Bad systems vs Bad apples: 13 years into the patient safety movement

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EXTRA!!! The Times EXTRA!!!

"Reporter Dies from Chemotherapy Overdose"

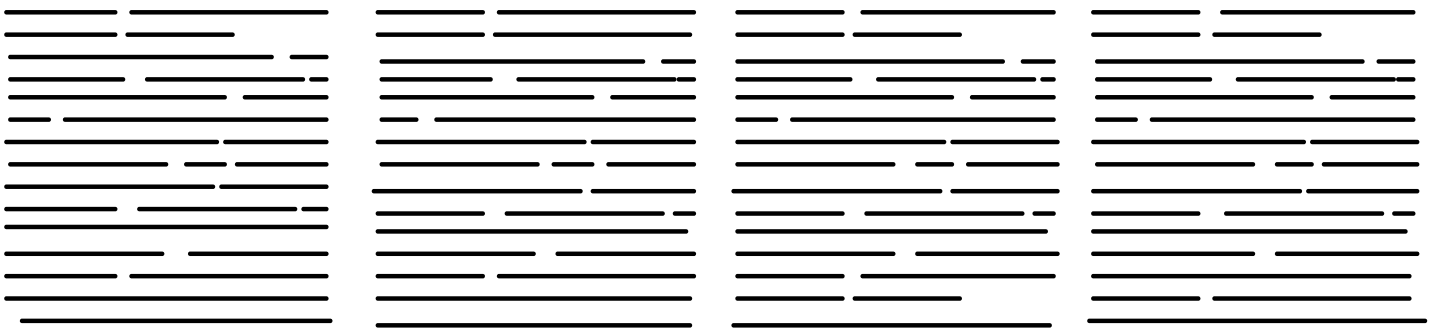
– *Boston Globe*, March 23, 1995

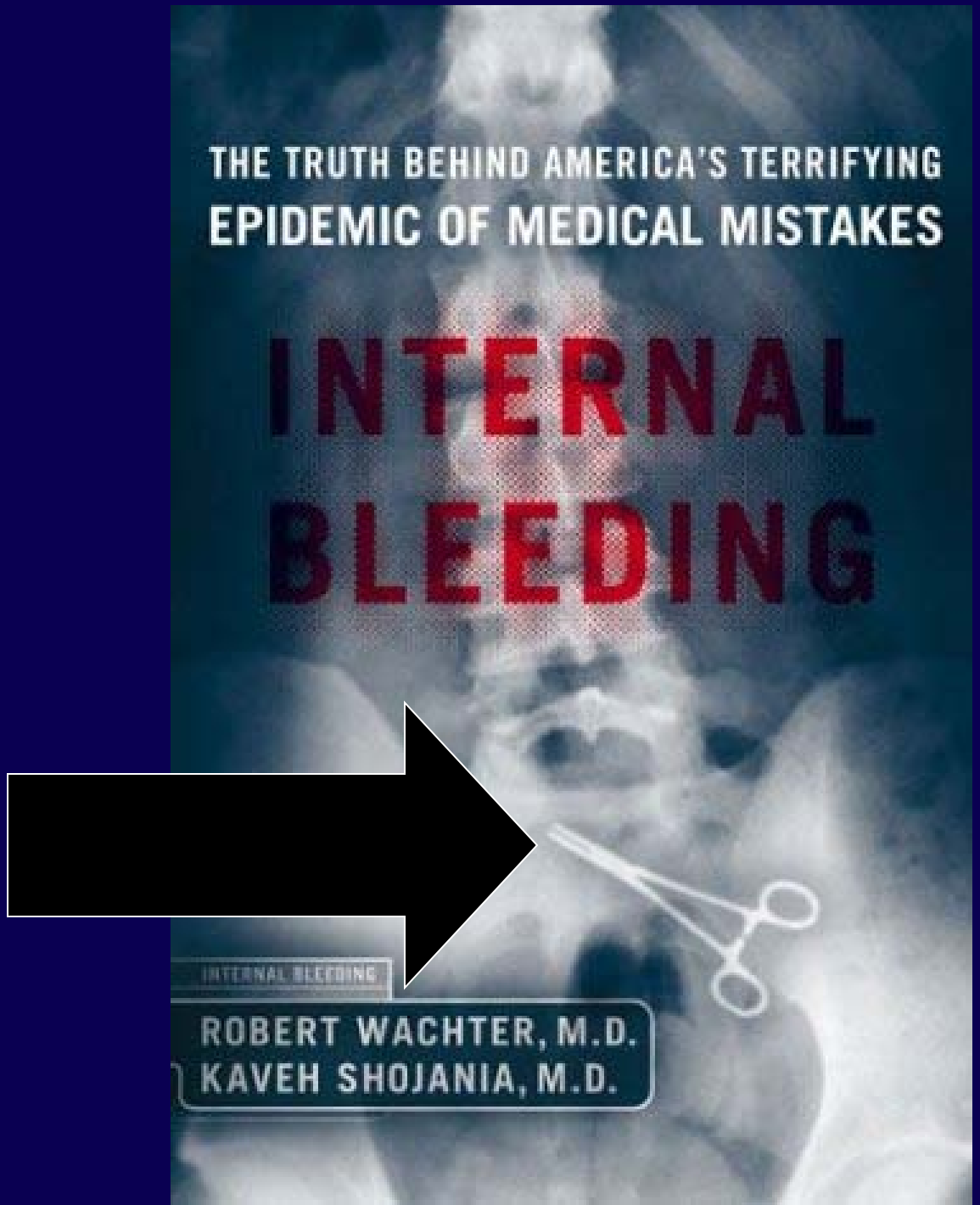
"Prominent neurosurgeon removes wrong side of brain – twice!

– *New York Times*, March 1, 2000

"Canadian Woman Had Surgical Tool in Stomach for 4 Months "

– *CNN*, December 16, 2000




THE TRUTH BEHIND AMERICA'S TERRIFYING
EPIDEMIC OF MEDICAL MISTAKES
INTERNAL BLEEDING
INTERNAL BLEEDING
ROBERT WACHTER, M.D.
KAVEH SHOJANIA, M.D.

EXTRA!!! The Times EXTRA!!!

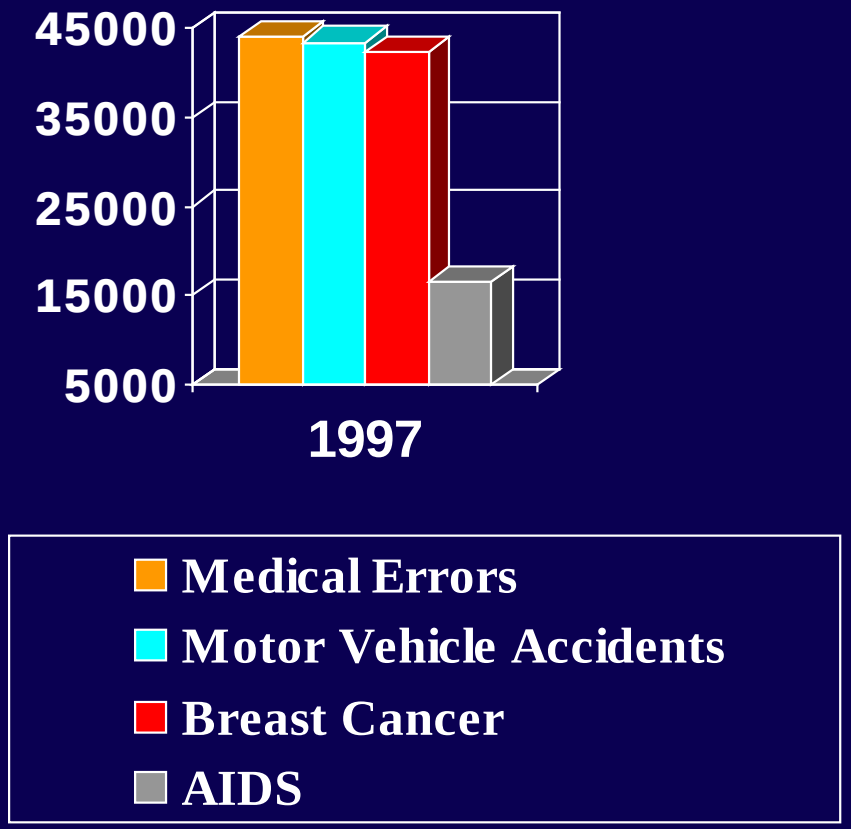
"Medical Mistakes 8th Top Killer" ***USA Today*** **,** ***11/30/99***

"Academy of Sciences asserts that rate of medical errors is 'stunningly high.' Congress urged to create federal agency to protect patients." ***New York Times,*** ***11/30/99***

"Errors kill 44,000 to 98,000 patients in hospitals each year" ***Wall Street Journal,*** **11/30/99**

The Figures Behind the Headlines

- Medical Errors 8th leading cause of death
- Total cost of preventable adverse events ~ $20 billion



Two Canadian Studies

Ottawa Patient Safety Study*

- 2 teaching hospitals
- 502 adults
- 12.7% with *adverse event*
- 37.5% were preventable

Canadian Adverse Event Study†

- 20 hospitals in 5 provinces
- 3745 adults
- 7.5% with *adverse event*
- 36.9% preventable

* Forster et al. *CMAJ*, 2004

† Baker, Norton, et al. *CMAJ*, 2004

Key Points

- These are not instruments left inside patients, catastrophic medication errors, wrong leg amputated etc
  - More mundane, but still important problems like infections, surgical complications, blood clots, etc
- They are also not primarily the actions of a small percentage of incompetent individuals
- ***But…we do know that "problem" doctors exist***

Context for “Systems Approach”

- Medicine evolved in two ways
  - Emphasis on professional excellence & responsibility
  - Series of “cottage industries”

→Two barriers to improving quality/safety

1. Individuals hesitant to discuss errors
2. No coherent design to increasingly complex and hazardous delivery systems

Annals of Internal Medicine
Established in 1927 by the American College of Physicians

67 y.o. woman admitted to a teaching hospital was mistakenly taken for an invasive electrophysiology (EP) procedure intended for another patient.

ACADEMIA AND CLINIC

QUALITY GRAND ROUNDS

Series Editors: Robert M. Wachter, MD;

The Wrong Patient

Mark R. Chassin, MD, MPP, MPH and

4 June 2002 | Volume 136 Issue 11 | Pages 826-833

Among all types of medical errors, cases in which the wrong patient undergoes an invasive procedure are sufficiently distressing to warrant special attention. Nevertheless, institutions underreport such procedures, and the medical literature contains no discussions about them. This article examines the case of a patient who was mistakenly taken for another patient's invasive electrophysiology procedure. After reviewing the case and the results of the institution's "root-cause analysis," the discussants discovered at least 17 distinct errors, no single one of which could have caused this adverse event by itself. The discussants illustrate how these specific "active" errors interacted with a few underlying "latent conditions" (system weaknesses) to cause harm. The most remediable of these were absent or misused protocols for patient identification and informed consent, systematically faulty exchange of information among caregivers, and poorly functioning teams.

Summary of Events

Joan Morris (a pseudonym) is a 67-year-old woman admitted to a teaching hospital for cerebral angiography. The day after that procedure, she mistakenly underwent an invasive cardia

The patient, a native English speaker and high school graduate whose daughter is a physician, had been well until several months earlier, when she fell and struck her head. Magnetic large cerebral aneurysms. The interventional radiology service admitted her for cerebral angiography.

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BBC News 'wrong Guy' is revealed

The true identity of a man who was mistakenly interviewed on BBC News 24 has been revealed.

Guy Goma, a graduate from the Congo, appeared on the news channel in place of an IT expert after a mix-up.

But Mr Goma, who was wrongly identified in the press as a taxi driver, was really at the BBC for a job interview.

Guy Goma faced questions about the Apple vs Apple court case

VIDEO Watch the interview

Mr Goma said his appearance was "very stressful" and wondered why the questions were not related to the data support cleanser job he applied for.

The mix-up occurred when a produce[illegible] to collect the expert from the wrong reception in BBC [illegible] Centre in West London.

The producer asked for Guy Kewney, editor of Newswireless.net, who was due to be interviewed about the Apple vs Apple court case.

> This has turn[illegible]

After being pointed in Mr Goma's[illegible] the producer - who had seen a [illegible] checked: "Are you Guy Kewney?

The economics and business stu[illegible] affirmative and was whisked up [illegible]

Business presenter Karen Bowerman, who was to interview the expert, managed to get a message to the editor that the guest seemed "very breathless and nervous".

Mr Goma was eventually asked three questions live on air,

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Mr Goma said his appearance was "very stressful" and wondered why the questions were not related to the data support cleanser job

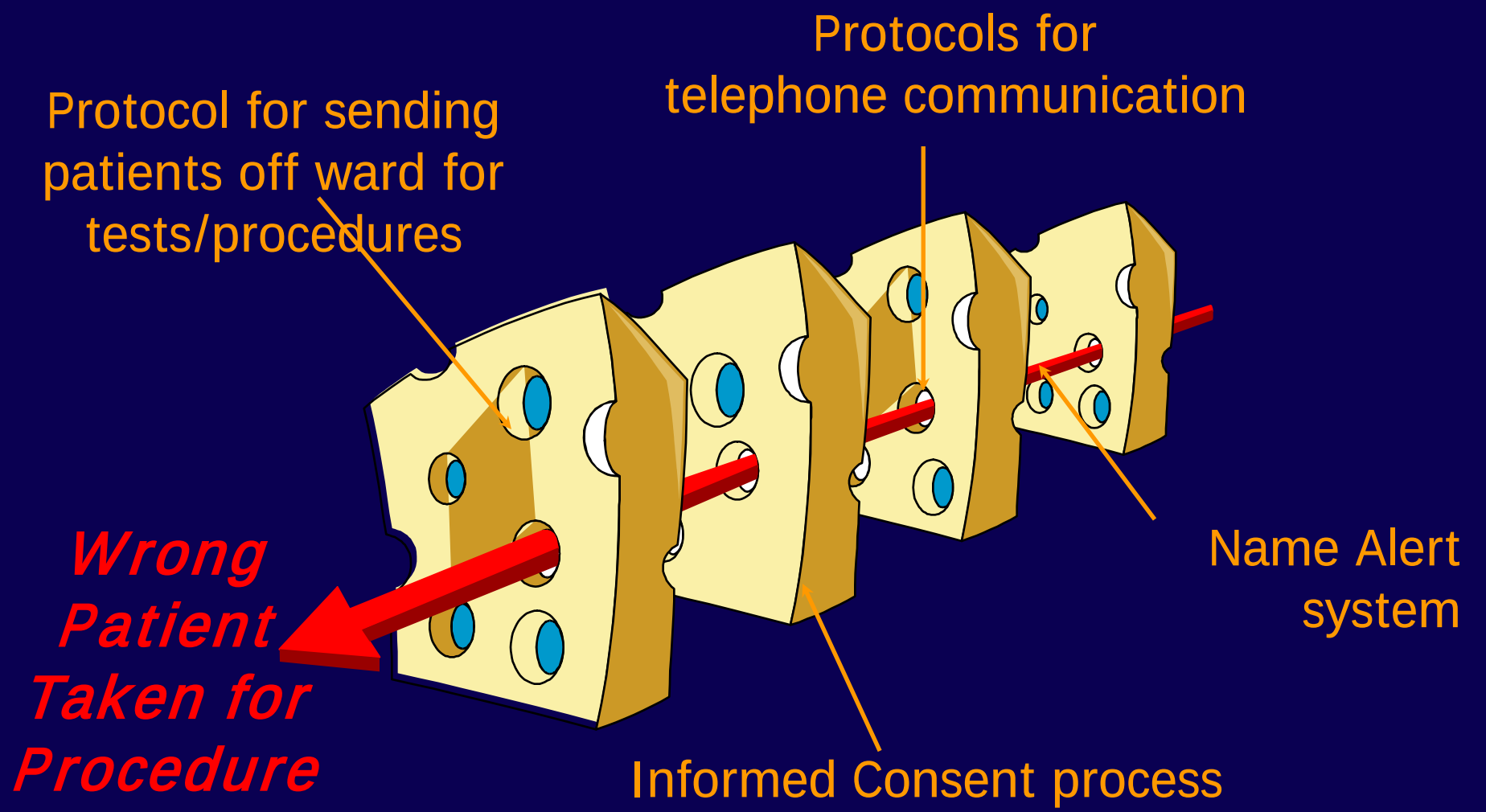
Multiple Problems in Case

System problems

- Fragmentation of care
- Off service patients
- Information systems
- Physician coverage system
- Communication within and across disciplines
- Name alert system
- Informed consent process

Unsafe acts

- Incomplete patient ID
- Sending patient off ward without order
- Ignoring major red flags
  - Lack of pertinent documentation
  - Patient's repeated statements that she is not supposed to go for this procedure


Protocol for sending patients off ward for tests/procedures
Protocols for telephone communication
Wrong Patient Taken for Procedure
Name Alert system
Informed Consent process

The “Systems Approach”

- Identify problems such as
  - Fragmented, paper-based medical records
  - Poor communication and teamwork
  - Badly designed equipment
- Implement solutions
  - Checklists
  - Electronic records & order entry
  - Teamwork training in surgery
  - Simulation for crisis scenarios

Progress Overall

- Some notable successes
  - Reductions in hospital-acquired infections
  - Teamwork training and reduced surgical mortality
  - Bar coding to prevent medication administration errors
- But, long way to go
  - *"War on Cancer" has been going on for 40 years*
- And, we still haven't tackled the problem of "bad apples"

BMJ Quality & Safety

Identification of doctors at risk of recurrent complaints: a national study of healthcare complaints in Australia Bismark et al 2013

- All 18,907 formal patient complaints filed against doctors with in Australia over an 11-year period.
- *3% of doctors accounted for 49% of complaints*
- *1% accounted for 25% of complaints*

BMJ Quality & Safety

Past complaints predicted future complaints

- Model could distinguish low and high-risk doctors

  <10% chance of complaint within 2 years vs >80% chance

- Doctors with 3 complaints had a 40% chance of generating a fourth complaint within one year and a 60% chance within two years

Bismark et al *BMJ Quality & Safety* 2013

Bad Apples & Bad Systems

- Serious complaints concentrated among few doctors
- Probably not true for medical injuries– ie, most medical injuries are not caused by a small proportion of doctors
  - ~500,000 hospital patients in US suffer medical injuries
  - Small minority of doctors could not possibly cause the majority of these events
- ***But, doctors with competency problems and behavioural issues clearly exist and we could do a much better job of identifying them early on***

Special Article

Disciplinary Action by Medical Boards and Prior Behavior in Medical School

- 235 graduates of three US medical schools who were disciplined by one of 40 state medical boards between 1990 and 2003
- Compared with 469 "controls"
- Unprofessional behavior in medical school 3-times more likely among the disciplined doctors
  - *Irresponsible behaviour, no self-improvement*
- Explained far more of the risk than did MCAT scores or grades

Papadakis, et al, N Engl J Med, 2005

JAMA The Journal of the American Medical Association

Physician Scores on a National Clinical Skills Examination as Predictors of Complaints to Medical Regulatory Authorities

- Subjects: All 3424 physicians taking the Medical Council of Canada clinical skills examination between 1993 and 1996 who were licensed to practice in Ontario or Quebec.
- Outcome: Patient complaints filed with regulatory authorities in Ontario or Quebec
- Results: 17% of MDs had at least 1 complaint, of which 82% were for communication or quality-of-care problems.
- *Physician who scored poorly on communication skills were more likely to have subsequent complaints against them*

Tamblyn et al, J Am Med Assoc, 2007

Bad Apples as a Systems Problem

- Weeding out “bad apples” did not work historically because
- Probably not true for medical injuries– ie, most medical injuries are not caused by a small proportion of doctors
  - ~500,000 hospital patients in US suffer medical injuries
  - Small minority of doctors could not possibly cause the majority of these events
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BMJ Quality & Safety

The relationship between commercial website ratings and traditional hospital performance measures in the USA

Bardach et al 2012

- Comparison of ratings on **Yelp**.com (1–5 stars), with traditional measures of hospital quality.
- Moderate correlations between Yelp ratings and
  - *Overall assessment of satisfaction by patients*
  - *Mortality for* 3 common conditions

Similar results in UK. **Greaves et al. et al *BMJ Qual & Saf* 2012**

Conclusions

- Weeding out “bad apples” did not work historically
  - Good doctors waste time proving they’re good and bad ones still escape detection
- But, we did not try that hard
- Could develop “early warning” systems
- Seems especially important to do since “systems approach” takes time AND cases of egregious doctors undermine public trust