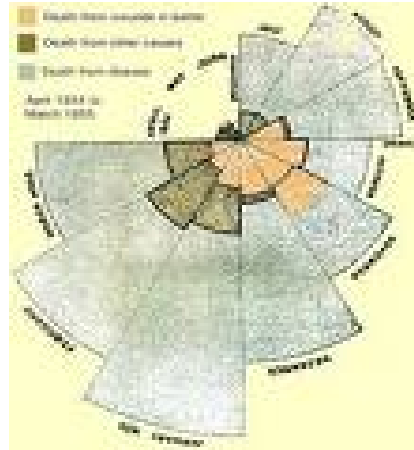


Measuring Healthcare Quality

Donna Diers, RN, PhD

Florence Nightingale



“If the purpose of the hospital were to kill people, then mortality would be a good measure.”



Eugene Codman, MD (1900)

- ▶ “...the whole hospital problem rests on this one question: What happens to the cases?”
- ▶ “We must formulate some method of hospital report showing as nearly as possible what are the results of the treatment obtained at different institutions.”

Early application of industrial concepts to hospital management - benchmarking

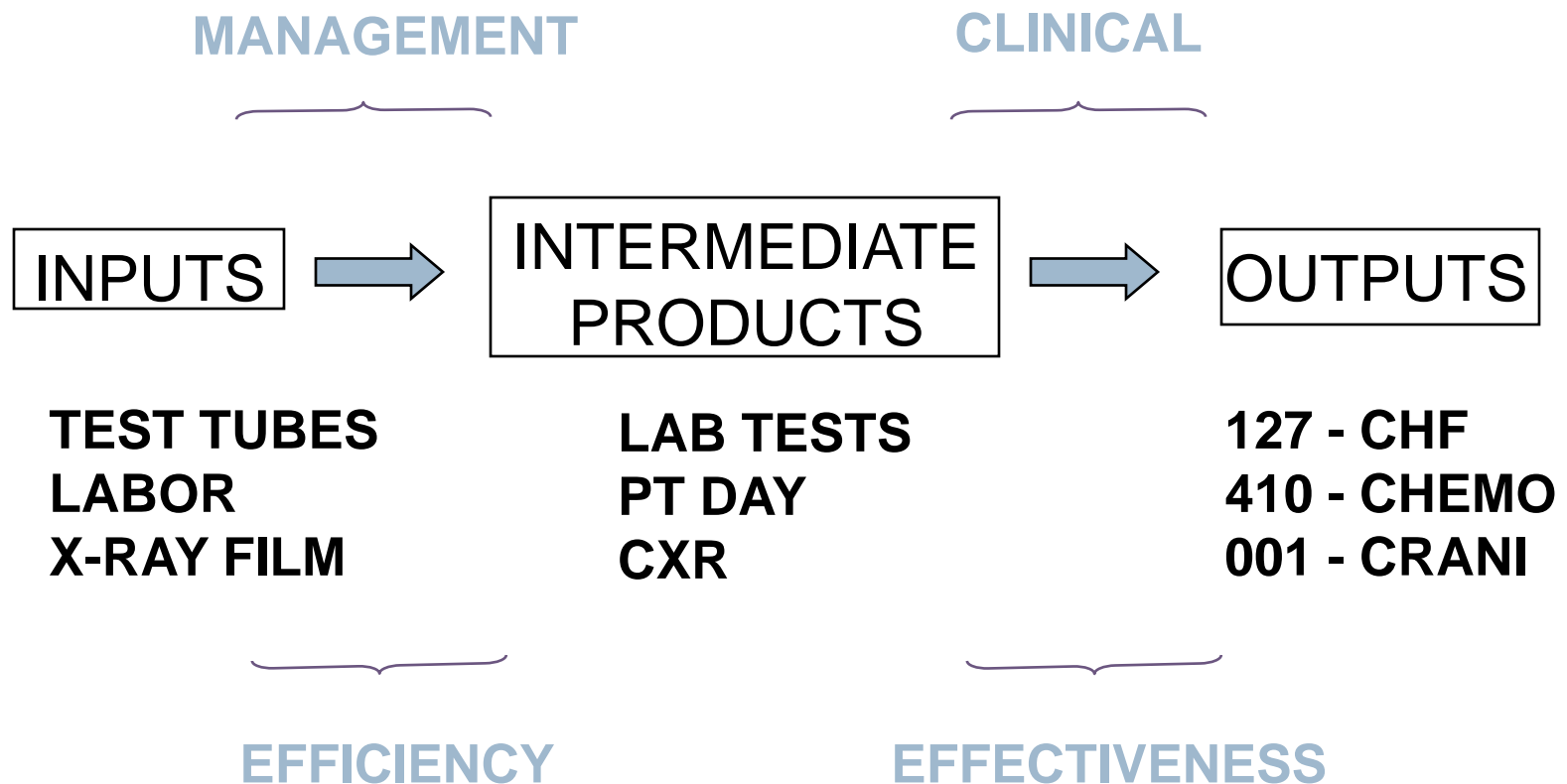


Diagnosis Related Groups (DRGs)

- ▶ A relatively small number of relatively clinically homogeneous, statistically reliable groups...
- ▶ ...with the use of which it would be possible to compare hospitals for **quality** and **cost**.



Production Theory: The Products of the Hospital



The folly of using mortality rates



Hospital XXX
in California

Mortality rate

85%

Quality metrics then and now

Cardiac first

Because they were there



“Original data” = Chart review

The traditional in medical science – never trust what anyone else does with your data.

Especially medical records coders.

Thus: **chart review** which is very labor intensive.





Centers for Medicare/
Medicaid (CMS)



Centers for Medicare/Medicaid (CMS)

FY 2013 Hospital IQR Measures

Acute Myocardial Infarction

Heart Failure

Surgical Care Improvement Project (SCIP)

Mortality Measures

Patients' Experience of Care

Readmission

AHRQ Patient Safety Indicators

Structural Measures

Healthcare – Associated Infections

Hospital Acquired Conditions

Emergency Department Throughput

Prevention – Global Immunization Measures

Cost Efficiency



Acute Myocardial Infarction (AMI)

- ▶ Aspirin at arrival (*suspended*)
- ▶ Aspirin prescribed at discharge
- ▶ ACEI/ARB for left ventricular systolic dysfunction (*suspended*)
- ▶ Beta-blocker prescribed at discharge (*suspended*)
- ▶ Fibrinolytic agent received within 30 minutes of arrival
- ▶ Timing of receipt of percutaneous coronary intervention
- ▶ Statin prescribed at discharge



Heart Failure

- ▶ Discharge instructions (smoking; diet)
- ▶ Evaluation of left ventricular systolic function
- ▶ ACE inhibitor or angiotensin receptor blocker (ARB) for left ventricular systolic dysfunction



Pneumonia

- ▶ Blood culture performed in the ED prior to first antibiotic in hospital
- ▶ Appropriate initial antibiotic selection



Surgical Care

- ▶ Prophylactic antibiotic within 1 hour prior to surgery
- ▶ Prophylactic antibiotic selection
- ▶ Prophylactic antibiotics discontinued within 24 hours after surgery end time (48 hours for cardiac)
- ▶ Cardiac surgery patients with controlled 6 AM postop serum glucose
- ▶ Appropriate hair removal (*suspended*)
- ▶ Postop urinary catheter removal on post op day 1 or 2
- ▶ Surgery patients with periop temperature management
- ▶ Surgery patients on a beta blocker prior to arrival who received a beta blocker during the post op period
- ▶ Surgery patients with VTE prophylaxis ordered
- ▶ Surgery patients who received appropriate VTE prophylaxis within
- ▶ 24 hours pre/post surgery

Mortality Measures

- ▶ Acute Myocardial Infarction (AMI) 30 day mortality rate
- ▶ Heart Failure 30 day mortality rate
- ▶ Pneumonia 30 day mortality rate



Patients' Experience of Care

- ▶ HCAHPS survey



Readmission

- ▶ Acute Myocardial Infarction 30 day Risk Standardized Readmission
- ▶ Heart Failure 30 day Risk Standardized Readmission
- ▶ Pneumonia 30 day Risk Standardized Readmission



AHRQ Patient Safety Indicators

- ▶ Iatrogenic pneumothorax, adult
- ▶ Post operative respiratory failure
- ▶ Post operative PE or DVT
- ▶ Postoperative wound dehiscence
- ▶ Accidental puncture or laceration
- ▶ AAA mortality rate
- ▶ Hip fracture mortality rate

- ▶ Death among surgical patients with serious treatable complications



Structural measures

- ▶ Participation in a systematic database for:
 - ▶ Cardiac surgery
 - ▶ Stroke care
 - ▶ Nursing sensitive care
 - ▶ General surgery

These measures are at **hospital** level



Healthcare-Associated Infections

- ▶ Central line associated bloodstream infection (CLABSI)
- ▶ Surgical site infection
- ▶ Catheter-associated UTI (CAUTI)



Hospital Acquired Conditions

- ▶ Foreign object retained after surgery
- ▶ Air embolism
- ▶ Blood incompatibility
- ▶ Pressure ulcer stage III or IV
- ▶ Falls and trauma (includes fracture, dislocation, intracranial injury, crushing injury, burn, electric shock)
- ▶ Vascular catheter-associated infection
- ▶ Manifestations of poor glycemic control



Emergency Department Throughput

- ▶ Median time from ED arrival to time of ED departure for admitted patients
- ▶ Median time from admit decision to time of departure from ED for patients admitted



Prevention: Global immunization

- ▶ Immunization for influenza
- ▶ Immunization for pneumonia



Cost efficiency

- ▶ Medicare spending per beneficiary (30 days bundled)



Pay for Performance (P4P)

CMS process

▶ Measures that are:

Easily measured (ICD codes, primarily)

High volume

Expensive

“Never events”: unambiguous, serious and usually preventable

blood incompatibility

retained sponge, surgical instrument

wrong site surgery

burn sustained in hospital



Issues

- ▶ Labor intensive if chart review
- ▶ Mostly “process” not really outcome
- ▶ “Bundling” care
- ▶ Risk adjustment
- ▶ No measures for pediatrics, maternity, psychiatry
- ▶ ? Relevance to nursing?



Next session

Nursing sensitive measures - NDNQI

