Clinical Transformation Through Clinical Decision Support and IT

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Overview

- Are We Receiving Value?
- Diagnostic Clinical Decision Support
- Revolutionary HIT

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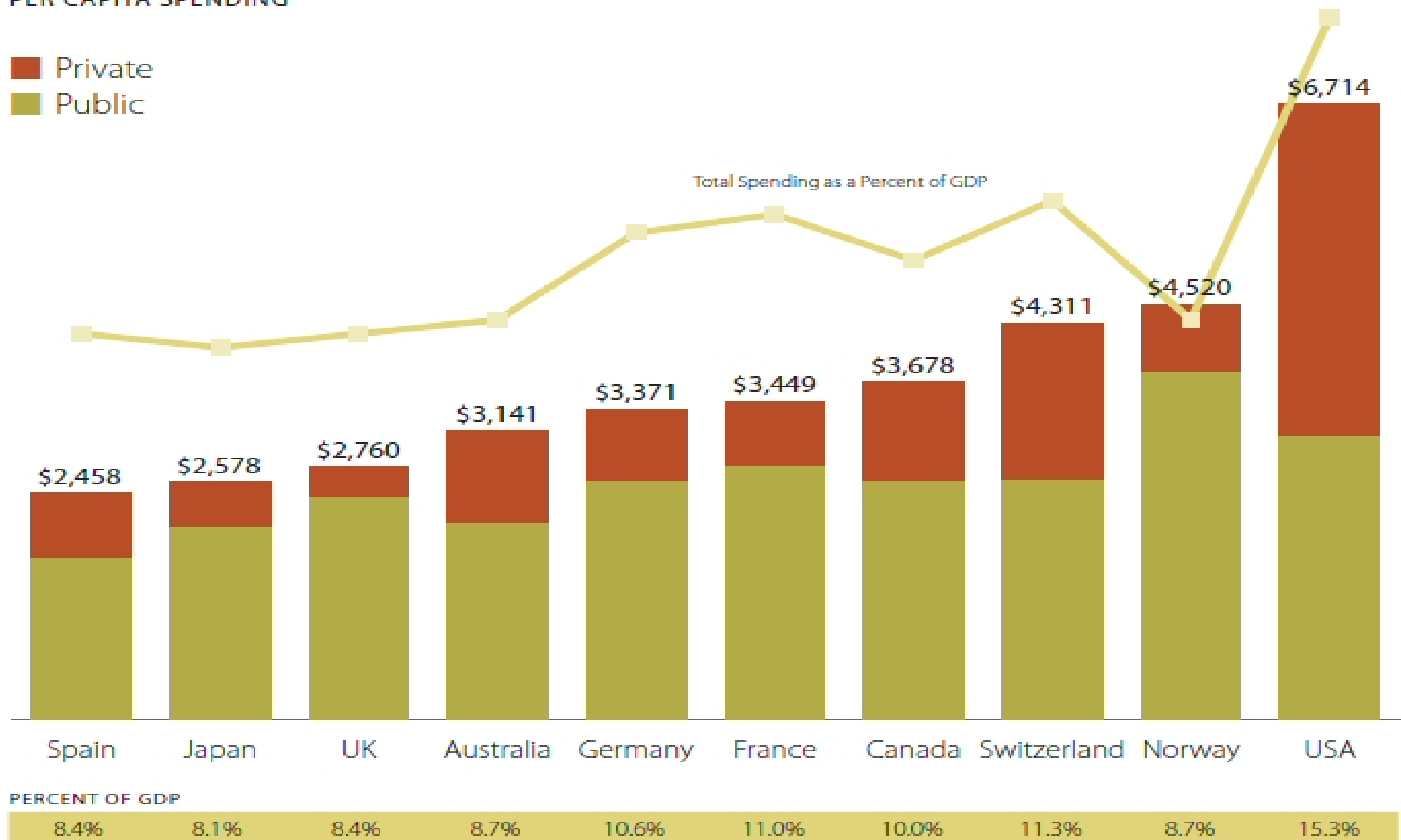
World's Highest Spending per Capita



Source: California Healthcare Foundation, Snapshot Health Care Costs 101, 2009

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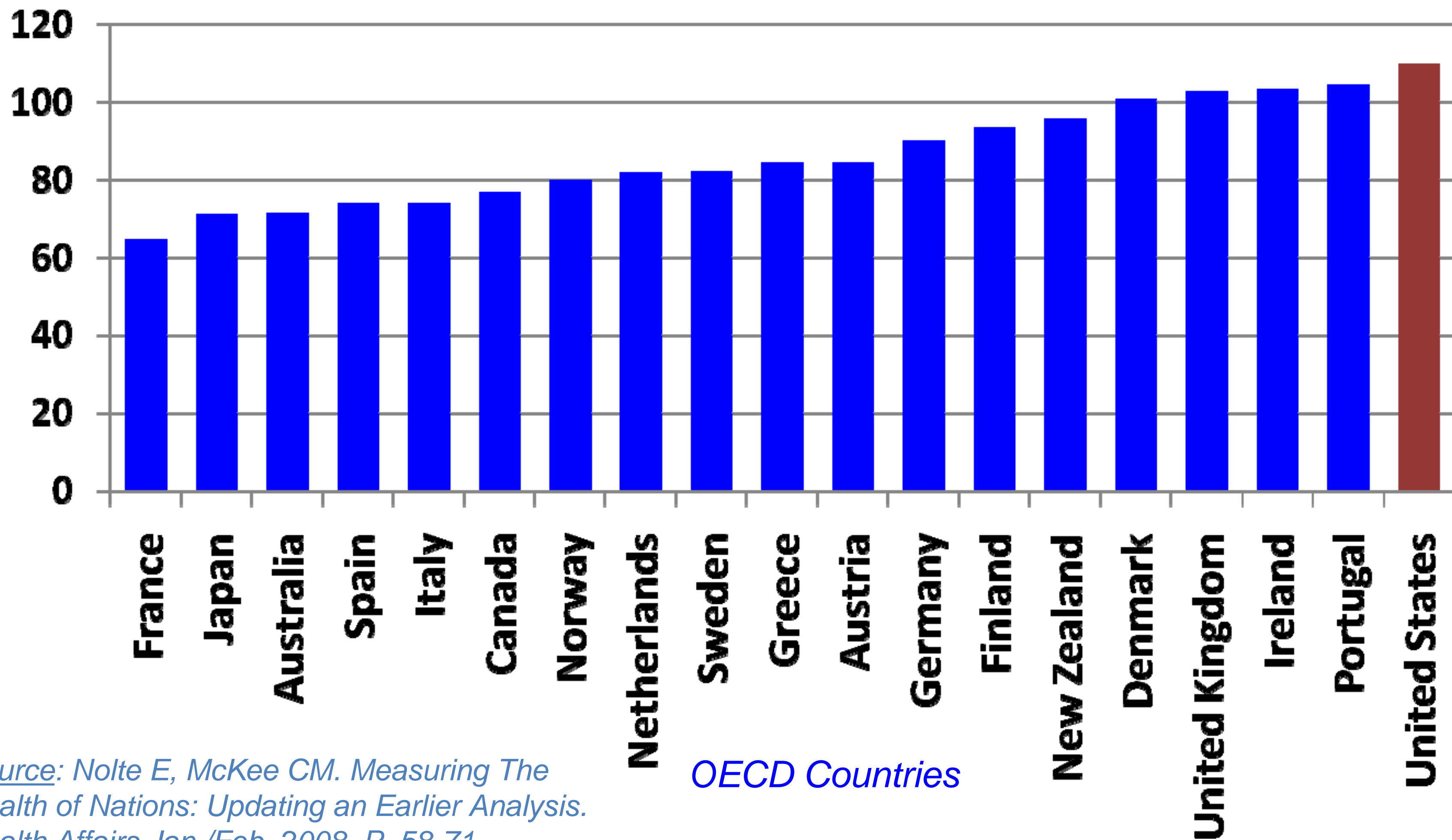
Not So Good



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Spotlight – Medication and Surgery

- Easy concepts for the media and public to understand
  - Illegible Rx leading to wrong dose and death
  - Wrong limb amputated or organ (kidney) removed at surgery

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Environment
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Health
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« Drugs that contribute to falls | Main | Good golfers see the hole differently »

More heparin overdoses, this time in Texas

11:42 AM, July 9, 2008

Add at least 17 Texas infants to the number of children mistakenly given overdoses of heparin in the hospital. At least one of those infants died, and an autopsy is planned to determine whether the blood thinner played a role. Another is still in critical condition.

The problem reportedly occurred in the Christus Spohn Hospital South pharmacy, according to the Corpus Christi Caller-Times.

This may sound familiar to Los Angeles and Indianapolis residents. The newborn twins of actor Dennis Quaid made headlines across the country last year after an accidental overdose of heparin at Cedars-Sinai Medical Center in Los Angeles. They survived, but three infants died in 2006 after a similar mix-up at Methodist Hospital in Indianapolis.

The incidents received national attention. Quaid testified before the U.S. House Committee on Oversight and Government Reform about his family's experience, and he and his wife, Kimberly, created a nonprofit organization, the Quaid Foundation, to reduce human errors in medical care. Many news stories and analyses about both incidents followed.

Dennis Quaid testifying before Congress

Diagnostic and Management Error

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Begin with an Accurate Diagnosis

1. Quality care
2. Better clinical outcomes
3. Decreased length of stay
4. Patient safety and decreased risk
5. ALL of the above

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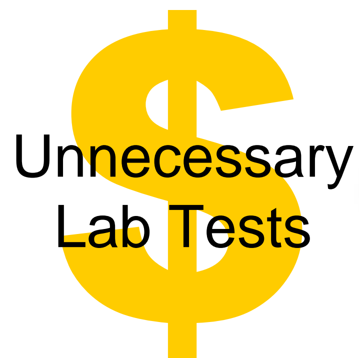
1 Billion Outpatient Visits in US Yearly

The clinician who misses the diagnosis



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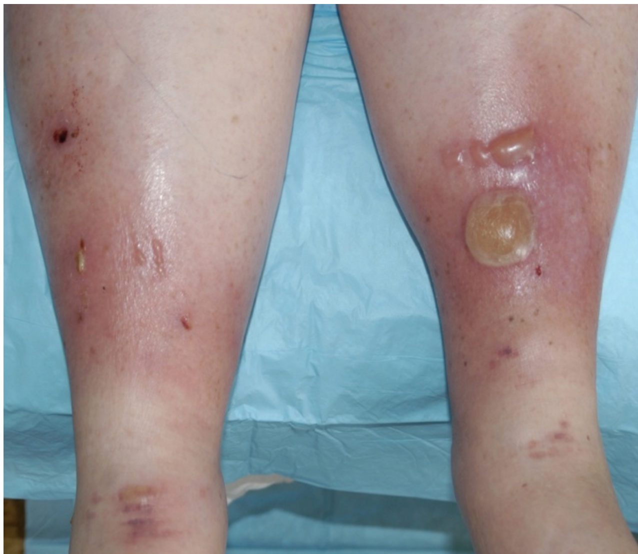
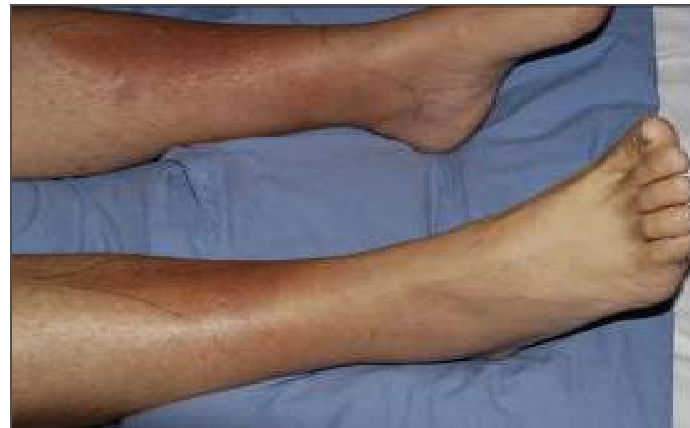
Common Costly Diagnostic Error

- Cellulitis and soft tissue infection
  - One of the leading causes for inpatient admission
    - 240,000 US admissions in 2005
    - >20% of admissions unnecessary - patients had alternative Dx





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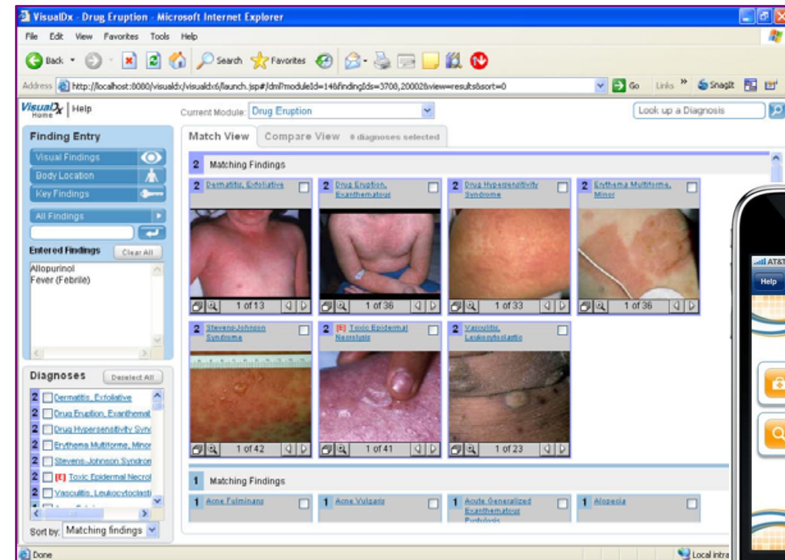
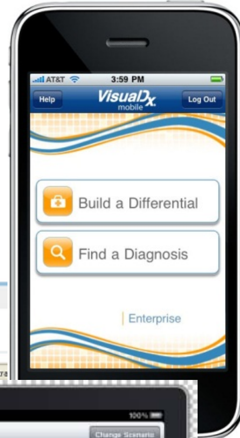
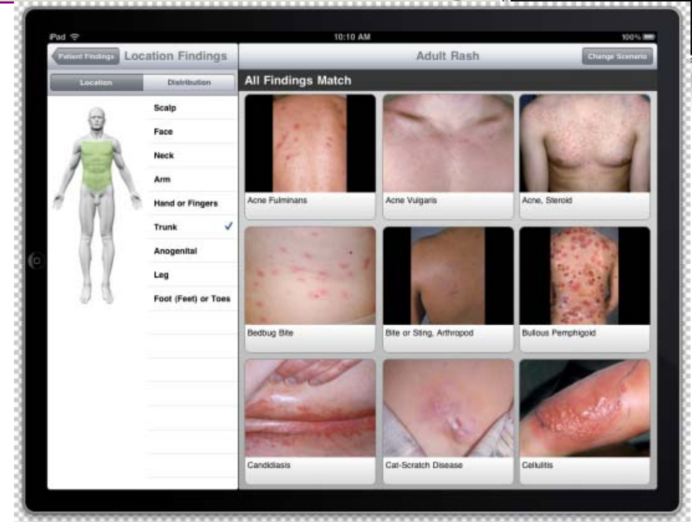
Visual and Pattern Approach to Diagnostic CDS

- Search by patient factors
- Develop a visual differential Dx
- Capture variation
- Graphical representation of knowledge
- 10,000,000 images viewed in 2009 across sites







Widely-Used Clinical Decision Support

- Used by1,300 health care sites nationwide
- Integrated into 25^{+} medical schools
  - Designated by UCLA as required learning
- Trending toward HIT tools use
  - Medical school starting in year 1

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Three Worlds of Errors

- Diagnosis Errors
  - AHRQ
  - Diagnostic Errors in Medicine conference
- Health information technology
  - AMDIS, AMIA, HIMSS
- Quality and patient safety organizations
  - Institute for Healthcare Improvement
  - National Patient Safety Foundation
  - National Quality Forum

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Diagnostic Error in Medicine 2010

3rd International Conference

October 25-27, 2010

KEYNOTE SPEAKER

Peter J. Pronovost, MD, PhD, FCCM

FEATURED PRESENTATIONS

Gordon Guyatt
Brian Haynes
Donald Redelmeier
Kaveh Shojania
Sharon Strauss

Sheraton Centre Toronto Hotel
Toronto, Ontario, Canada

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Diagnostic Error in Medicine 2010

OCTOBER 25-27, 2010 | TORONTO, CANADA

www.smdm.org/diagnostic_errors.shtml

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- Sharon Strauss

Featuring Presentations on

- Keynote Presentation: Safe Patients, Smart Hospitals: What Can the DEM Movement Learn from Successes in Therapeutic Safety?
- Learning from Diagnostic Mistakes - Past, Present, & Future
- Diagnostic Reasoning, Accuracy, Tools, Errors
- Diagnostic Errors Related to Test Results and the Role of Electronic Health Records in Error Prevention
- Current Research Approaches to Diagnostic Error
- Research Methods Panel Discussion: Is there a Right Way Forward?
- Setting the Agenda for Diagnostic Errors Research
- Improving Diagnostic Accuracy – What Will it Take?
- Can Evidence-Based Medicine Help Reduce Diagnostic Error?
- Simulation to Reduce Diagnostic Error

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Clinical Transformation Needed

- Utilize clinical technologies
- Impact clinical processes
- Enhance quality
- Achieve efficiencies
- Continue comparative effectiveness research
- Honor privacy and security
- Modify malpractice incentives
- Necessary focus
  - Clinical strategy
  - Clinical business
  - Process redesign and change management

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Clinical Decision Support

- Delayed knowledge transfer
  - Diagnostic
  - High error rate
- Therapeutic
  - Best practices
- Build CDS workflow
  - Effectiveness
  - Efficiency
  - Accuracy

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New Job Descriptions

- Physicians
  - Higher level of work
  - Greater management responsibility
- Nurses
  - Higher level of work
  - Delivery of physician level care
- Other healthcare providers
  - Delivery of nurse level care
- Change rewards

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Drivers of These New Roles

- Health information technology
  - Electronic medical records
  - Clinical decision support
    - Alerts, reminders, guidelines, protocols, best practices
      - Evidence based medicine
  - Electronic information transfer
    - ePrescribing
    - Electronic case collaboration
    - RHIO/Health record banks
- Reimbursement/business reforms
  - Address economic incentives

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Getting There

- Transform medical education
  - Physicians, nurses
    - Value new skills
    - Change definition of excellence
- Transform incentives
  - Providers - reimbursement
  - Pharma – knowledge transfer
  - Legal – quality and prevention
- Transform culture
  - Expectations
    - More is not better

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African Proverb

Every morning in Africa, a gazelle wakes up.

It knows it must run faster than the fastest lion or it will be killed.

Every morning a lion wakes up.

It knows it must outrun the slowest gazelle or it will starve to death.

It doesn't matter whether you are a lion or a gazelle.

When the sun comes up, you better start running.

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