Quality Measurement and Improvement

Component 2, Unit 7a

Overview

- State of the quality of care
- Definitions and operationalization of quality measurement and improvement
- Quality measures
- Role of information technology (IT) and informatics
- Results of current approaches
- Challenges, limitations, and ethical issues
- Quality measurement and improvement under meaningful use

Healthcare quality – as good as could be?

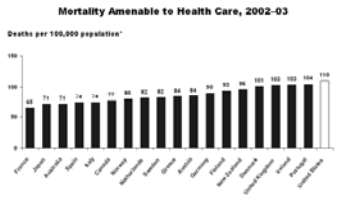
- Correct things not done – errors of omission
- Incorrect things done – errors of commission
- Variation in care – no relationship between what is done and what it costs, vs. its quality

What we know about quality – errors of omission

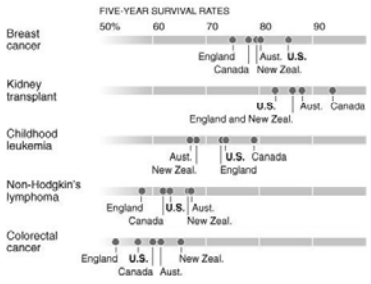
- McGlynn, 2003
  - Sample of nearly 7,000 adults in 12 US metro areas assessed for 30 conditions
  - On average, only 54.9% of care was consistent with known quality
- NCQA, 2009 – annual report on quality shows "gaps" to get all health plans to 90th percentile of current quality
  - 49,400-115,300 avoidable deaths
  - $12 billion in avoidable medical costs
- Quality of care for patients with chronic disease no better and in many ways worse in US than for other developed countries (Schoen, 2009)

"Amenable mortality"

- (Nolte, 2008)
- US ranks last among 14 advanced countries in deaths preventable with timely and effective healthcare



US healthcare quality varies by condition (Leonhardt, 2009)



Errors of commission

- First brought to light by IOM *To Err is Human* report (Kohn, 2000) that concluded 48,000-96,000 deaths were attributable to preventable errors
  - Some argue IOM numbers too high (McDonald, 2000), though the researchers rebut (Leape, 2000)
  - Others claim it is too difficult to measure with current sources of data (Sox, 2000)
- But other data give credence to the claim
  - Another analysis shows comparable results (HealthGrades, 2009)
  - There are about 13.8 preventable adverse drug events per 1000 patient-years in elderly in ambulatory settings (Gurwitz, 2003)

If errors were considered among the leading causes of death

LEADING CAUSES OF DEATH[1]	
Diseases of the Heart	726,974
Cancer (malignant neoplasms)	539,577
Cerebrovascular Disease	159,791
Chronic Obstructive Pulmonary Disease	109,029
Medical Errors[2]	**44,000–98,000**
Accidents and Adverse Effects (motor vehicle accidents = 43,458; all others = 52,186)	95,644
Pneumonia and Influenza	86,449
Diabetes	62,636
Suicide	30,535
Kidney Disease	25,331
Liver Disease	25,175

SOURCES: 1. Centers for Disease Control and Prevention, 1997. 2. IOM, *To Err Is Human: Building a Safer Health System*, 2000.

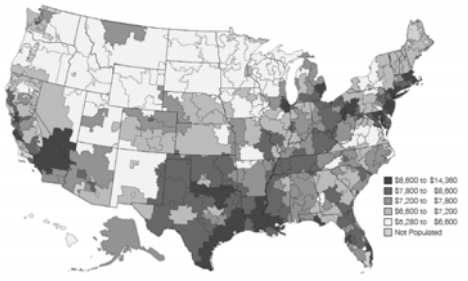
Courtesy of Dan Masys, MD

Related to quality is variation in services

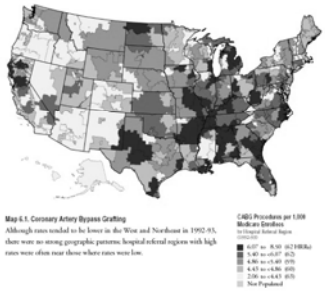
- Dartmouth Atlas of Health Care – www.dartmouthatlas.org
- Variation in chronic illness care is so substantial that reducing level to most efficient providers could reduce expenditures by 30% (Wennberg, 2006)
- Healthcare costs vary widely by region (Fisher, 2009); explained mainly by physician characteristics (Sirovich, 2008)
- Came to light in 2009 healthcare reform debate (Skinner, 2009), popularized by Gawande (The New Yorker, 2009)

Variation in Medicare spending per beneficiary

(Wennberg, 2008)



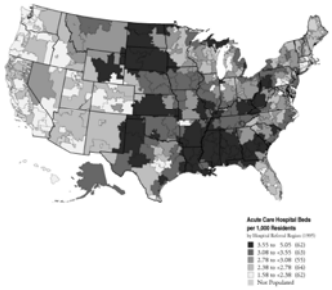
Variation in coronary bypass (CABG) per Medicare enrollee



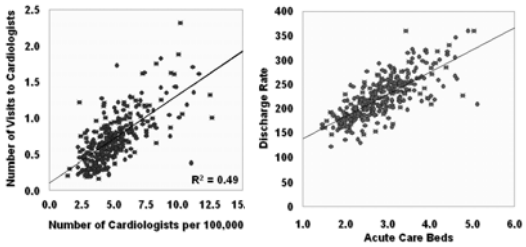
Map 6.1. Coronary Artery Bypass Grafting

Although rates tended to be lower in the West and Northeast in 1992–93, there were no strong geographic patterns; hospital referral regions with high rates were often near those where rates were low.

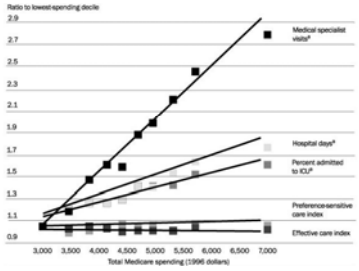
Variation in hospital beds per 1,000 residents



Variation may be explained by other “supply-sensitive” factors

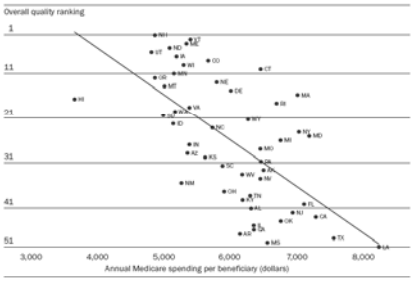


There is great variation in cost but not quality of care



(Fisher, 2003; Fisher, 2003)

There may be inverse relationship between quality and spending



(Baicker, 2004)

More on, more is not better

- More care of chronic diseases not associated with longer life or better quality of life (Wennberg, 2008)
- Hospital-level analysis continues to support notion that there is no or a negative correlation between amount of spending vs. quality (Yasaitis, 2009)
- Lower-cost hospitals have modestly lower-quality care but comparable risk-adjusted mortality (Jha, 2009)