Measuring health system performance: Problems and Opportunities in the Era of Assessment and Accountability

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Health Care Reform: No Magic Bullets

• Incrementalism rules

• Bottom up: improvements in services, measurement-driven

• Top down: policy adjustments, experience/evidence-based
The Health Care Decision-Making Triad

- EVIDENCE
- VALUES or CULTURE
- CIRCUMSTANCES or CONTEXT
Some Drivers of the Measurement Movement

- Fiscal/Management Imperatives
- Public Expectations
- Ubiquity of Variations and Errors
- Rising Stakes: Post-Genomic Technology
Genetic Code of Human Life Is Cracked by Scientists

JUSTICES REAFFIRM MIRANDA RULE, 7-2; A PART OF ‘CULTURE’

By LINDA GREENHOUSE

WASHINGTON, June 26 — The Supreme Court reaffirmed the Miranda decision today by a 7-to-2 vote that erased a shadow over one of the most famous rulings of modern times and acknowledged that the Miranda warnings “have become part of our national culture.”

The court said in an opinion by Chief Justice William H. Rehnquist that because the 1966 Miranda decision “announced a constitutional rule,” a statute by which Congress had sought to overrule the decision was itself unconstitutional.

Miranda had appeared to be in jeopardy, both because of that long-ignored but recently rediscovered law, by which Congress had tried to overrule Miranda 32 years ago, and because of the court’s perceived hos-
Average life expectancy at birth in 13 OECD countries, 1960-96

Hurst J. Bulletin of the World Health Organization, 2000, 78 (6)
EXAM QUESTION:

Health care has only modest effects on population health status.

Should measures of health system performance include population health indicators as outcomes or as confounders?

PLEASE ANSWER IN 200 WORDS OR LESS…
Population Health: Major Determinants

- Genetic Endowment
- Environmental
- Health Services System
- Health Status
- Productivity & Wealth
- Socioeconomic
- Lifestyle
Measurement Priorities for Programs and Interventions

- Strong evidence for impacts on health status
- High Costs or high risks
- High variation
AMI Patients across income quintile in Ontario, Canada

Male = 63.1%

Source: Alter et al. 1999
Survival post-AMI by SES

Log-rank test; p<0.001

Source: Alter et al. 1999
Accept complexity

Make selective use of composite measures

Different measures to inform different stakeholders
Example of Shewhart’s control chart to describe process variation

Mortality of women aged 65 + in 2 UK towns, 1992-98

Mortality by year of Dr. Harold Shipman’s women patients

Source: Mohammed MA et al. Lancet 2001
Statistical Significance versus Policy Relevance

• Population health impact

• Budgetary impact

• ‘Identifiable victims’

• Font-size of headlines!
Focus on assembling accurate, reliable, and relevant data
Talk with different audiences about their data needs and concerns before (re-) designing information systems
Standardize and fill the ‘black holes’ in health info-structure

• Standardize definitions of inputs & outputs

• Better characterization of providers, patients, processes, and outcomes

• Address ‘black holes’: i.e. waiting lists, primary/ambulatory care, long-term and rehab services
Supplement existing data on a project-specific and time-limited basis with clear analytical goals.
Acquire data to follow patients through episodes of illness and across the care continuum.

Integrated data can help reduce dis-integration of health services.
Take advantage of technology and upgrade info-structure as necessary
HOW...to achieve IMPROVEMENT

ALIGN:

• Information systems
• Performance measures
• Reporting systems
• Organizational/Professional culture
• Implementation mechanisms
Length of Most Recent Doctor Visit

- Less than 10 minutes:
  - Australia: 43%
  - Canada: 33%
  - New Zealand: 43%
  - United Kingdom: 65%
  - United States: 30%

- Longer than 20 minutes:
  - Australia: 13%
  - Canada: 23%
  - New Zealand: 18%
  - United Kingdom: 15%
  - United States: 33%

1998 Commonwealth Fund International Policy Health Survey
Respondents reporting time their doctor spent with them was too short

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>United States</td>
<td>23%</td>
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<tr>
<td>Australia</td>
<td>13%</td>
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<td>United Kingdom</td>
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1998 Commonwealth Fund International Policy Health Survey
Coronary surgery: Ontario vs New York

Limited
Moderate
Severe

Threat to life from Coronary Blockages

Relative CABG rate (NY to ON)

Age 20-64
Age 65-74
Age ≥ 75

7.3
10.8
16.8

0.8
1.2
2.2

2.0
2.5
4.5
Percentages of Senior Citizens receiving Cardiac Procedures after Heart Attacks in the United States and Ontario, Canada, 1991

<table>
<thead>
<tr>
<th>Procedure</th>
<th>United States</th>
<th>Ontario, Canada</th>
<th>Relative Rate</th>
<th>United States</th>
<th>Ontario, Canada</th>
<th>Relative Rate</th>
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<tbody>
<tr>
<td>Coronary angiography*</td>
<td>35</td>
<td>6</td>
<td>5</td>
<td>37</td>
<td>10</td>
<td>4</td>
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<tr>
<td>PTCA</td>
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<td>1</td>
<td>8</td>
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<tr>
<td>CABG</td>
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<td>1</td>
<td>8</td>
<td>12</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>CABG + PTCA</td>
<td>22</td>
<td>3</td>
<td>8</td>
<td>25</td>
<td>6</td>
<td>4</td>
</tr>
</tbody>
</table>

* The coronary angiography rates do not include procedures performed on an outpatient basis in either country.
Tu et al. 1997. NEJM 336 (21):1500-1505
EQUOL GUSTO

Domains Assessed

- Quality of Life
- Functional Status
- Employment Status/role functioning
- Symptoms (chest pain, dyspnea)
- Psychological well-being
- Time trade-off (QALY)
- General Health Status

Economics/Resource Consumption

- Hospitalizations
- Cardiac catheterization
- Revascularization
- Outpatient care

Source: Mark et al NEJM 1994;331:1130-5
Diminishing Marginal Returns of Health Care
Castrations for cancer soaring, research shows

Prostate cases jump 56 per cent

By Lisa Priest
Health Policy Reporter

Ontario men are getting castrated in record numbers, particularly those aged 75 and older, according to closely guarded scientific research obtained by The Star.

The rate of castration for Ontario men suffering from prostate cancer has jumped 56 per cent over the past decade, even though more moderate therapies have been available, says the confidential study.

The report also says hysterectomy surgery for women in Ontario is declining, although it is still three times the rate as in the United Kingdom.

It also found discrepancies in the rate of surgical procedures across the province, which it said was mostly attributable to doctors' "practice styles."

"Statistical analysis showed the extent of increase in the rate of orchiectomy (castration) was clearly greater than could be explained by chance alone," says the draft chapter by the Institute for Clinical Evaluative Sciences in Ontario, expected to be released some time in May.

Specifically, the rate of castration, which is the surgical removal of the testicles, has increased from 67 per 100,000 in 1981/82 to 104 per 100,000 in 1991/92.

"The differences are particularly interesting when one compares the Ottawa region where rates are low, for example, to the Metropolitan Toronto region where they are similar to or higher than, the provincial average," according to research of castration rates for men age 50 and older.

Counties with the highest castration rates over the past three years were Halton, Wellington.
Rating of zero stars for a dozen British hospitals
“There has always been a convenient excuse when there is a problem, but these tables explode the myth once and for all.”

Alan Milburn
Health Secretary

“I worry that strident reporting of a hospital’s weaknesses can dent the confidence of the community in its local hospital, adversely affect recruitment and further damage the morale of clinical staff.”

Peter Hawker
Chairman, BMA Consultants’ Committee

Medical Post, October 16, 2001
HOW...to achieve IMPROVEMENT

ALIGN:

• Information systems
• Performance measures
• Reporting systems
• Organizational/Professional culture
• Implementation mechanisms
Incentives

Economic
Non-economic

Mechanisms
Regulatory
Admin/Professional
Market-based

Actors
Consumers
Purchasers/Funders
Professionals/Managers
“Measuring Up”
Improving Health Systems Performance in OECD Countries

Measurement and Management Assessment and Accountability Onwards and Upwards!

Health Canada Santé Canada