Underuse and Quality of Care: The Extent and Nature of the Problem

Elizabeth A. McGlynn, Ph.D.
Associate Director, RAND Health
# Defining Quality

<table>
<thead>
<tr>
<th>Elements of Quality Care</th>
<th>Type of Quality Problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>People get the care they need</td>
<td>Underuse</td>
</tr>
<tr>
<td>People need the care they get</td>
<td>Overuse</td>
</tr>
</tbody>
</table>
## Defining Quality

<table>
<thead>
<tr>
<th>Elements of Quality Care</th>
<th>Type of Quality Problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>People get the care they need</td>
<td>Underuse</td>
</tr>
<tr>
<td>People need the care they get</td>
<td>Overuse</td>
</tr>
</tbody>
</table>

\[
\text{Effectiveness}
\]
# The Other Elements of Quality

<table>
<thead>
<tr>
<th>Elements of Quality Care</th>
<th>Type of Quality Problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>People get the care they need</td>
<td>Underuse</td>
</tr>
<tr>
<td>People need the care they get</td>
<td>Overuse</td>
</tr>
<tr>
<td>Care is provided safely</td>
<td>Error</td>
</tr>
<tr>
<td>Care is timely</td>
<td>Delays</td>
</tr>
<tr>
<td>Care is patient-centered</td>
<td>Unresponsive</td>
</tr>
<tr>
<td>Care is delivered equitably</td>
<td>Disparities</td>
</tr>
<tr>
<td>Care is delivered efficiently</td>
<td>Waste</td>
</tr>
</tbody>
</table>
How Did We Measure Quality?

• Developed 439 standards for evaluating care for:
  – 30 chronic and acute health problems
  – Preventive care
• Phoned people randomly selected from 12 representative metropolitan areas
  – With and without insurance
  – Healthy and seriously ill
  – Across the socioeconomic spectrum
• Reviewed all of their medical records for a two year period
Constructing Quality Scores

Score = \frac{\text{# of times recommended care was given}}{\text{# of opportunities to deliver recommended care}}
American Adults Receive About Half of Recommended Care
And You Aren’t Safe Anywhere…

And You Aren’t Safe Anywhere…

Overall Preventive

% of recommended care received

Boston
Cleveland
Greenville
Indianapolis
Lansing
Little Rock
Miami
Newark
Orange Co
Phoenix
Seattle
Syracuse
And You Aren’t Safe Anywhere…

% of recommended care received

- Overall
- Preventive
- Acute

Cities:
- Boston
- Cleveland
- Greenville
- Indianapolis
- Lansing
- Little Rock
- Miami
- Newark
- Orange Co
- Phoenix
- Seattle
- Syracuse
And You Aren’t Safe Anywhere…

- Boston
- Cleveland
- Greenville
- Indianapolis
- Lansing
- Little Rock
- Miami
- Newark
- Orange Co
- Phoenix
- Seattle
- Syracuse

% of recommended care received

- Overall
- Preventive
- Acute
- Chronic
U.S. Health Care System Is Operating at ~1 Sigma

% of standards failed

Overall

Underuse

Overuse
Underuse: Ongoing Monitoring of Diabetes

- Eye exam
- HbA1c
- Urine protein
- Foot exam
- Cholesterol
- Blood pressure

% of recommended care ordered or delivered
Underuse: Response to Abnormal Results

- Abnormal urine protein
  -Prescribe ACEI (55%)

- Failure of therapy
  -Change therapy (38%)
Underuse: Initial Diagnosis and Management of Hypertension

- Initial H&P
- Initial laboratory tests
- Diet/exercise
- Pharmacotherapy

% of recommended care ordered or delivered

0 20 40 60 80 100
**Underuse: Treatment of Pneumonia**

- Elderly vaccinated
- Lab tests: hospitalized patients
- Appropriate antibiotics

% of recommended care ordered or delivered

RAND

McGlynn-17 07/15/04
Underuse: Prevention

- Advice to quit smoking
- Hearing assessed: elderly
- Annual BP measurement
- Flu vaccine: asthmatics
- Flu vaccine: elderly

% of recommended care ordered or delivered

0 20 40 60 80 100
What Can We Do?

• Implement systems
  – Registries
  – Reminders
  – Alerts
  – Proactive monitoring
• Implement protocols
  – Standing orders
• Engage physicians in identifying and implementing solutions
• Activate patients to identify and advocate for their needs
# What are the Consequences of Poor Quality?

<table>
<thead>
<tr>
<th>Condition</th>
<th>What We Found</th>
<th>Preventable Complications/ Deaths (Annual)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>Blood sugar not measured for 40%; 24% uncontrolled</td>
<td>2,600 blind; 29,000 kidney failure</td>
</tr>
<tr>
<td>Hypertension</td>
<td>Blood pressure uncontrolled in 58%</td>
<td>68,000 deaths</td>
</tr>
<tr>
<td>Heart attacks</td>
<td>39-55% did not receive needed medications</td>
<td>37,000 deaths</td>
</tr>
<tr>
<td>Colon cancer</td>
<td>62% not screened</td>
<td>9,600 deaths</td>
</tr>
</tbody>
</table>