

Seminário Informática em Saúde

03, 04 e 05 de agosto de 2009

Novotel São Paulo Ibirapuera
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Inscrições: http://www.unifesp.br/dis/pg/form_pg.htm

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Alunos de Programa de Pós-Graduação "stricto sensu" terão direito a 03 créditos

Este curso é uma atividade do projeto apoiado pelo Fogarty Institute – Grant # TW007015-02 – Biomedical Research Informatics for Global Health, National Institute of Medicine, Estados Unidos (PI: Dra Lucila Ohno Machado; Responsável no Brasil: Dra Heimar F. Marin).

Programação

Dia 03/08/2009 (segunda feira)

09 as 12hs

Theme: Biomedical Informatics: Its Definition, Scientific Basis, and Role in Clinical Practice

In this session, Dr. Shortliffe will introduce one definition of the discipline of *biomedical informatics*, clarifying its relationship to other biomedical sciences and to its component sciences such as computer science, decision science, cognitive science, information science, and management science. He will distinguish between the core informatics discipline and its various applied science activities, such as bioinformatics, nursing informatics, imaging informatics, or public health informatics. Then, focusing on clinical informatics, he will explore the state of the art in electronic medical records, their history, and the challenges we have faced in bringing about their effective implementation in hospitals, health systems, and ambulatory practices. Key lessons involve the important role that sociocultural context plays, including the active participation of future users, in determining whether a given system implementation is likely to be effective and accepted.

➤ Dr. Edward Shortliffe

14 as 17hs

Theme: Biomedical Informatics and the Science of Cognition

Recent developments in biomedical informatics research have afforded possibilities for great advances in health care delivery. These exciting opportunities also present formidable challenges to the implementation and integration of technologies in the workplace. As in most domains, there is a gulf between technologic artifacts and end users. Since medical practice is a human endeavor, there is a need for bridging disciplines to enable clinicians to benefit from rapid technologic advances. This in turn necessitates a broadening of disciplinary boundaries to consider cognitive and social factors pertaining to the design and use of technology, providing some human solutions to technological problems. My lectures will provide a set of arguments for a place of prominence for cognitive science in biomedical informatics. Cognitive science provides a framework for the analysis and modeling of complex human performance and has considerable applicability to a range of issues in informatics. Its methods have been employed to illuminate different facets of design and implementation. This approach has also yielded insights into the mechanisms and processes involved in collaborative design in the domain of biomedical informatics. Cognitive scientific methods and theories will be illustrated in the context of clinical and other health care examples.

➤ Dra. Vimla Pate

Dia 04/08/2009 (terça feira)

09 as 12hs

Theme: Clinical Decision Support Systems

In this session, Dr. Shortliffe will summarize the state of the art in clinical decision making, emphasizing probabilistic reasoning, artificial intelligence, and the integration of decision systems with clinical systems such as EMRs and computerized physician order entry (CPOE) systems. The relevance of Bayes' Theorem to medical diagnosis will be introduced with a specific clinical example. Inadequacies of a purely probabilistic approach will then be discussed, leading to the role that artificial intelligence and expert systems have played. He will describe several myths about clinical decision support that have been disproven over the years and help us to understand how best to implement knowledge systems as integrated components of clinical systems. Current research on clinical reminders, clinical guidelines, and diagnostic decision support will be summarized.

➤ Dr. Edward Shortliffe

14 as 17hs

Theme: Medical and Health Care Errors: Current and Contemporary Perspectives

Given the complexities of modern medicine, delivery of safe and timely care is a huge challenge. Errors, misunderstandings, and inaccuracies, large and small, are routine occurrences in our everyday activities. Health information technology (HIT) has undoubtedly reduced the risk of serious injury for patients during hospital stays. However, its true potential for preventing medical errors remains only partially realized and, paradoxically, systems may even give rise to hazards of their own. There is a growing recognition that many errors are neither solely attributable to lapses in human performance nor to flawed technology. Rather they develop as a product of the interaction between human beings and technology. I will present a general overview of medical errors, its cognitive foundation, and then illustrate contemporary views with the use of clinical examples, closing with some recommendations for error management, including a need for a different focus on education and training.

➤ Dra. Vimla Patel

Dia 05/08/2009 (quarta feira)

08 as 9hs

Theme: Knowledge System Evaluation: A Case Study

In this session, Dr. Shortliffe will discuss the complexity in evaluating a clinical decision support system, especially in settings when there is no agreement among clinical experts about what the "correct answer" might be for a given clinical problem. He will present the evaluation results for a clinical expert system known as "MYCIN", designed to provide antibiotic recommendations for the treatment of patients with severe infections. The evaluation demonstrates the challenges in study design and the results raise new questions about clinical medicine and the nature of expertise.

➤ Dr. Edward Shortliffe

09:30 as 10:30hs

Theme: Evaluation of Health Care Technology

In this session, Dr. Patel will present some methods for evaluation of health care technology. Pros and cons of each of these methods will be discussed. It is important to select right evaluation method depending on the purpose of the evaluation. You are encouraged in this session to bring some specific problems and questions you may have encountered in evaluation, to the class for our discussion.

➤ Dra. Vimla Patel