

The role of medical data analytics in reducing health fraud and improving clinical and financial outcomes

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Abstract

Consider the following healthcare trends:

- *There is a tremendous increase in the amount of patient, life sciences and process data in electronic form, fueled by advances in healthcare IT technology, and health reform legislation.*
- *The amount of medical information (e.g., evidence-based knowledge) and published knowledge is said to be doubling every few years.*
- *There is an explosion in the number of available therapies and diagnostic options for patient care, often enabling precise targeting of therapy to disease conditions.*

In this talk we will discuss these trends and some of the reasons why, despite these advances, healthcare is facing a crisis: namely, there is a steady unsustainable increase in medical costs without a corresponding improvement of patient outcomes. We believe that analysis of clinical, life sciences and medical process data can play a key role in tackling these fundamental challenges. Two technology advances, in particular, can play a key role: cloud computing and mobility will make it possible to analyze vast amounts of data and quickly deliver useful information to clinicians, consumers and researchers at the point where it can have the most impact. Some of this is already happening today, with medical records being analyzed to reduce fraud, waste and abuse, improve patient outcomes, and to improve compliance with standards of care and policy guidelines. We conclude the talk with a glimpse of a future where medical systems could be continually analyzed for optimizing healthcare costs and outcomes.