Summary Measure of Population Health for the Health System Measurement Project

Erin Miller
Office of the Assistant Secretary for Planning and Evaluation
Outline

• The question and background
• Options considered
• Chosen measure
Policy Question

• Needed an outcome-oriented “global measure of health status” for the Health System Measurement Project
• Project already includes additional population health measures (7 others)
The Health System Measurement Project tracks government data on critical U.S. health system indicators. The website presents national trend data as well as detailed views broken out by population characteristics such as age, sex, income level, and insurance coverage status.

As of June 2011, an estimated 2.5 million young adults had gained insurance coverage through the Affordable Care Act provision that extends dependent coverage up to age 26. Young adults have historically been more likely than other groups to lose their health insurance as they move between school and employment or change jobs.

More
Topical Areas

**Access to Care**
Access to health care improves health status and quality of life. Today, however, many Americans have inadequate access to care. This dashboard tracks changes in access to care.

**Coverage**
Health insurance coverage gives Americans and their health providers protection against the financial risk associated with the costs of health care. This dashboard tracks measures related to insurance coverage and the financial protection it provides.

**Cost & Affordability**
The cost of health care should be affordable to American families, businesses, and taxpayers. This dashboard reports on trends in health care costs and on the efficiency and competitiveness of the delivery system.

**Health Care Workforce**
Access to health services and the quality of those services are closely linked to supply of trained health care providers. Training and retaining primary care providers is particularly important. This dashboard tracks key workforce measures including access to health care providers and the number of primary care providers.

**Health Information Technology**
Health information technology allows health care providers to better manage patient care through the secure use and sharing of health information. This dashboard tracks the use of electronic prescribing and the adoption of electronic health records by physicians and hospitals.

**Innovation**
Innovation, knowledge development, and continuous improvement should be fundamental to the U.S. health care system. This dashboard tracks a set of short, intermediate, and long-term indicators that reflect new ideas, processes, and technologies for improving health outcomes.

**Population Health**
The health system should help Americans live longer, healthier lives. Health risk behaviors are a critical factor in determining people’s health. This dashboard includes measures of population health outcomes and of critical health risk behaviors.

**Prevention**
Prevention is often the most effective way to improve health and control health care costs. This dashboard tracks preventive interventions that address some of the leading causes of morbidity and mortality in the United States.

**Quality**
American health care should be safe, coordinated, evidence-based, responsive to patient preferences, and continuously improving. This dashboard includes measures that capture multiple dimensions of quality, including outpatient care, inpatient care, and nursing facilities.

**Vulnerable Populations**
Disparities in health care access and outcomes are widespread. This dashboard tracks measures associated with health disparities.
Background

- “All measures of population health involve choices and value judgements in both their construction and their application” [1]
- Had been a challenge for the group working on the National Prevention Strategy
  - Prevention plan used:
    - infant mortality,
    - proportion who live to 25, 65, and 85,
    - and proportion in good or better health ages 0-24, 25-64, 65-84 and 85+
- We wanted to combine into a single measure the expectancy and quality of life

Measure Requirements

- Relatively easy to explain to the public
- 10 years of trend data
- Available annually
- Ability to break out data by demographic characteristics is valued
Considered Measures

1. Life expectancy

2. Measures that combine mortality with one measure of morbidity
   a. Expected years of life in good or better health
   b. Expected years of life without activity limitations
   c. Percent in good or better health (with and without activities limitation in age groups)

3. Measures that combine mortality with two measures of morbidity, weighted
   a. Disability or quality adjusted life expectancy
   b. Expected years in good or better health and free of activity limitation (defined by HALex)

4. Measure that combines mortality with two measures of morbidity, unweighted
Considered Alternatives 1

• Expected years of life

Advantages:
• Most commonly used summary measure
• Relatively easy to understand
• Easy to compare across time

Limitations:
• Most recent medical intervention improves quality of life more than length of life
• Frequency of injury
Total life expectancy at birth, age 25, 50 and 65 for the total U.S. population: 1997 - 2007

Data from NCHS
Considered Alternatives 2

- Expected years of life in good or better health
- Expected years of life without activity limitations
- Percent in good or better health (with and without activities limitation in age groups)

Advantages:
- Combining morbidity and mortality better reflects excess burden of poor health among vulnerable populations [2]
- Consistent and approximately unbiased even without longitudinal data

Limitations:
- Close to what we wanted, but not as broad – liked HALex concept (see Alternatives 3...)

Figure 2. Expected years in good or better health at birth, age 25, 50, and 65 for the total U.S. population, 1997 - 2007

Data from NCHS
Figure 3. Expected years without activity limitations at birth, age 25, 50, and 65 for the total U.S. population, 1997 - 2007

Data from NCHS
Considered Alternatives 3

- Disability or quality adjusted life expectancy
- Expected years in good or better health and free of activity limitation (defined by HALex)

Advantages:
- Combines morbidity and mortality with morbidity defined both by health status and limitation
- HALex can be examined by some sociodemographic breakouts

Limitations:
- Difficult to explain to public – esp. the weighting (subjective)
Expected years in good or better health and without activity limitation
# Health System Measurement Project

Based on Expected Years in Good or Better Health and Without Activity Limitation

<table>
<thead>
<tr>
<th>Measure Value</th>
<th>Year</th>
<th>Age</th>
<th>Race</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1997</td>
<td>At birth</td>
<td>All</td>
<td>81.1</td>
</tr>
<tr>
<td>2</td>
<td>1998</td>
<td>At birth</td>
<td>All</td>
<td>81.7</td>
</tr>
<tr>
<td>3</td>
<td>1999</td>
<td>At birth</td>
<td>All</td>
<td>82.1</td>
</tr>
<tr>
<td>4</td>
<td>2000</td>
<td>At birth</td>
<td>All</td>
<td>82.5</td>
</tr>
<tr>
<td>5</td>
<td>2001</td>
<td>At birth</td>
<td>All</td>
<td>82.2</td>
</tr>
<tr>
<td>6</td>
<td>2002</td>
<td>At birth</td>
<td>All</td>
<td>82</td>
</tr>
</tbody>
</table>

| Total         | 264204 |
Advantages from Policy Perspective

• Includes an element of longevity/survival and quality of life
• Better indicator of overall health than any of the three indicators alone (life expectancy, good or better health, free of activity limitations)
• Easier to explain than HALex
• People can relate to it/understand it
Major Advantages from Policy Perspective

- Medicaid expansion in Oregon ➔ significant improvement in self-reported health and decrease in the number of days with health-related activities limitations[3]

- Health expectancy increase is greatest when mortality and activity limitation are reduced among adults 25-64[4] – insurance expansions of ACA will affect this group


Disadvantages from Policy Perspective

- Does not move much year to year (most longevity measures do not)
- Particularly difficult to move a national measure – data limited by availability in life tables
Erin Miller
Office of the Assistant Secretary for Planning and Evaluation
U.S. Department of Health and Human Services

erin.miller@hhs.gov
202-690-7858
www.aspe.hhs.gov