

Disclosure of Financial Relationships

Jeff Wiese, MD, MHM, FACP

Has no relationships with any entity producing, marketing, re-selling, or distributing health care goods or services consumed by, or used on, patients.

The Story of Us...

SPECIAL ARTICLE

Outcomes of Care by Hospitalists, General Internists, and Family Physicians

Peter K. Lindenauer, M.D., Michael B. Rothberg, M.D., M.P.H.,
Penelope S. Pekow, Ph.D., Christopher Kenwood, B.S., Evan M. Benjamin, M.D.,
and Andrew D. Auerbach, M.D., M.P.H.

ABSTRACT

BACKGROUND

The hospitalist model is rapidly altering the landscape for inpatient care in the United States, yet evidence about the clinical and economic outcomes of care by hospitalists is derived from a small number of single-hospital studies examining the practices of a few physicians.

METHODS

We conducted a retrospective cohort study of 76,926 patients 18 years of age or older who were hospitalized between September 2002 and June 2005 for pneumonia, heart failure, chest pain, ischemic stroke, urinary tract infection, acute exacerbation of chronic obstructive pulmonary disease, or acute myocardial infarction at 45 hospitals throughout the United States. We used multivariable models to compare the outcomes of care by 284 hospitalists, 993 general internists, and 971 family physicians.

RESULTS

As compared with patients cared for by general internists, patients cared for by hospitalists had a modestly shorter hospital stay (adjusted difference, 0.4 day; $P < 0.001$) and lower costs (adjusted difference, \$268; $P = 0.02$) but a similar inpatient rate of death (odds ratio, 0.95; 95% confidence interval [CI], 0.85 to 1.05) and 14-day readmission rate (odds ratio, 0.98; 95% CI, 0.91 to 1.05). As compared with patients cared for by family physicians, patients cared for by hospitalists had a shorter length of stay (adjusted difference, 0.4 day; $P < 0.001$), and the costs (adjusted difference, \$125; $P = 0.33$), rate of death (odds ratio, 0.95; 95% CI, 0.83 to 1.07), and 14-day readmission rate (odds ratio, 0.95; 95% CI, 0.87 to 1.04) were similar.

CONCLUSIONS

For common inpatient diagnoses, the hospitalist model is associated with a small reduction in the length of stay without an adverse effect on rates of death or readmission. Hospitalist care appears to be modestly less expensive than that provided by general internists, but it offers no significant savings as compared with the care provided by family physicians.

From the Center for Quality and Safety Research, Baystate Medical Center, Springfield, MA (P.K.L., M.B.R., P.S.P., E.M.B.); the Department of Medicine, Tufts University School of Medicine, Boston (P.K.L., M.B.R., E.M.B.); the School of Public Health and Health Sciences, University of Massachusetts, Amherst (P.S.P., C.K.); and the Department of Medicine, University of California at San Francisco, San Francisco (A.D.A.). Address reprint requests to Dr. Lindenauer at the Center for Quality and Safety Research, Baystate Medical Center, 759 Chestnut St., P-5928, Springfield, MA 01199, or at peter.lindenauer@bhs.org.

N Engl J Med 2007;357:2589-600.

Copyright © 2007 Massachusetts Medical Society.

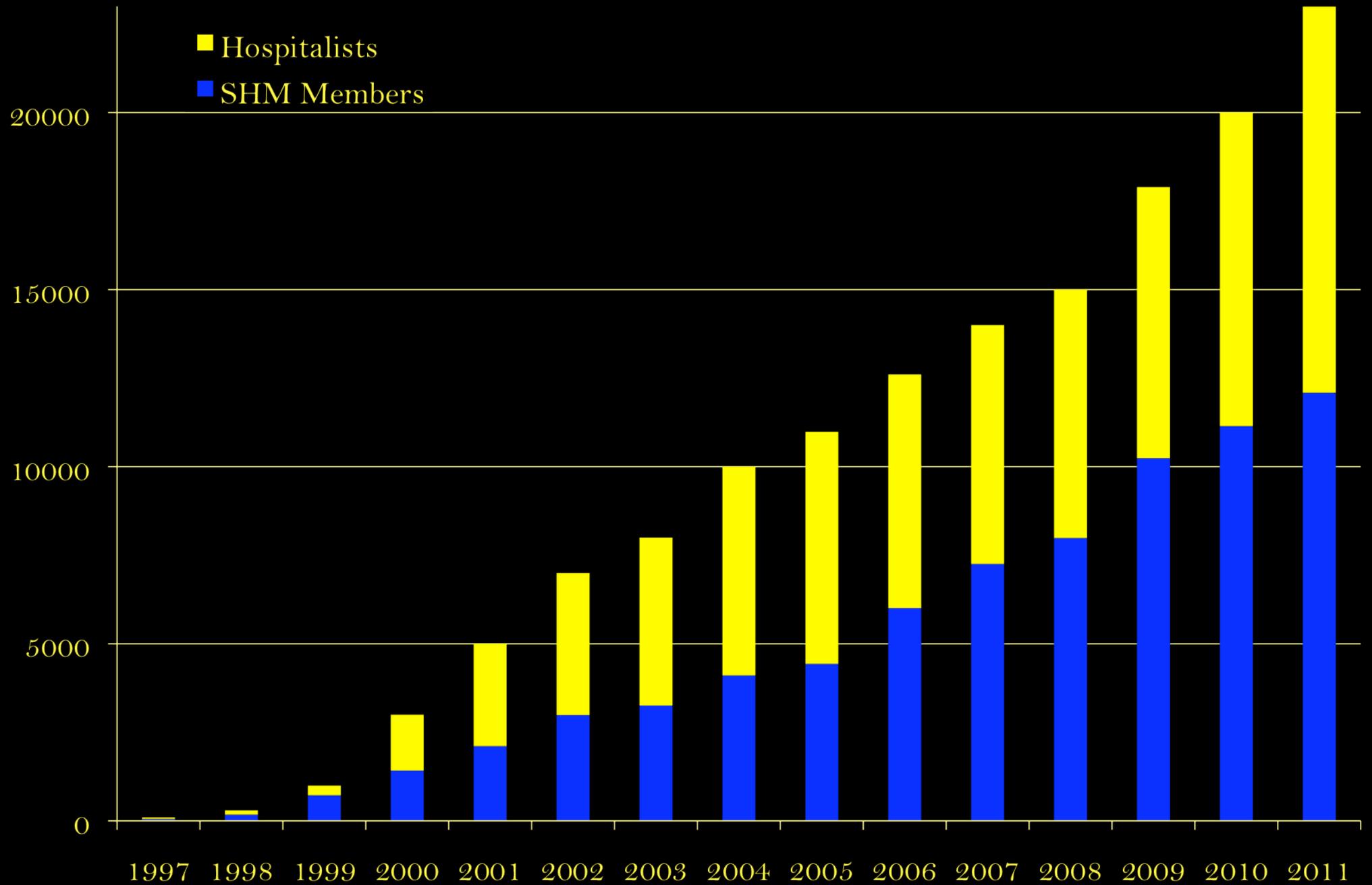
Hospitalists vs Gen Internists

Length of Stay -0.4 days

Costs -\$268

Same mortality

Same re-admit rate

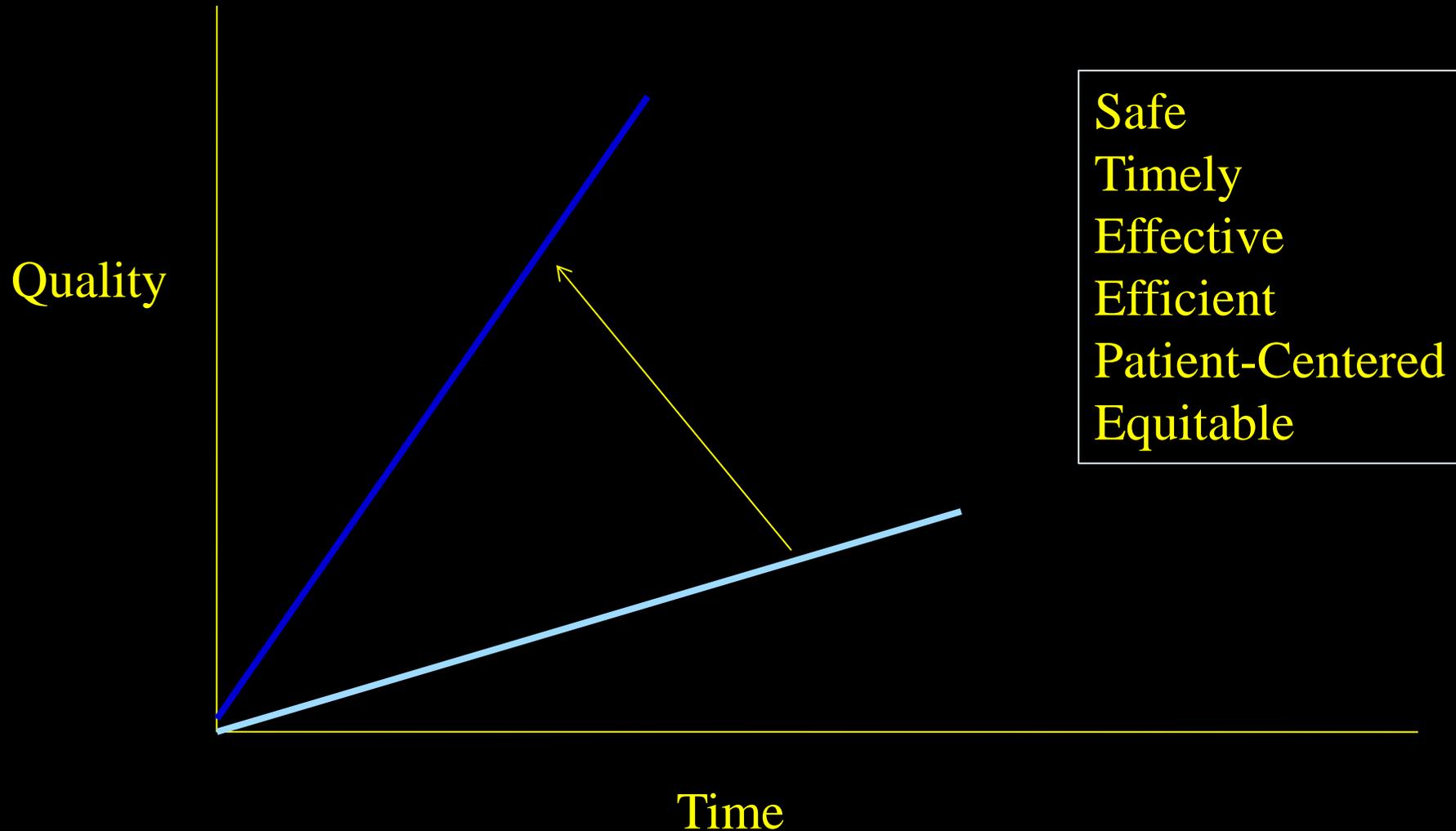


Quality and Patient Safety

- **Quality:** Patients receive the highest standard of care such that expected outcomes are routinely achieved.
- **Patient Safety:** Adverse consequences of diagnostic and therapeutic interventions, including medical errors, are avoided.



Institute of Medicine's Six Components of Quality Health Care



Meanwhile ...



Pre-Duty Hours



Pre-Duty Hours



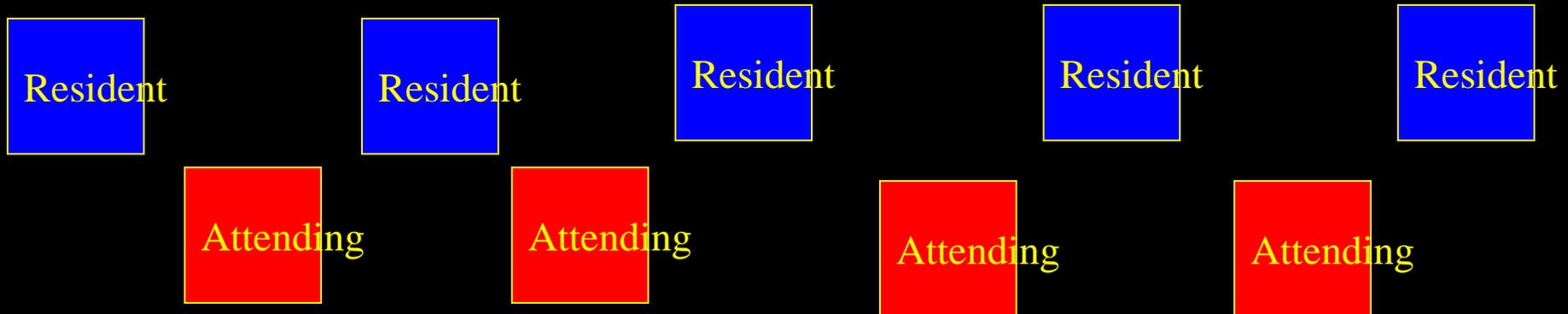
Post-Duty Hours



Pre-Duty Hours



Post-Duty Hours





The Seven Organizational Sins

1. Overproduction
2. Waiting
3. Transporting
4. Inappropriate Processing
5. Unnecessary Inventory
6. Unnecessary Motion
7. Defects

A gravel path winds through a lush green forest. Two black poles stand in the middle of the path, each supporting a semi-transparent green sign with a yellow border. The sign on the left contains the text 'Quality & Patient Safety' in blue. The sign on the right contains the text 'Graduate Medical Education' in blue. At the bottom center of the path, a yellow rectangular sign with a black border contains the text 'QSEA' in black.

Quality &
Patient Safety

Graduate
Medical
Education

QSEA

The Gold Standard

- Residents work in teams
- Active learning replaces passive knowledge acquisition
- Role models are identified and developed
- Meaningful projects are instituted longitudinally
 - ◆ Meaningful to the system
 - ◆ Meaningful to the resident
- The system is constructed to enable time to engage
- Three rules

AEQUANIMITAS

WITH OTHER ADDRESSES

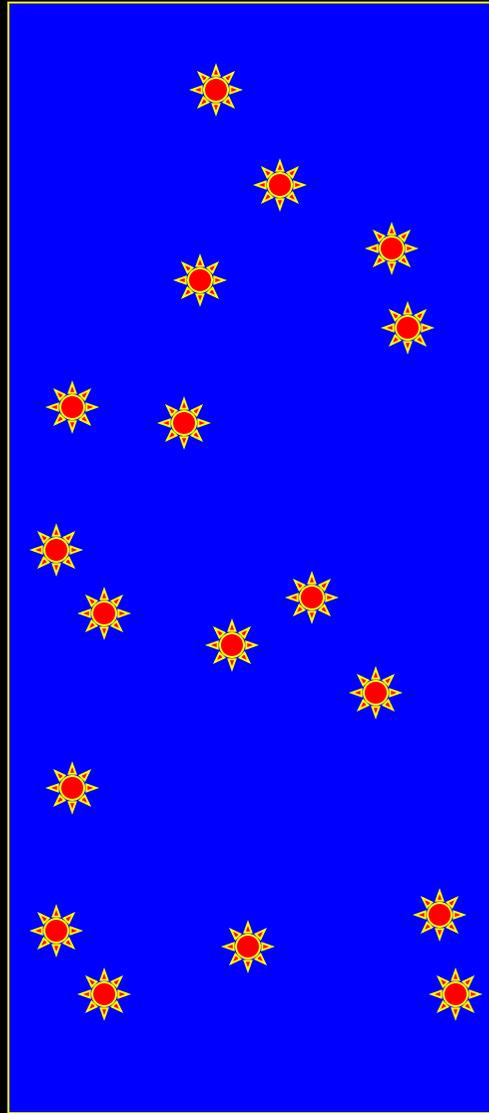
WILLIAM OSLER



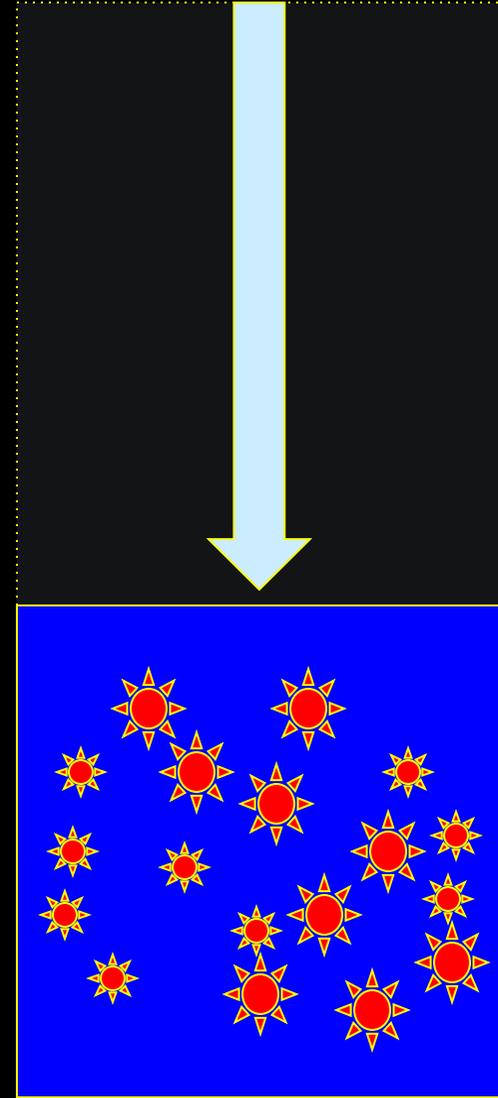
Threat 1:

The Paradigm of Teaching Doesn't Change

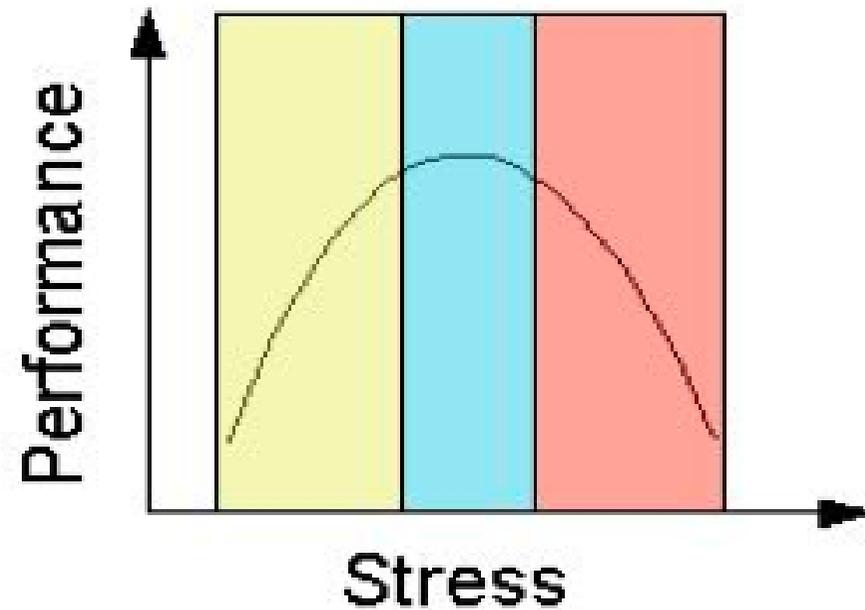
Before the Work Hours



After the Work Hours



The Yerkes-Dodson Curve

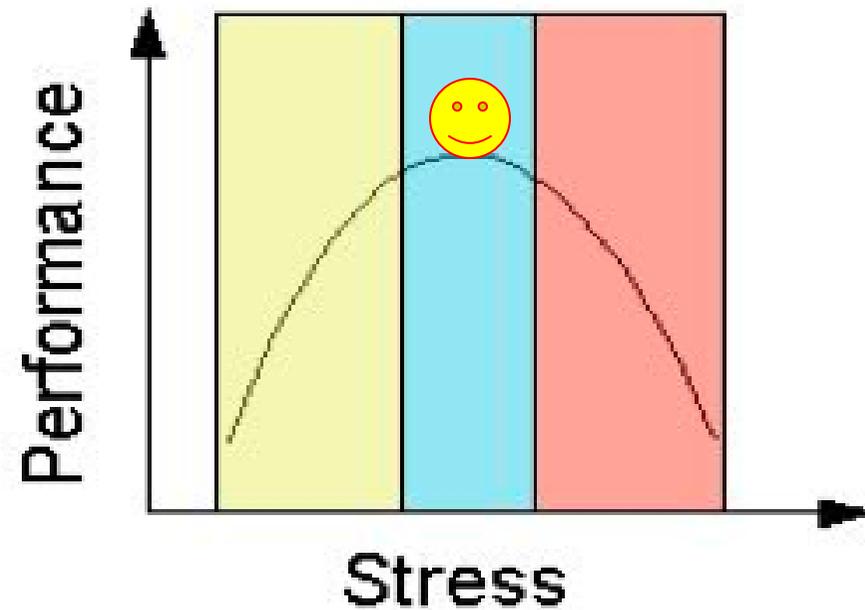


Unproductive – Not Enough Stress

Optimal Production
(Width Varies Based Upon Stress Tolerance)

Unproductive-Too Much Stress

The Yerkes-Dodson Curve

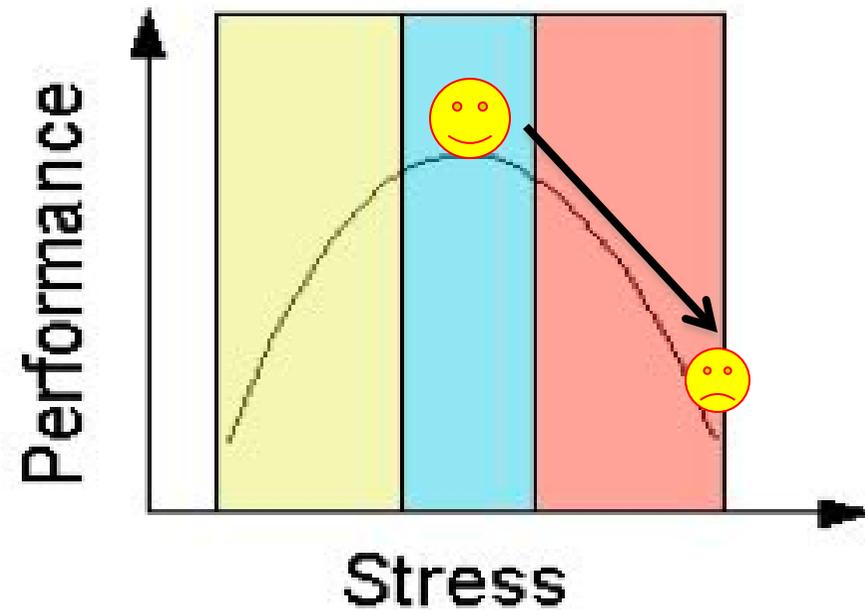


Unproductive – Not Enough Stress

Optimal Production
(Width Varies Based Upon Stress Tolerance)

Unproductive-Too Much Stress

The Yerkes-Dodson Curve



Unproductive – Not Enough Stress

Optimal Production
(Width Varies Based Upon Stress Tolerance)

Unproductive-Too Much Stress



ACP

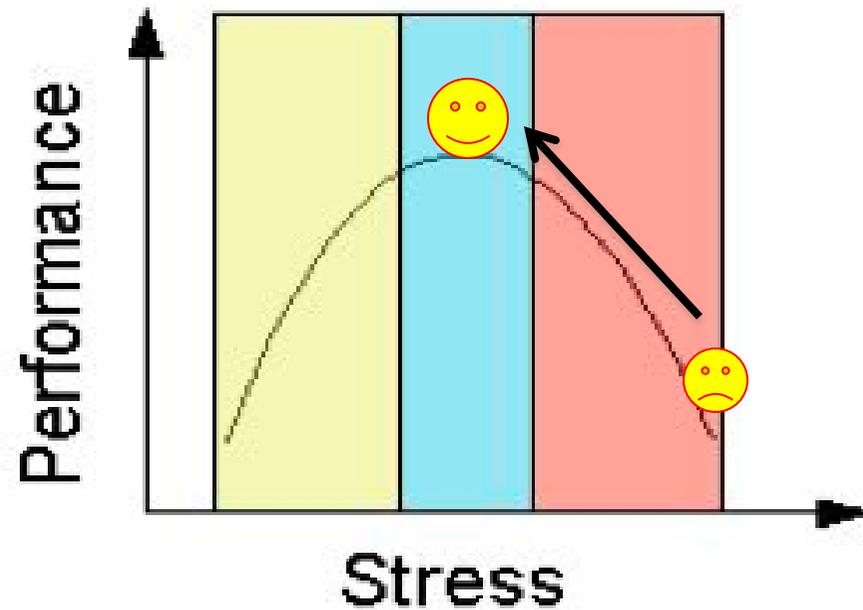
Teaching in the Hospital

ACP TEACHING MEDICINE SERIES



Jeff Wislar, MD

The Yerkes-Dodson Curve



Unproductive – Not Enough Stress

Optimal Production
(Width Varies Based Upon Stress Tolerance)

Unproductive-Too Much Stress



Threat 2:

Hypocrisy.... Not changing the system

The 4 + 1

Week	Red	Green	Blue	Yellow	Orange
June 22-June 26 th					
June 27 th - July 3 rd					
July 4 th - July 10 th					
July 11 th - July 17 th					
July 18 th - July 24 th					
July 25 th - July 31 st					
August 1 st - August 7 th					
August 8 th - August 14 th					
August 15 th - August 21 st					
August 22 nd - August 28 th					
August 29 th - Sept. 4 th					
Sept. 5 th - Sept. 11 th					
Sept. 12 th - Sept 18 th					
Sept. 19 th - Sept 25 th					
Sept. 26 th - Oct. 2 nd					
Oct. 3 rd - Oct. 9 th					
Oct. 10 th - Oct 16 th					
Oct. 17 th - Oct. 23 rd					
Oct. 24 th - Oct. 30 th					
Oct. 31 st - Nov. 6 th					
Nov. 7 th - Nov. 13 th					
Nov. 14 th - Nov. 20 th					
Nov. 21 st - Nov. 27 th					
Nov. 28 th - Dec. 4 th					
Dec. 5 th - Dec. 11 th					
Dec. 12 th - Dec. 18 th					
Jan 2 nd - Jan. 8 th					
Jan. 9 th - Jan. 15 th					
Jan 16 th - Jan. 22 nd					
Jan. 23 rd - Jan. 29 th					
Jan. 30 th - Feb. 5 th					
Feb. 6 th - Feb. 12 th					
Feb. 13 th - Feb 19 th					
Feb. 20 th - Feb. 26 th					
Feb. 27 th - March 5 th					
March 6 th - March 12 th					
March 13 th - March 19 th					
March 20 th - March 26 th					
March 27 th - April 2 nd					
April 3 rd - April 9 th					
April 10 th - April 16 th					
April 17 th - April 23 rd					
April 24 th - April 30 th					
May 1 st - May 7 th					
May 8 th - May 14 th					
May 15 th - May 21 st					
May 22 nd - May 28 th					
May 29 th - June 4 th					
June 5 th - June 11 th					
June 12 th - June 18 th					

Sample “+1 Week”

	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
Morning	Off	Off	Ambulatory Conference	Sub-spec	Sub-spec	Sub-spec	FS
Afternoon	Off	Off	Cont. Clinic	Cont. Clinic	Cont. Clinic	Cont. Clinic	CAS

Sample “+1 Week”

	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
Morning	Off	Off	Ambulatory Conference	Sub-spec	Sub-spec	Sub-spec	FS
Afternoon	Off	Off	Cont. Clinic	Cont. Clinic	Cont. Clinic	Cont. Clinic	CAS

You 

What I'm talking about



You





Threat 3:
Choosing a Topic Part I...
Yielding to Concrete Thinkers

Public Reporting of Antibiotic Timing in Patients with Pneumonia: Lessons from a Flawed Performance Measure

Robert M. Wachter, MD; Scott A. Flanders, MD; Christopher Fee, MD; and Peter J. Pronovost, MD, PhD

The administration of antibiotics within 4 hours to patients with community-acquired pneumonia has been criticized as a quality standard because it pressures clinicians to rapidly administer antibiotics despite diagnostic uncertainty at the time of patients' initial presentations. The measure was recently revised (to 6 hours) in response to this criticism. On the basis of the experience with the 4-hour rule, the authors make 5 recommendations for the development of future publicly reported quality measures. First, results from samples with known diagnoses should be extrapolated cautiously, if at all, to patients without a diagnosis. Second, for some measures, "bands" of performance may make more sense than

"all-or-nothing" expectations. Third, representative end users of quality measures should participate in measure development. Fourth, quality measurement and reporting programs should build in mechanisms to reassess measures over time. Finally, biases, both financial and intellectual, that may influence quality measure development should be minimized. These steps will increase the probability that future quality measures will improve care without creating negative unintended consequences.

Ann Intern Med. 2008;149:29-32.

For author affiliations, see end of text.

www.annals.org

Improving health care quality depends on having valid ways to measure quality. Unfortunately, there are few validated quality outcome measurements, because valid and feasible case-mix adjusters are lacking and patients are difficult to follow over time for clinically important outcomes, such as death. Processes of care are easier to identify and measure, but some of these measures will be proven invalid or inappropriate because their scientific rationale was flawed from the start, unanticipated consequences emerge after implementation, or later studies undermine them.

We review how these issues played out in the measure of time to first antibiotic dose (TFAD), also called "door-to-needle time," for patients presenting to the hospital with community-acquired pneumonia (CAP). We also propose lessons that can be learned from the experience.

TFAD AS A QUALITY MEASURE

Community-acquired pneumonia is one of the most common admitting diagnoses in U.S. hospitals, accounting for more than 1 million hospitalizations yearly (1), with short-term mortality rates ranging from 0.5% to 27.1% (2). Given its risk, frequency, and perceived outcome variations, CAP was an obvious candidate for quality measurement and improvement initiatives. Because outcome measurement in CAP was problematic for the usual reasons (data collection burden, case-mix adjustment, and need for posthospital follow-up), investigators sought process measures associated with higher quality.

During the 1990s, the notion of time-based quality measures gained favor because evidence emerged that rapid treatment of myocardial infarction, and later trauma, stroke, and sepsis, improved outcomes (3-7). Naturally, investigators began to examine whether rapid administration of antibiotics might improve CAP outcomes.

In 1997, a retrospective study of 14 069 Medicare patients hospitalized for CAP found that, after adjustment for severity (2) and demographic factors, administration of an-

tibiotics within 8 hours was associated with a lower 30-day mortality rate (odds ratio [OR], 0.85 [95% CI, 0.75 to 0.96]) (8). Patients were included if they had chest radiography results within 2 days of admission consistent with pneumonia and an initial "working diagnosis" of pneumonia.

In 2004, a second retrospective study of 13 771 Medicare patients (age ≥ 65 years) hospitalized for CAP (9) also found that, among the 75% of patients without evidence of prehospital receipt of antibiotics, administration of antibiotics within 4 hours was associated with a lower 30-day mortality rate (OR, 0.85 [CI, 0.76 to 0.95]). Extrapolating these data to a hypothetical national Medicare sample, the authors estimated that achieving TFAD by 4 hours after presentation to the hospital would save more than 1200 lives yearly.

The 2 studies reported that patients who received their first dose of antibiotics in the first hour of their emergency department stay had a higher mortality rate than those who received antibiotics later; however, this finding was attributed to incomplete adjustment for severity of CAP and was therefore not felt to challenge the main conclusion about TFAD (8, 9). Two smaller studies of CAP found no association between early antibiotic administration and outcomes (10, 11). Nevertheless, the authors of the 2004 study (9) editorialized that the 4-hour TFAD quality measure was still valid (12, 13).

TRANSLATION INTO A PERFORMANCE STANDARD

Almost exclusively on the basis of results from the 1997 study, the Medicare National Pneumonia Project endorsed first antibiotics within 8 hours of hospital arrival as a CAP quality measure in 1998. The Medicare National Pneumonia Project tightened its TFAD window to 4 hours in 2002 on the basis of the prepublication results of the 2004 study by Houck and colleagues (9, 12). In 2003, the Infectious Diseases Society of America (IDSA) also endorsed a 4-hour timeframe (14). With support from the

*Wachter R, et al.,
Ann Intern Med. 2008;149:29-32.*

FINITE and INFINITE GAMES

A Vision of Life as Play and Possibility



J A M E S P . C A R S E

Finite Games

Defined beginning and end

No who must play, can play

Players are abstractions of themselves

The goal is to exclude other players

The goal is to win....

Finite Games

Defined beginning and end

No who must play, can play

Players are abstractions of themselves

The goal is to exclude other players

The goal is to win....

Infinite Games

There is no end

Everyone can play

Players are themselves

The goal is to recruit
new players

The goal is to keep
playing



Finite Games

Work-arounds/secretcy

Wins at the expense of another

“Taking a knee” when the
game is over

Atrophy of the soul

Non-team play (excluding players)

Infinite Games

“Calling your own fouls”

We win and lose together

The play always continues

The soul and role merge

Team play



Threat 4:
Choosing a Topic Part II...
Not Finding the Hook



Find the Middle Ground

Delayed Time to Defibrillation after In-Hospital Cardiac Arrest

Paul S. Chan, M.D., Harlan M. Krumholz, M.D., Graham Nichol, M.D., M.P.H.,
Brahmajee K. Nallamothu, M.D., M.P.H., and the American Heart Association
National Registry of Cardiopulmonary Resuscitation Investigators*

ABSTRACT

BACKGROUND

Expert guidelines advocate defibrillation within 2 minutes after an in-hospital cardiac arrest caused by ventricular arrhythmia. However, empirical data on the prevalence of delayed defibrillation in the United States and its effect on survival are limited.

METHODS

We identified 6789 patients who had cardiac arrest due to ventricular fibrillation or pulseless ventricular tachycardia at 369 hospitals participating in the National Registry of Cardiopulmonary Resuscitation. Using multivariable logistic regression, we identified characteristics associated with delayed defibrillation. We then examined the association between delayed defibrillation (more than 2 minutes) and survival to discharge after adjusting for differences in patient and hospital characteristics.

RESULTS

The overall median time to defibrillation was 1 minute (interquartile range, <1 to 3 minutes); delayed defibrillation occurred in 2045 patients (30.1%). Characteristics associated with delayed defibrillation included black race, noncardiac admitting diagnosis, and occurrence of cardiac arrest at a hospital with fewer than 250 beds, in an unmonitored hospital unit, and during after-hours periods (5 p.m. to 8 a.m. or weekends). Delayed defibrillation was associated with a significantly lower probability of surviving to hospital discharge (22.2%, vs. 39.3% when defibrillation was not delayed; adjusted odds ratio, 0.48; 95% confidence interval, 0.42 to 0.54; $P < 0.001$). In addition, a graded association was seen between increasing time to defibrillation and lower rates of survival to hospital discharge for each minute of delay (P for trend < 0.001).

CONCLUSIONS

Delayed defibrillation is common and is associated with lower rates of survival after in-hospital cardiac arrest.

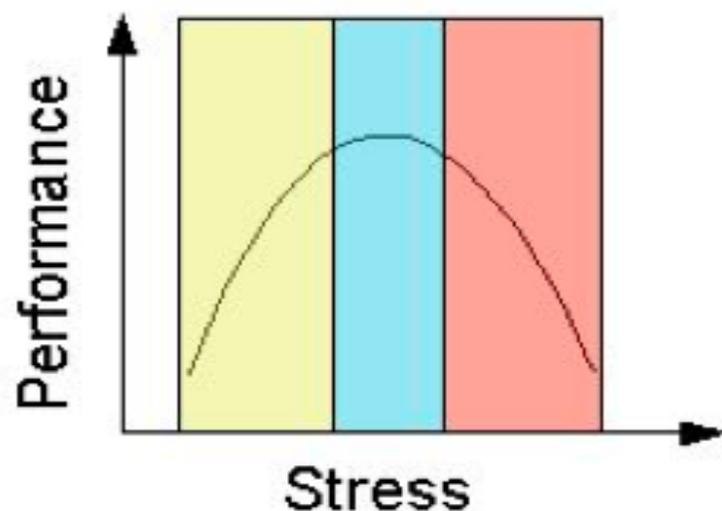
From Saint Luke's Mid-America Heart Institute, Kansas City, MO (P.S.C.); the University of Michigan Division of Cardiovascular Medicine, Ann Arbor (P.S.C., B.K.N.); the Section of Cardiovascular Medicine and the Robert Wood Johnson Clinical Scholars Program, Department of Medicine, and the Section of Health Policy and Administration, Department of Epidemiology and Public Health, Yale University School of Medicine, and the Center for Outcomes Research and Evaluation, Yale–New Haven Hospital—all in New Haven, CT (H.M.K.); the University of Washington–Harborview Center for Prehospital Emergency Care, Seattle (G.N.); and the Veterans Affairs Ann Arbor Health Services Research and Development Center of Excellence, Ann Arbor, MI (B.K.N.). Address reprint requests to Dr. Chan at the Mid-America Heart Institute, 5th Fl., 4401 Wornall Rd., Kansas City, MO 64111, or at pchan@cc-cc.com.

*The American Heart Association National Registry of Cardiopulmonary Resuscitation Investigators are listed in the Appendix.

N Engl J Med 2008;358:9-17.
Copyright © 2008 Massachusetts Medical Society.

Chan PS, et al.
N Engl J Med 2008;358:9-17.

The Yerkes-Dodson Curve



Unproductive – Not Enough Stress

Optimal Production
(Width Varies Based Upon Stress Tolerance)

Unproductive-Too Much Stress




$$\text{VALUE} = \frac{\text{Quality}}{\text{Cost}}$$

Ideas and Opinions

Appropriate Use of Screening and Diagnostic Tests to Foster High-Value, Cost-Conscious Care

Amir Qaseem, MD, PhD, MHA; Patrick Alguire, MD; Paul Dallas, MD; Lawrence E. Feinberg, MD; Faith T. Fitzgerald, MD; Carrie Horwitch, MD, MPH; Linda Humphrey, MD, MPH; Richard LeBlond, MD; Darilyn Moyer, MD; Jeffrey G. Wiese, MD; and Steven Weinberger, MD

+ Author Affiliations

Abstract

Reader Survey: [Which testing scenarios are low value?](#)

Unsustainable rising health care costs in the United States have made reducing costs while maintaining high-quality health care a national priority. The overuse of some screening and diagnostic tests is an important component of unnecessary health care costs. More judicious use of such tests will improve quality and reflect responsible awareness of costs. Efforts to control expenditures should focus not only on benefits, harms, and costs but on the value of diagnostic tests—meaning an assessment of whether a test provides health benefits that are worth its costs or harms. To begin to identify ways that practicing clinicians can contribute to the delivery of high-value, cost-conscious health care, the American College of Physicians convened a workgroup of physicians to identify, using a consensus-based process, common clinical situations in which screening and diagnostic tests are used in ways that do not reflect high-value care. The intent of this exercise is to promote thoughtful discussions about these tests and other health care interventions to promote high-value, cost-conscious care.

Related articles

Editorial:

High-Value Testing Begins With a Few Simple Questions

Christine Laine

Ann Intern Med January 17, 2012 156:162-163;

[Excerpt](#) [Full Text](#) [Full Text \(PDF\)](#)



Threat 5:

Ignoring the Psychology of Residency:
The Adaptive Unconscious

blink

By the author of THE TIPPING POINT



The Power of Thinking
Without Thinking

Malcolm Gladwell

Copyrighted Material

TIMOTHY D. WILSON



Strangers to Ourselves

DISCOVERING
THE
ADAPTIVE
UNCONSCIOUS

Sample “+1 Week”

	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
Morning	Off	Off	Ambulatory Conference	Sub-spec	Sub-spec	Sub-spec	FS
Afternoon	Off	Off	Cont. Clinic	Cont. Clinic	Cont. Clinic	Cont. Clinic	CAS

Threat 6:
Ignoring Cultural Change



Culture

Shared Roles, Goals, Expectations and Beliefs...

Culture

Shared Roles, Goals, Expectations and Beliefs...

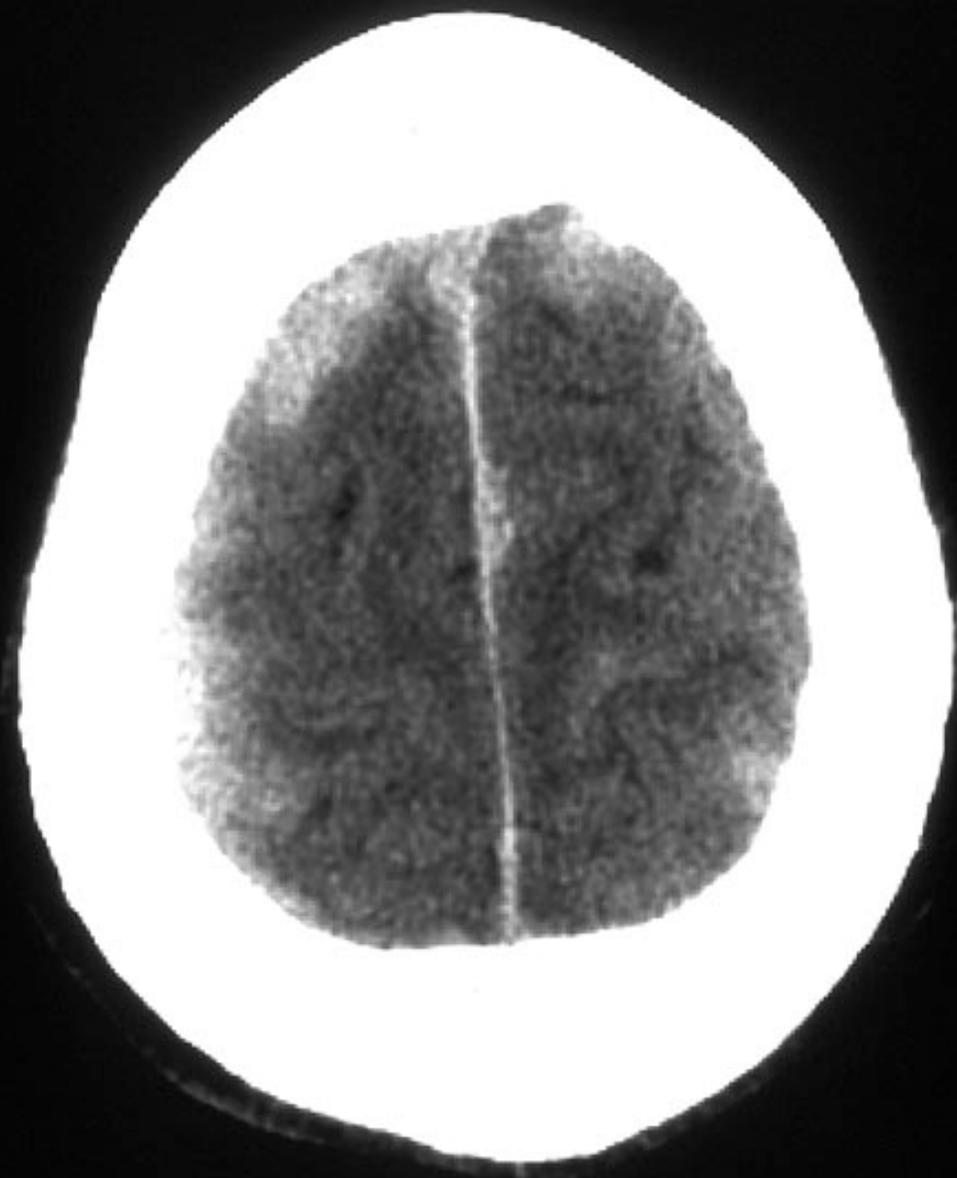
Traditions

Songs

Symbols

Scripture









Threat 7:
Failing to Master Change

“He’s really good when things suck.”

- *My dean, on “What do you think of Jeff Wiese*



The Power of Cognitive Dissonance



17 9:39 AM

Leaders vs. Mavens



Threat 8:

Not seeing the potholes ahead



Going it alone... and without provisions



Being the self-made man/woman



Re-inventing the wheel



Trying to Cure Cancer





Threat 9:
Failure to Create Soil for Change

AEQUANIMITAS

WITH OTHER ADDRESSES

WILLIAM OSLER



The same minds that
created the problem cannot
be the ones to correct it.

We cannot become who we
want to be, if we continue
to be who we are.