

University of Southern California

**DANIEL J. EPSTEIN DEPARTMENT OF
INDUSTRIAL AND SYSTEMS ENGINEERING**

EPSTEIN INSTITUTE SEMINAR • ISE 650 SEMINAR

The Science of Health Care Quality Delivery

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ABSTRACT

Health care delivery in the US is wasteful, fragmented, difficult for patients to navigate and too often lethal. Application of modern management techniques have failed to improve Emergency Room overcrowding or ambulance diversion, Operating Room underutilization or staff overtime, reduce 'no-show' rates or improve access in ambulatory care. A fundamental reason is the failure to establish either a descriptive or explanatory theory of health care quality. This presentation will offer a framework for developing a quantitative model of health care delivery from the perspectives of individual patients, provider, health care organizations and society as a whole generating extensive form sub-game Bayesian Nash Equilibrium.

**TUESDAY, JANUARY 18, 2011
ELECTRICAL ENGINEERING BUILDING (EEB) ROOM 248
3:30 – 4:50 PM**

BIO

Dr. Fontanesi is a professor in the School of Medicine, University of California, San Diego with joint appointments to the Department of Medicine, Division of General Internal Medicine and the Department of Family and Preventive Medicine. He is a member of a number of national committees including a core member of Clinical Laboratory Improvement Advisory Committee for the Federal government

Dr. Fontanesi is the Principle Investigator for a number of studies examining the operational conditions and organizational structures that facilitate or constrain organizational effectiveness in providing quality care. Recent studies include workflow analysis and simulation in emergency department re-design, optimized scheduling in ambulatory specialty care clinics, the logistical and fiscal requirements of alternative delivery sites for influenza vaccinations, improving patient compliance through work re-design and restructuring the role and relationships between the Vaccines for Children field staff and Providers. Recent publications range from the cost and efficiencies of mass vaccination clinics, discrete event simulation of ambulatory clinics, modeling patient arrival times and the role of measurement in improving quality of care in ambulatory care clinics.