiting malpractice liability. St Louis University Journal of Health Law and Policy. 2012;5(2):251-340.