How Well Is It Working?

A Vision, Goals and Performance Indicators for Maine's Health Care System

A Preliminary Report of the

Maine Health Care Performance Council

February, 2003

Funding provided through a grant from the Robert Wood Johnson Foundation's State Coverage Initiatives Program and the Maine Department of Human Services

Prepared by the Maine Development Foundation

Governor Angus S. King, Jr. appointed the Maine Health Care Performance Council in September of 2001 to develop a vision and goals for Maine's health care system, and a set of performance indicators to measure the State's progress towards achieving the vision and goals. This document is a preliminary report of the Council's work.

Council Members

Donald Gerrish, ***Co-Chair*****,** Town Manager, Brunswick, Maine
Kevin P. Gildart, ***Co-Chair*****,** Vice President of Human Resources & Public Affairs, Bath Iron Works
John Benoit, Vice President, Employee Benefits Solutions
Sandra Bernstein, Superintendent of Schools, MSAD #27/MSAD #10
Kevin Concannon, (ex-officio), Commissioner, Maine Department of Human Services
Warren C. Cook, President, JAX Research Systems
Laura Fortman, Executive Director, Maine Women's Policy Center
Warren Kessler, Health Care Consultant
Kathie Leonard, President, Auburn Manufacturing, Inc.
Christopher O'Neil, State Representative, House District #15
Kristine Ossenfort (ex-officio), Assistant to the Commissioner, Maine Department of Professional and Financial Regulation
Connie Sandstrom, Executive Director, Aroostook County Action Program
Jane Saxl, Former State Representative
Karl Turner, State Senator, Senate District #26

Former Council Members

Joseph G. Carleton, Jr., Attorney
Mark J. Cook, Manager, Employee Benefits, L. L. Bean, Inc.
Scott Planting, Minister
S. Catherine Longley, Former Commissioner, Maine Department of Professional and Financial Regulation

Staff

The Maine Development Foundation administered the Maine Health Care Performance Council, with Katie Fullam Harris, Program Director, serving as lead. Henry Bourgeois, MDF's President and CEO, was integrally involved, and Dianne Heino was Administrative Assistant to the project. Gino Nalli of the University of Southern Maine Muskie School of Public Service served as lead consultant on the project.

Please visit the Maine Development Foundation's website at: www.mdf.org/mhcpc for background papers, text of presentations and minutes of meetings. This report is also available on the website in pdf format.

MAINE DEVELOPMENT FOUNDATION
45 Memorial Circle, Augusta, ME 04330
Tel. (207) 622-6345 Fax: (207) 622-6346
Website: www.mdf.org/mhcpc E-mail: mdf@mdf.org

Maine Health Care Performance Council Indicators

Cost Indicators

Participation Indicators

Participation Indicators (cont'd)

Quality Indicators

Prepared by the Maine Development Foundation which administers the Maine Health Care Performance Council.

Introduction

Maine's health care "system" of providers, payers and consumers is one of the state's largest and most important enterprises. With an annual expenditure of approximately $5 billion, this system affects every citizen, business and community in the state and is essential to our quality of life.

How well is it working? We don't know! As this report demonstrates, we have some data on various elements of the system, and we have anecdotal information from our own experience. But there is no comprehensive annual measure of the system's performance that captures its complexity, interdependence and importance.

By most accounts, Maine's health care system is in crisis. The cost of health insurance has increased at a rate far greater than inflation in recent years, and thousands of Maine people are uninsured. This climate has led to a number of questions about the overall performance of the health care system. Yet, in spite of the questions, there is no common set of data that policymakers, purchasers and payors can use to pinpoint those elements that are succeeding, those that need improvement, and how Maine compares to other states.

At the urging of his Year 2000 Blue Ribbon Commission on Health Care, Governor Angus S. King, Jr. created the Maine Health Care Performance Council in September 2001. The Council's mission is to strengthen Maine's health care system by informing the decisions of policymakers, purchasers, and providers. A unique model, the Council achieves its mission by setting and promoting a vision and goals, and developing reliable indicators that measure the performance of Maine's health care system over time. The Council's initial work was financed by a grant from the Robert Wood Johnson Foundation's State Coverage Initiatives Program and administered by the Maine Development Foundation.

This is the Council's preliminary report. It contains the Council's vision and goals for Maine's health care system, and performance indicators to measure Maine's success in achieving the vision and goals. We have attempted to build a foundation to answer the question, "How well is it working?" As a preliminary report, it does not include data for each indicator, nor does it include comparables with other states, or specific targets to achieve in 5 years. These are the next steps for the Council, which, if funding is available, should be completed in one year with the publication of the first annual report.

Over 100 Maine people were engaged in preparing this report; a list is appended. Governor King provided the leadership and insight that guided our work from the beginning. Gino Nalli, MPH, with USM's Muskie School of Public Service, led a team of graduate students and experts whose assistance was invaluable. And, we are deeply indebted to Katie Fullam Harris, program director at the Maine Development Foundation, who tirelessly coordinated the entire effort and authored this report.

This report is in three parts: a short narrative describing the process, data and themes; the Indicators section arranged by the three goal areas; and lists of works cited and contributors.

The Council was deliberate in its decision-making. Health care is a complex field, and the Council worked hard to ensure that its work would be easily understood and relevant to all stakeholders in the system. We hope that you will find this work helpful, and we look forward to continuing our mission to disseminate information about Maine's health care system.

Donald Gerrish
Town Manager, Brunswick

Kevin P. Gildart
Vice President, Bath Iron Works

Process, Data and Themes

The Council's Process

The Maine Health Care Performance Council (the Council) was appointed by Governor Angus S. King, Jr. in September of 2001. The 15 members are primarily comprised of people who do not work directly in the health care system -- employers, payers and consumers. The Council met an average of every six weeks for the sixteen-month period; all meetings were open to the public and reported-on at the web site (www.mdf.org/mhcpc).

In its first four months, the Council learned about the health care system from experts across the State, developed criteria for performance indicators and adopted a vision and goals for the system:

> **Vision:** All Maine people shall participate in a health care system that is integrated, affordable, accountable and accessible.
> **Goals:**
> - Cost: The health care system should be cost-effective and financed to ensure its long-term sustainability.
> - Quality: The health care system should produce quality outcomes and information to improve the health of Maine citizens.
> - Participation: The health care system should be structured to promote appropriate participation by consumers, providers and payors.

From January-June, the Council began to identify performance indicators. Recognizing the need to have people with relevant expertise inform its work, the Council appointed a working group for each of the goal areas. The task of these 10-15 member groups was to draft the first set of indicators that would measure Maine's progress towards achieving the vision and goals. The working groups included Council members, doctors and health care providers, hospital executives, insurance company leaders, public health officials and others with expertise on Maine's health care system. Working groups were staffed by Muskie School graduate students-- Allison Volchok, Christina Booth and Carlotta Drane; Gino Nalli, served as a consultant to the process.

Their work culminated in a large public meeting at which working group leaders presented their suggested indicators to the Council and a panel of legislative and policy leaders. Using criteria developed by the Council, the working groups identified over 400 indicators, of which the Council prioritized 220 for further consideration.

From July-December, the Council narrowed the list of indicators, with the final goal of selecting 60. Gino Nalli led a team of experts -- Maureen Booth and Julie Fralich -- from the Muskie School of Public Service's Center for Health Research and Policy to review the list and use their expertise to recommend 60 indicators.

The Council made limited changes to the work of the Muskie team, and sent the indicators to hundreds of interested parties for public comment in early November. Twenty-nine people sent written comments, which were compiled and reviewed by the Council. The 63 indicators were finalized in December.

The Data Challenge

"Good data drives good decisions."
Governor Angus S. King, Jr. speaking to the Maine Health Care Performance Council, September 17, 2001

As the Council began its work, it was advised by a number of leading health experts that finding data to support the indicators would present a significant challenge. Because Maine does not have a single health care system, there are few data sources that capture the entire population or all elements of the system. For example, current data collection efforts in the area of cost often reside with payors, both governmental and private; this results in significant data gaps, e.g. the exclusion of people who lack health insurance, and inconsistent collection efforts that do not always allow for the comparison of data.

The Council operated under the premise that the selection of indicators should reflect the values of the Council and the vision and goals it sought to achieve -- regardless of whether data is currently collected and available. A criterion was that each indicator had to reflect data that could feasibly be collected.

The result is a set of indicators for which the Council believes that standardized data should be collected and available, though systems may not allow for it at this time. Specifically, 17 of the 63 indicators in this report have data that is currently available over time; 23 of the remainder will require special surveys; and 23 will need further analysis.

While there is a clear need for improved data collection efforts in Maine, valuable insight can be gained from the 17 indicators for which public data is currently available. The Council looks forward to expanding that list as technology and systems improve over time. The Council applauds the efforts of the Maine Health Data Organization and the Maine Health Information Center as they work collaboratively to develop a database that compiles information on all health insurance claims, including, we hope, Medicaid and Medicare. This database will be the first of its kind in the country. Once available, the data collected through this effort will apply to many of the indicators identified in this report, and it will provide policymakers, employers and the public with important information about cost, quality and utilization that is not otherwise available.

Content and Themes

The Council focused on several key themes throughout the process.

Focus on the System, not Status. This report is intended to provide a structure to measure the performance of Maine's health care system. This is different from, but complementary to, the excellent work on the health status of Maine's population that is published in the Maine Bureau of Health's *HealthyMaine* reports. *HealthyMaine 2010* sets a public health agenda for Maine, while *How Well is it Working?* provides a framework for measuring the entire system. The Council identified a number of *HealthyMaine* indicators that met its criteria, so the two reports contain some overlapping indicators and data.

Focus on the System, not Individual Providers. This report is intended to provide data on the elements of the health care system(s) in Maine, not individual providers within the system. Many people have requested that the report provide information specific to institutional and individual providers, and/or county-specific data. Though many of the indicators identified could be further refined for such purposes, the intent of this report is to provide general information about the system as a whole, rather than specific providers.

Proxies. Many indicators represent broader issues within the health care system. For example, indicators related to the management of diabetes are designed to illustrate both the increasing magnitude of diabetes-related illness in Maine, and the importance of evidence-based treatment for chronic disease in general.

Population-based Indicators. The Council believes strongly that its work should reflect all Maine people, including those who have employer-based insurance, those who purchase their own insurance, those who receive coverage through public programs and those who lack insurance altogether. This goal has proven particularly challenging, as there is very little population-based "system" data available. Because the payor systems, private and governmental, are the means through which much data is collected, information regarding the cost and utilization of services for people who lack insurance or who pay for care out-of-pocket is usually excluded. The Council recognizes this problem; however, short of the development of a comprehensive data collection and analysis system in Maine, it has no alternative but to utilize for many of its indicators claims data that excludes the uninsured population.

Evidence-Based Practice. Many of the indicators attempt to measure the extent to which Maine providers are utilizing proven methods of best practice, or evidence-based practice, in their clinical practices. There have been several recent efforts at the national level to develop evidence-based guidelines for clinical decision-making; the Council has incorporated them into its state-level work.

The Connection Between Participation, Quality and Cost. Much of the current research addresses one or two of the goal areas, but very little ties all three together. While there is recognition that participation and quality affect cost, we could find little population-based data to support that assumption. The indicators were developed with the goal of tying the three factors together. For example, "costs associated with avoidable hospitalizations", represent costs that could be avoided if patients and providers managed and treated ambulatory-sensitive conditions according to best practice.

Cost Shifting. The Council discussed cost-shifting at length. The complexities of our public and private health care financing systems make it extremely difficult to show the true cost of providing health care services. The Council has included several indicators that illustrate the different prices paid by payors for the same service, but the Council was not able to discern the actual cost of providing the service. This is an area that should be noted by policymakers when looking at cost data.

Patient-Based Decision-Making. The Council discussed the need for the indicators to reflect the availability of information upon which health care consumers can make well-informed decisions. With the demise of managed care as a means for controlling costs, health care payors, including employers and the government, are shifting their focus to helping patients make well-informed decisions about their own health care. Such decision-making requires information about quality, outcomes and costs of services, very little of which is currently available to the public. The Council has included several indicators to measure the availability of such information.

Cost Indicators

Goal: *"The health care system should be cost-effective and financed to ensure its long-term sustainability."*

There appears to be general consensus that the overall cost of health care is increasing, but there is very little quality data available that reflects the cause. Is it unhealthy lifestyles? Lack of preventive care? Profits? Administrative costs? Poor quality care? To what extent do participation and quality drive cost? The complexity of the health care financing system has prevented the collection of population-based cost data, yet it is critical for policymakers to have such information to identify solutions to the escalating crisis. The Council developed indicators that reflect cost from several angles: Who pays? How much? Why? And for what? The following indicators are intended to reflect the costs associated with major elements of Maine's health care system.

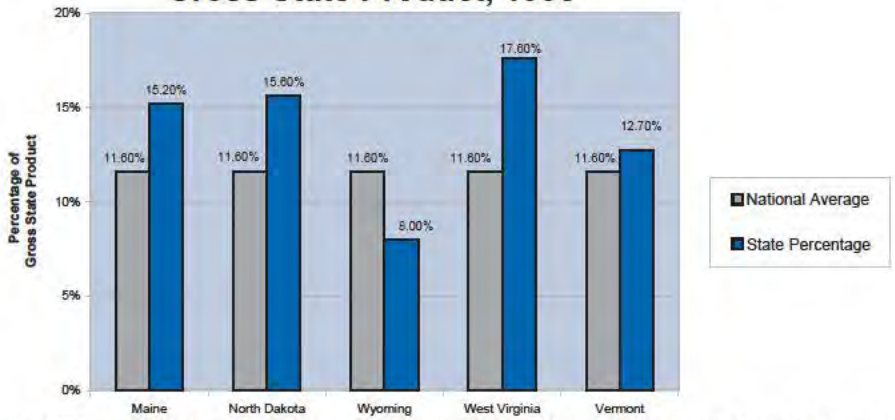
1. Health Care Expenditures as a Percentage of Maine's Gross State Product

Total annual health care expenditures as a percentage of Maine's Gross State Product, compared to other states with similar characteristics.

Importance and Rationale: Health care expenditures have become a significant component of Maine's economy. Because health care is not an exportable good, it is important to track the rate at which health services are growing compared to the economy as a whole. This indicator puts Maine's total health care spending in the economic context of its total gross state product. Trended over time, this indicator will show whether health care spending is disproportionately increasing compared to the gross state product, and how health care spending in Maine compares to other states with similar profiles.

Available Data or Recommended Data Source: In 1998, Maine's health care expenditures were the third highest percentage of any State's Gross State product, at 15.2%. The national average was 11.6%. Comparison states were: North Dakota: 15.6%; Wyoming: 8.0%; West Virginia: 17.6%; and Vermont: 12.7% (Health Care State Rankings, p. 280).

Health Care Expenditures as a Percentage of Gross State Product, 1998



Source: Health Care in the 50 States, 10th Ed. Morgan Quitno Press, using data from the US Dept. of Health and Human Services, Centers for Medicare and Medicaid.

2. Health Care Expenditures in Maine

Total health care expenditures in Maine on an aggregate and per capita basis, compared to other states with similar population characteristics.

Importance and Rationale: Rising health care expenditures are of great concern to individuals, employers, insurers and policymakers in Maine. In fact, between 1990 and 1998, Maine's per capita expenditures on health care increased by 80.4% - the highest rate of increase in the nation, and over twice the rate of general inflation during the same period (State Health Facts, p. 281). This indicator will show trends in Maine's health care spending over time, as well as whether those trends are Maine-specific or national in scope. Comparison states include North Dakota, Wyoming, West Virginia and Vermont.

Available Data or Recommended Data Source: In 1998, Maine's total personal health care expenditures were $4,925,000,000, or $3,948 per capita. Of that amount, hospital services comprised 37%; physicians and other professional services comprised 25%; prescription drugs comprised 9%; and other areas comprised 28.5% of expenditures in Maine. 1998 per capita spending in comparison states was: North Dakota: $4,202; Wyoming $2,931; West Virginia $3,884; and Vermont: $3,498. (State Health Rankings, 2002).

3. Impact of Price on Access to Health Care

Percentage of Maine people who report that they could not access needed medical care due to cost.

Importance and Rationale: There exists public perception that individuals who lack health insurance coverage are able to access needed care through emergency departments and other subsidized venues. This indicator measures the extent to which people report that an inability to afford care impacts their ability to access needed medical services.

Available Data or Recommended Data Source: In the Year 2000, approximately 11.2% of Maine people surveyed indicated that they were unable to access needed medical care within the last twelve months because of cost (BRFSS, 2000).

4. Charity Care and Bad Debt Expenses for Hospitals

Charity and bad debt expense as a percent of total operating revenue for hospitals.

Importance and Rationale: Charity care and bad debt expense are an indicator of people's inability to afford needed health care, and they represent a shift in cost to private payors. Individuals who lack adequate health insurance often access services through hospitals that bill based upon a patient's insurance status and income. Charity care is given to those individuals who fall under a certain financial threshold. If a person is over the threshold but unable to pay the bill, services are eventually written off as bad debt, and the costs of charity care and bad debt are shifted to private payors. This indicator shows the extent to which charity care and bad debt compare to total hospital operating revenues.

Available Data or Recommended Data Source: The Maine Hospital Association reports that uncompensated care represented 7.4% of net patient revenue in 2001 (Maine Hospital Association Quarterly Financial and Statistical Report).

5. Wage Trends

The average change in wages for Registered Nurses working at Maine hospitals.

Importance and Rationale: Hospital costs comprise the largest growing segment of the health care system, and the cost of labor, particularly for registered nurses, reflects a significant proportion of hospital budgets in Maine. Like the nation, Maine has experienced a nursing shortage in recent years. This shortage results in a corresponding decrease in access and increase in wages, and thus hospital costs. This indicator reflects wage increases for nurses in Maine over time as an indicator of hospital costs.

Available Data or Recommended Data Source: In 2002, the average hourly wage for nurses in Maine (including RNs and NPs) was $21.67/hour (Department of Labor, Bureau of Labor Statistics.)

6. Medical Loss Ratios

Medical expenditures paid as a percentage of total premium income for the three largest health insurers in Maine.

Importance and Rationale: As health insurance premiums rise, it is important to identify the cause of the increases. This indicator reflects the extent to which rising health care premiums are the result of actual medical expenses paid by insurers, rather than profits, administrative costs or other non-medical expenses.

Available Data or Recommended Data Source: Data for this indicator will be accessed through the Maine Bureau of Insurance, Department of Professional and Financial Regulation.

7. Financial Impact of Smoking

Annual health care expenditures for the three most prevalent smoking related chronic diseases, analyzed per capita and per smoker.

Importance and Rationale: The physical and financial costs associated with smoking are avoidable. Smoking-related disease is preventable, and the effects of smoking represent a significant cost driver in the health care system. Nationally, smoking-attributable costs for medical care in 1993 were estimated to be $50 billion (National Library of Medicine). According to the Center for Disease Control, the three most prevalent smoking-related diseases are lung cancer, ischemic heart disease and chronic airway obstruction (Center for Disease Control, MMWR). This indicator will trend the financial impact of these smoking-related diseases in Maine over time.

Available Data or Recommended Data Source: Data for this indicator will be collected through an analysis of Medicaid, Medicare and commercial insurance claims in Maine.

8. Cost of Certificate of Need Approvals

The change in number of procedures and revenues from utilization of new medical equipment approved through the Certificate of Need process.

Importance and Rationale: Health care delivery does not work as a traditional economic market. Maine's Certificate of Need process is intended to provide a balance by regulating unnecessary capital health care expenditures. This indicator measures the extent to which the number of procedures and revenues change as a result of capital health care expenditures on new technology that has been approved through the Certificate of Need process.

Available Data or Recommended Data Source: Data for this indicator will be collected through an analysis of Medicaid, Medicare and commercial insurance claims in Maine.

9. Malpractice Premium Expenditures

Total expenditures for medical malpractice insurance in Maine as a percentage of total health care expenditures.

Importance and Rationale: Physicians consistently rank the cost of medical malpractice insurance as an area of significant concern and a cause of increasing health care costs (Kaiser Family Foundation). This indicator measures the extent to which malpractice costs affect total health care expenditures in Maine.

Available Data or Recommended Data Source: Data for this indicator will be developed through the Maine Bureau of Insurance and information provided by providers and insurance claims.

10. Participation in Quality Incentive Plans

The percentage of physician offices, outpatient facilities and inpatient facilities that participate in financial incentive programs that link quality to the price paid for a service.

Importance and Rationale: Health care is a unique market in that the quality of outcomes is rarely a factor in the price paid for the service; in fact, payors ultimately pay for increased services that result from poor quality care. There have been recent attempts by some payor sources to financially reward health care providers for providing high quality services. This indicator measures the participation rate of providers in these types of reimbursement programs.

Available Data or Recommended Data Source: Data for this indicator will be collected through a survey of major insurance companies who write business in Maine.

11. Avoidable Inpatient Costs

Total health care expenditures on avoidable hospital admissions for ambulatory-sensitive conditions.

Importance and Rationale: Hospital costs represent both the largest category of health care expenditures in Maine and that which is experiencing the highest rate of increase. Many hospitalizations could be avoided with clinically appropriate preventive care and disease management. Ambulatory-sensitive conditions are those conditions that are less likely to require inpatient hospitalization with timely and appropriate disease management and primary care. They include such conditions as: diabetes, cellulitis, asthma, kidney/urinary tract infections, angina, dehydration, COPD, bacterial pneumonia, and CHF. The costs associated with avoidable hospitalizations for ambulatory-sensitive conditions are an indicator of avoidable health care expenditures.

Available Data or Recommended Data Source: Data for this indicator will be collected through an analysis of Medicaid, Medicare and commercial insurance claims.

12. Expenditures for the Five Most Common Procedures

The frequency, unit price and aggregate health care expenditures for the five most common procedures, inpatient and/or outpatient, by payor source.

Importance and Rationale: This indicator tracks a number of data components that drive health care costs. The unit price broken out by payor source shows cost shifting between payors. The frequency and aggregate expenditure data track the extent to which utilization drives total health care expenditures in Maine. This data also provides useful information in tracking the extent to which the five most common procedures change from over time.

Available Data or Recommended Data Source: Data for this indicator will be collected through an analysis of Medicaid, Medicare and commercial insurance claims.

13. Health Care Benefit Costs as a Percentage of Payroll Costs

The percentage of total health care benefit costs paid by employers as a percentage of total payroll costs.

Importance and Rationale: This indicator shows the extent to which health benefit cost increases are rising at a rate greater than total payroll costs. This is important in answering the question of whether employers are picking up health costs in lieu of pay increases for employees.

Available Data or Recommended Data Source: Data for this indicator will be collected through a survey of employers who offer health insurance to employees in Maine.

14. Employer Share of Premium Costs

The percentage of employee insurance premium costs paid by employers.

Importance and Rationale: As insurance premiums increase, employers struggle to continue offering coverage to their employees. The percentage of private sector employers in Maine that offered health insurance to employees in 1999 was 52.0%, well below the national average of 59.3% (Kaiser Family Foundation, State Health Facts Online). In many cases, employers are increasingly asking employees to participate in the cost of their insurance. This indicator shows the extent to which employers are continuing to pay insurance costs for employees.

Available Data or Recommended Data Source: Data for this indicator will be collected through a survey of employers doing business in Maine.

15. Market Share of Catastrophic Insurance Contracts

The percentage of individual insurance policies issued with a deductible in excess of 10% of the average family income in Maine.

Importance and Rationale: As health insurance premiums have increased over the last several years, individuals and employers alike are turning to alternatives to traditional indemnity and managed care plans. Insurance plans with high deductibles, often called catastrophic plans, are currently the fastest growing market in Maine, and there is some evidence that individuals with high deductible plans do not fully participate in appropriate preventive care. This indicator defines catastrophic plans as individual plans with deductibles that exceed 10% of the average family income, and measures their market share over time.

Available Data or Recommended Data Source: Data for this indicator will be collected through a survey of insurers doing business in Maine.

16. Rate of Premium Increases

The average rates of increase for single and family health insurance premiums in individual, small group and large group markets, and compared to other states.

Importance and Rationale: Like overall health expenditures, Maine's health insurance premiums have increased at a very high rate over the last several years. For example, recent individual rate filings to the Maine Bureau of Insurance ranged from 13.6% to 50%. These increases have presented a difficult situation for employers, employees and individual purchasers. In addition to knowing the actual rate of increase for insurance premiums, it is helpful for policymakers to know whether Maine's increasing insurance costs are unique, or whether they follow a national trend. If available, data for Maine will be compared to states with similar profiles, including West Virginia, Wyoming, North Dakota and Vermont. This indicator shows how Maine's rate increases compare to other states, as well as the trend in premium prices over time.

Available Data or Recommended Data Source: Data for this indicator will be collected a survey of insurers doing business in Maine.

17. Individual Health Care Expenditures

The average health care expenditures that are paid out-of-pocket by consumers in the form of premium contributions, cost sharing provisions, out-of-pocket expenses and other payments, by insurance source and as a percentage of average annual income.

Importance and Rationale: As health insurance premiums rise, individuals are contributing an increasingly large portion of their health costs out-of-pocket. It is not yet clear what effect increased cost sharing will have on utilization of services. However, tracking individual contributions is an increasingly important answer to the question of who pays for health care. This indicator measures how much individuals are paying out of pocket as a percentage of their income, broken out by insurance source.

Available Data or Recommended Data Source: Data for this indicator will be extrapolated from total health care expenditures in Maine.

18. Availability of Price Information to Consumers

The number of acute care health facilities that make available to the public a "price list" for non-emergency procedures, broken out by payor source, and including self-pay.

Importance and Rationale: Employer-sponsored health insurance has traditionally shielded insured consumers from factoring cost into health care decisions. As consumers are required to pay more out of pocket for health care, they need good price information upon which to base their decisions. Price lists provide consumers with the dollar amount paid by Medicaid, Medicare, people paying out of pocket for the service and commercial insurers. The discounts that are negotiated between insurers and providers are currently proprietary information, and thus not available to consumer. This indicator intends to measure the availability of price information to consumers including the actual price paid by insurers for non-emergency, outpatient services.

Available Data or Recommended Data Source: It is currently illegal for providers to disclose to the public the discount rates they negotiate with insurers. The Maine Health Care Performance Council believes that the availability of price information to consumers is critical to making informed health care decisions.

Participation Indicators

Goal: *"The health care system should be structured to promote appropriate participation by consumers, providers and payors."*

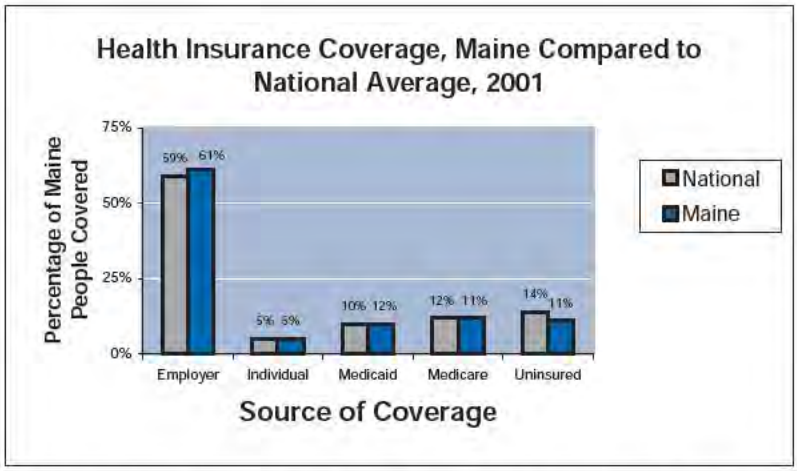
Most health care experts describe the three key elements of the health care system as cost, quality and access. The Council discussed adopting these standard elements, but felt that while access to services is critical, individuals must also participate in the appropriate utilization of health care. The following indicators are intended to reflect how well the health care system is promoting and achieving appropriate participation by Maine people.

19. Insurance Coverage in Maine

The percentage of Maine people who have health insurance coverage, by payor.

Importance and Rationale: It has become widely accepted that there is a direct correlation between insurance coverage and participation in preventive health care. People who lack health insurance tend not to seek preventive services, resulting in higher utilization of expensive services and worse health outcomes. This indicator measures the percentage of Maine' s population that has insurance coverage at any given point in time by form of coverage (employer-based, individual or public).

Available Data or Recommended Data Source: In 1999-2000, 89% of Maine people had health insurance coverage. Of those who had coverage, 61% were covered through their employers; 5% had individual policies; 12% participated in Medicaid; and 11% participated in Medicare (Kaiser Family Foundation, StateHealth Facts Online. p. 4).



Source: Kaiser Family Foundation, "State Health Facts Online", 2001. www.kff.org

20. Smoking in the Workplace

The percentage of workplaces where smoking is allowed in some or all work areas.

Importance and Rationale: The effects of second-hand smoke are physically and financially costly. Passive smoking accounts for approximately 3,000 lung cancer deaths in the United States annually (National Library of Medicine). Workplaces that do not allow smoking in indoor public and common areas promote the well being of their workforces, which reduces the physical and financial costs associated with smoking over the long term. This indicator reflects the willingness of employers to promote health by prohibiting smoking in indoor workspaces.

Available Data or Recommended Data Source: In 2001, approximately 12 percent of people reported that smoking was allowed in some or all work areas (BRFSS 2001).

21. Adult Physical Activity

The percentage of adults who engage in thirty minutes or more of moderate physical activity at least five days per week, or 20 minutes or more of vigorous physical activity at least three days per week.

Importance and Rationale: Staying healthy involves individual participation in maintaining one's own health. Exercise is a critical component in maintaining a healthy lifestyle. The United States Preventive Health Task Force recommends that it is the single most effective preventive measure that can be taken against coronary heart disease, hypertension, obesity and other diseases (Agency for HealthCare Quality and Research, USPHTF Guidelines, Appendix A Task Force Ratings, Table 55). This indicator measures the willingness of adults to participate in their own health maintenance.

Available Data or Recommended Data Source: In 2001, approximately 50% of adults in Maine participated in moderate activity 5 days per week or vigorous activity at least 3 days per week (BRFSS, 2001).

22. Diabetes Self-Management

The proportion of adults with diabetes who report that they have taken a course or class in managing diabetes.

Importance and Rationale: Diabetes is becoming increasingly prevalent in our population. Between 1994 and 2000, Maine's age-adjusted prevalence of diabetes increased by more than 50% (Center for Disease Control). The appropriate treatment and management of diabetes requires a team effort between treating providers and the patient. Patients with diabetes who have been appropriately educated about their disease can actively participate in self-care and appropriate health service utilization, which will result in better health outcomes and lower costs over time.

Available Data or Recommended Data Source: Between 1998-2000, an average of 57% of adults with diabetes reported that they had taken a course or class in disease self-management (BRFSS, 2001).

23. Influenza Vaccine Rate

The percentage of people over the age of 65 who have had a flu shot within the last 12 months.

Importance and Rationale: Influenza, or "the flu," results in severe human and financial costs every year. It's the sixth leading cause of death among elders annually (HealthyMaine 2010, p. 91). Immunization is an effective means of prevention, and the United States Preventive Health Task Force recommends that all persons aged 65 or older receive an annual influenza vaccination. The rate of vaccination for people over 65 represents the health care system's ability to prevent disease and the willingness and ability of persons over 65 to access this preventive service.

Available Data or Recommended Data Source: In 1999, an estimated 73.7% of Maine people over the age of 65 reported that they had a flu shot within the last twelve months (BRFSS).

24. Health Care Workforce Capacity

The percentage change in employment for the following health care occupations: physicians; nurses (NPs, RNs, LPNs CNAs); dentists; and certified home health aides.

Importance and Rationale: The state's supply of health care workers has a direct effect on cost, quality and access to the system; fluctuations in the labor supply have a significant impact on health system capacity and service cost. A labor shortage can result in greatly increased costs, poor quality care and a lack of access to appropriate care. This indicator measures changes in the state's health care workforce over time.

Available Data or Recommended Data Source: According to Maine's Department of Labor, Bureau of Labor Statistics, in 2001, Maine's health care workforce included: 2,380 LPNs; 12,180 RNs; 9170 CNAs; 4230 home health aids; and 650 dentists.

25. Regular Source of Care

The percentage of persons by income who report having one person they think of as their personal doctor or health care provider.

Importance and Rationale: Studies have shown that having a regular care provider is a strong predictor of participation in standard preventive health services such as pap tests and mammograms. Participation in evidence-based preventive care can greatly improve health outcomes and decrease costs to the individual and the system. This indicator reflects the extent to which individuals have a single source of primary care, and thus reflects participation in preventive health care.

Available Data or Recommended Data Source: In 2001, 85.8% of Maine people reported that they have a personal doctor or health care provider (BRFSS, 2001).

26. Colorectal Cancer Screening

The percentage of persons who are routinely screened for colorectal cancer.

Importance and Rationale: Maine's rate of new colon and rectum cancer cases is well above the national average, with an estimated 62.2 cases per 100,000 population, compared to the estimated national average of 52.1 cases per 100,000 population in 2002 (State Health Care Rankings, p. 363). The United States Preventive Health Task Force Guidelines strongly recommend that clinicians screen persons aged 50 years and over for colorectal cancer. This indicator measures the extent to which primary care providers adhere to the guidelines issued by the United States Preventive Health Task Force.

Available Data or Recommended Data Source: Data for this indicator will be collected through an analysis of Medicaid, Medicare and commercial insurance claims.

27. Screening for Family Violence

The percentage of primary care providers who screen and assess whether patients are at-risk for violence in their homes.

Importance and Rationale: Family violence is a significant public health problem in Maine; in 2001, nearly half of all homicides in Maine were the result of such violence. Family violence includes physical and sexual child abuse; physical or sexual abuse of a spouse or partner; and abuse or neglect of an older person. (National Library of Medicine). Guidelines for screening are available from the American Medical Association, American Academy of Pediatrics, Institute for Clinical Systems Improvement and US Dept. of Health and Human Services. Primary care providers can play an important role in identifying victims of violence in the home and helping them seek safety and treatment. This indicator measures the participation level of clinical providers in following evidence-based guidelines in this prevention effort.

Available Data or Recommended Data Source: Data for this indicator will be collected through a survey of primary care providers in Maine.

28. Lead Screening of At-Risk Children

The percentage of children who receive blood screening for lead toxicity at ages 12 months and 24 months.

Importance and Rationale: Lead poisoning represents a serious and preventable public health issue in Maine. High levels of lead exposure in children can cause neurological complications, which can lead to death or serious impairment. The Maine Department of Human Services' Bureau of Health believes the issue to be so important that it pays the cost of lead screening for at-risk children. This indicator measures the extent to which primary care providers follow the Department's guidelines for lead screening.

Available Data or Recommended Data Source: Data for this indicator will be collected through the Maine Bureau of Insurance and the Department of Human Services.

29. Children's Physical Activity

The percentage of school-aged children who engage in 30 minutes of vigorous activity at least five times a week.

Importance and Rationale: Like adults, research shows that children who participate in vigorous activity are more likely to be physically healthy than those who do not. Physical activity is a significant factor in preventing obesity and disease, and learning healthy lifelong habits. This indicator measures the extent to which school-aged children are participating in physical activity on a regular basis.

Available Data or Recommended Data Source: Data for this indicator will be collected through a survey.

30. Generic Drug Use

The percentage of brand name prescriptions filled for which a generic equivalent is available.

Importance and Rationale: Prescription drugs are a large driver of increased health care costs, both in Maine and in the United States. One means of stabilizing expenditures for prescription drugs is to substitute generic equivalents for brand name drugs when possible. Consumer and provider participation are important factors in creating this change, as pharmaceutical advertising to consumers and providers has increased dramatically over the last several years. This indicator measures the extent to which consumers and providers seek the most expensive alternative for prescription drug treatment.

Available Data or Recommended Data Source: Data for this indicator will be collected through an analysis of Medicaid and commercial insurance claims.

31. Avoidable Emergency Department Utilization

The percentage of emergency department visits to treat adults with asthma.

Importance and Rationale: Hospital emergency departments often serve as an expensive alternative to primary health care in Maine. Historically, Maine has experienced a high emergency department utilization rate; in 2001 Maine had the 7th highest emergency room utilization rate in the country (Kaiser Family Foundation, State Health Facts Online). Adults who participate in quality primary care and asthma self-management rarely utilize the emergency department of a hospital for treatment of asthma. This indicator reflects the utilization of emergency department services in lieu of access to and participation in quality primary care for this treatable chronic disease.

Available Data or Recommended Data Source: Data for this indicator will be collected through a survey of hospital emergency departments in Maine.

32. Asthma Self-Management

The percentage of people with asthma who have self-management plans that have been developed in conjunction with and approved by their primary care providers.

Importance and Rationale: Asthma is an increasingly prevalent chronic disease in Maine; in 2000, approximately 12% of the adult population reported that it had been diagnosed with asthma. Patient education and self-management of asthma is a critical component of successful treatment. The National Health, Lung and Blood Institute has developed clear guidelines for providers to follow when educating patients about their disease, and helping them develop self-management plans. Patients with asthma who have been appropriately educated about their disease can actively participate in self-care and appropriate health service utilization, which will result in improved health outcomes and lower costs over time.

Available Data or Recommended Data Source: Data for this indicator will be collected through a survey of people with asthma.

33. Transportation Barriers to Care

The percentage of people unable to access medical care because they did not have transportation.

Importance and Rationale: Appropriate participation in preventive health care can be stymied by a variety of obstacles, including cost and physical access. Maine is a rural state with very little public transportation infrastructure, which can present difficulties for adolescents, low-income people and older populations. This indicator reflects the extent to which people report that lack of transportation was a barrier to their ability to access health care.

Available Data or Recommended Data Source: Data for this indicator will be available from the 2002 BRFSS survey.

34. Hospice Utilization

The percentage of people who died from cancer who used hospice.

Importance and Rationale: End of life care for people with terminal illness is an area with increasing options. Hospice services can provide an affirmative, cost-effective, high-quality alternative for people with terminal illness. A high rate of hospice utilization would reflect a health care system that is supportive of appropriate alternatives to hospitalization for people with terminal illnesses.

Available Data or Recommended Data Source: Data for this indicator is available through the Maine Hospice Association.

35. Access to Psychiatric Services for Low-Income People in Maine

The percentage of psychiatrists who have at least 5% of their outpatient caseload in MaineCare.

Importance and Rationale: One in four adults experiences a mental health disorder in any given year (HealthyMaine 2010, p. 131). Though Maine has a higher rate of psychiatrists than the national average (131), access to outpatient psychiatric services for low-income people is an issue of significant concern, particularly in rural parts of the state. This indicator measures the extent to which psychiatrists' provide outpatient services to low-income Maine people.

Available Data or Recommended Data Source: Data for this indicator will be collected through a survey of psychiatric practices in Maine.

36. Access to Dental Services for Low-Income People in Maine

The percentage of dentists who have at least 5% of their caseload in MaineCare (Medicaid).

Importance and Rationale: Access to dental care for low-income Maine people is an issue of significant concern. Medicaid reimbursement rates for dentists are low, and Maine's rate of dentists per capita is well below the national average (Health Care State Rankings 2002, p. 485). Dental caries (tooth decay) and oral disease represent significant health problems in the population. Access to dental services is particularly difficult for people who lack dental insurance or who participate in MaineCare (HealthyMaine 2010: Longer and Healthier Lives, p. 8). This indicator measures the extent to which dentists provide dental services to low-income Maine people.

Available Data or Recommended Data Source: Data for this indicator will be collected through a survey of dental practices in Maine.

37. Providers with Specialized Geriatrics Training

The number of primary care physicians who have completed a residency rotation in geriatric care, and the number of geriatric nurse specialists in Maine.

Importance and Rationale: Maine's population is aging, placing an increasing demand on health care services. The supply of primary care providers who have specialized training in geriatrics is an important indicator of the ability of older persons to access appropriate services to meet their health care needs. It has been shown that specialized training has a significant positive impact on medical residents' knowledge of geriatric medicine (Chiang, Lillian). This indicator measures the system's capacity to address the changing needs of our population.

Available Data or Recommended Data Source: Data for this indicator will be collected through a survey of primary care providers.

38. Impaired Activities due to Substance Abuse

The average number of days people were unable to work or carry out their usual activities because of substance abuse.

Importance and Rationale: Substance abuse is a major health problem in Maine. In 1999, Maine's age-adjusted death rate by alcohol-induced deaths was 7.9/100,000 population, which was the thirteenth highest in the nation (State Health Facts 2002, p. 185). Substance abuse results in significant costs to society, including missed work, increased incidence of comorbid disease, intentional and unintentional injuries, and impaired activities, and can affect both the abuser and family members. This indicator measures the rate at which substance abuse in Maine causes impairments to daily life activities.

Available Data or Recommended Data Source: Data for this indicator will be collected by a survey of adults in Maine.

39. Rate of Screening for Breast Cancer

The percentage of women ages 50 through 69 who were screened for breast cancer according to guidelines set by the United States Preventive Health Task Force.

Importance and Rationale: Breast cancer is the most commonly diagnosed, non-skin cancer among women in the United States (Leatherman and McCarthy). In 2000, Maine had the 15th highest death rate in the country due to breast cancer. This indicator reflects both the health care system's ability to implement an important screening tool, and women's access and willingness to participate in this evidence-based preventive health strategy.

Available Data or Recommended Data Source: Data for this indicator will be collected through an analysis of Medicaid, Medicare and commercial insurance claims.

40. Children's Access to Dental Care

The percentage of children 3-18 years of age who have had their teeth cleaned by a dentist or dental hygienist within the last 12 months.

Importance and Rationale: Dental caries (tooth decay) is the most common chronic childhood disease -- five times more common than asthma; the average child has eight cavities by the age of 17. Oral health problems lead to missed school, poor nutrition and a variety of other problems. Childhood access to and participation in oral health care, and particularly prophylactic care, is an important measure of a state's preventive health infrastructure and a predictor of overall health status.

Available Data or Recommended Data Source: Data for this indicator will be collected through a survey of Maine people.

Quality Indicators

Goal: *"The health care system should produce quality outcomes and information to improve the health of Maine citizens."*

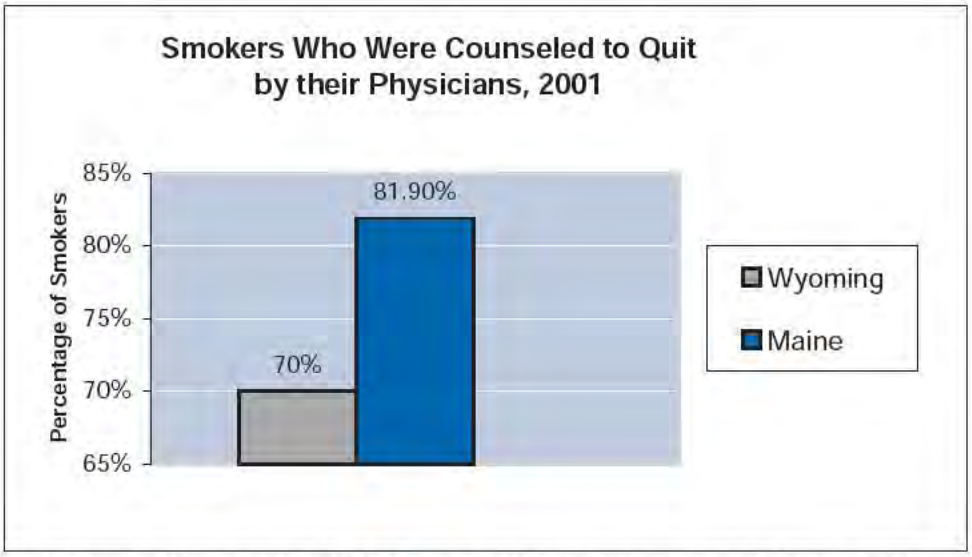
Health care quality is a subject of great importance and increasing popularity. Publicity surrounding the Institute of Medicine's landmark 1999 report To Err is Human brought the subject of medical errors and quality to the fore. The definition of quality can be somewhat subjective, and the Council relied upon the extensive work of national agencies and experts to guide the development of indicators. The Council looked at the quality of Maine's system from three vantage points: structural quality, treatment quality and the quality of outcomes. The result is a series of indicators that reflect the health care system's ability to achieve quality outcomes for Maine people.

41. Health Care Providers Who Advise Smokers to Quit

The percentage of adult smokers who were advised to quit smoking by a physician within the last year.

Importance and Rationale: Smoking is the most preventable cause of disease and death in the United States (DHHS 2000). There is good evidence that smokers are more likely to quit smoking when they are advised to do so by a health care professional .The United States Preventive Health Task Force strongly recommends that physicians counsel all tobacco users to quit. This indicator measures basic preventive services provided by physicians to adult patients who smoke.

Available Data or Recommended Data Source: In 2001, 81.9% of respondents indicated that they have been advised to quit smoking by a physician within the last year, compared to 70% in Wyoming. (BRFSS, 2001).



Source: State Specific BRFSS Survey Data for Wyoming and Maine, 2001

42. Individual Health Status

The percentage of persons who report their health as "excellent, very good or good", and "fair or poor," reported by income level.

Importance and Rationale: Improved health status is an important goal of the health care delivery system. Though health status is also affected by external factors such as the environment and lifestyle choices, reported health status is a good measure of the overall effectiveness of the health care system.

Available Data or Recommended Data Source: In 2001, 86.8% of Maine people surveyed reported that their health was "Excellent, very good or good." 13.2% reported that their health was "fair or poor." (BRFSS, 2001).

43. Childhood Immunization Rate

The percentage of two-year olds who are fully immunized.

Importance and Rationale: Childhood immunizations are a proven, cost-effective, public health disease prevention strategy. Cost savings associated with appropriate immunizations can range from $2 for every dollar spent on recently approved vaccines to $24 for other vaccinations such as tetanus (Healthy Maine 2010: Longer and Healthier Lives. p. 89). The rate of fully immunized children is an indicator of the effectiveness of public and preventive health strategies in a state.

Available Data or Recommended Data Source: In 1999, 84.6% of two-year olds in Maine were fully immunized, compared with 77.9% nationally (Maine Health 2001/2002: A Health Planning Resource p. I6).

44. Female Deaths Due to Breast Cancer

The breast cancer death rate per 100,000 women in Maine.

Importance and Rationale: Breast cancer is a disease that, if detected early and treated appropriately, has a very high recovery rate. The breast cancer death rate reflects the outcome of individual participation in and access to timely preventive services, and the quality of treatment provided to women who are diagnosed with breast cancer.

Available Data or Recommended Data Source: In 2002, the estimated death rate due to breast cancer in women is 30.6/100,000 population. This statistic places Maine as the fifteenth highest in the nation. The national rate is estimated to be 27.9/100,000 (State Health Care Rankings, p. 112).

45. Systems to Reduce Medical Errors

The number of Maine hospitals that use computerized physician order entry systems as a means of reducing medical errors.

Importance and Rationale: It is estimated that the human and financial costs of medical prescribing errors are significant. Medication mistakes occur most frequently at the prescribing stage (Leatherman and McCarthy, Chartbook, 2002. p. 66). It has been shown that Computerized Physician Order Entry systems in inpatient settings can greatly reduce medication prescribing errors by up to 86% (Bates, DW et al.) This indicator reflects the extent to which Maine hospitals are utilizing this technology, which has proven to save lives and reduce costs.

Available Data or Recommended Data Source: Data for this indicator will be attained through a survey of hospitals in Maine.

46. Quality of Surgical Outcomes

The percentage of persons who had non-emergency elective surgery within the past 12 months and report improved health status as a result.

Importance and Rationale: Elective surgical procedures are intended to improve the functional health of a patient. This indicator tracks the extent to which patients perceive that elective surgeries are accomplishing their purpose.

Available Data or Recommended Data Source: Data for this indicator will be collected through a survey of patients who have received elective surgery within the past 12 months.

47. Quality of Preventive Services

The percentage of individuals who are routinely screened for lipid measurement (cholesterol) by their primary care providers.

Importance and Rationale: Coronary heart disease is the leading cause of death for men and women in Maine. One in four hospital admissions in Maine is the result of coronary heart disease, and it accounted for $277 Million in health care spending in 1997 (Maine Bureau of Health). Early detection of increased risk for coronary heart disease through lipid screening can allow for drug therapy that can substantially decrease the incidence of the disease. This indicator measures the rate at which adults are routinely screened for the disease, as strongly recommended by US Preventive Services Task Force.

Available Data or Recommended Data Source: Data for this indicator will be collected through an analysis of Medicaid, Medicare and commercial insurance claims in Maine.

48. Availability of Public Information about Quality

The percentage of licensed health care facilities that provide public information about volume of procedures and quality of outcomes.

Importance and Rationale: There is a growing body of evidence that suggests that the outcomes of health care procedures vary widely between institutions. There is also strong evidence to suggest that there is a correlation among volume of procedures and quality outcomes; the higher the volume, the better the outcome. At present, very little information regarding the quality of services provided by institutions in Maine is available to the public. This indicator measures the number of licensed health care facilities that track the volume and quality of outcomes and make that information available to the public.

Available Data or Recommended Data Source: Data for this indicator will be collected through a survey of licensed health care facilities in Maine.

49. Smoking Prevention for Teens

The percentage of youth who smoke and are counseled to quit by their primary care providers.

Importance and Rationale: Though tobacco consumption among Maine teens declined between 1997 and 1999, over 25% of our youth still smoke. The physical and financial costs of smoking are very high; smoking accounts for 1 in every 5 deaths in the United States, and over $50 billion per year in attributable medical costs. There is good evidence that supports the efficacy of providers' counseling their patients not to smoke, and the United States Preventive Health Task Force strongly recommends that physicians counsel all tobacco users to quit. This indicator measures the quality of preventive services provided to youth who smoke.

Available Data or Recommended Data Source: Data for this indicator will be measured through a survey of teenagers who smoke.

50. Over Utilization of Technology in the Emergency Department

The percentage of patients over the age of 16 who present ankle injuries at hospital Emergency Departments and receive X-Rays or other radiological technology to diagnose the injury.

Importance and Rationale: Over utilization of health care results in wasted health care expenditures. Studies have proven that assessment tests can be a reliable substitute for X-Rays when diagnosing certain ankle acute injuries. The evidence suggests that manual assessment tests should preclude the need to X-Ray in one-third of acute ankle injuries that present at the Emergency Department (Stiell, Ian G). This indicator represents over utilization of technology, a problem that has both quality and cost implications for the health care system.

Available Data or Recommended Data Source: Data for this indicator will be collected through an analysis of Medicaid, Medicare and commercial insurance claims.

51. Comprehensive Behavioral Health Treatment for Children

The percentage of children on psychotropic medications who are receiving therapy from a licensed behavioral health provider.

Importance and Rationale: The number of children being diagnosed and treated for behavioral health issues is rapidly increasing. Children whose needs are assessed to require medication treatment should also participate in psychosocial interventions, such as psychotherapy (American Academy of Child and Adolescent Psychiatry). This indicator reflects the health care system's ability to provide comprehensive, quality treatment to a vulnerable and increasingly large segment of the population.

Available Data or Recommended Data Source: Data for this indicator will be obtained through an analysis of Medicaid, Medicare & commercial claims

52. Quality of Medication Management

The percentage of primary care providers who prescribe medications for patients with mental health problems and consult with psychiatrists regarding the management of those medications.

Importance and Rationale: Primary care providers administer a great deal of mental health care for Maine people, particularly in rural parts of the state. State-of- the-art treatment for behavioral health problems is a vast and specialized field. General practioners' ability to provide clinically appropriate, high quality mental health treatment can be dependent upon their ability to consult with psychiatrists in a timely way. This indicator measures the extent to which primary care providers utilize psychiatric consultations in the treatment of their patients who have mental illness.

Available Data or Recommended Data Source: Data for this indicator will be collected through a survey of primary care providers.

53. Deaths Due to Medical Errors

Intra-operative or post-operative deaths in an ASA Class I and II patients per 1,000 surgeries.

Importance and Rationale: Deaths for ASA Class I and II patients are considered to be events that should rarely, if ever, occur. For example, if a healthy patient dies as a result of a tonsillectomy, it would be considered a Class I death. This indicator represents egregious inpatient medical errors in Maine.

Available Data or Recommended Data Source: Data for this indicator will be collected through the Department of Human Services, Bureau of Medical Services.

54. Avoidable Hospitalizations

The percentage of total hospital admissions for ambulatory care sensitive conditions in Maine.

Importance and Rationale: Many hospitalizations could be avoided with clinically appropriate disease management. Ambulatory sensitive conditions are those conditions that are less likely to require inpatient hospitalization with timely and appropriate disease management and primary care. The list of such conditions includes: diabetes, cellulitis, asthma, kidney/urinary tract infections, angina, dehydration, COPD, bacterial pneumonia, and CHF. This indicator reflects the effectiveness of preventive care and disease management for persons with ambulatory care sensitive conditions.

Available Data or Recommended Data Source: Data for this indicator will be collected through an analysis of Medicaid, Medicare and commercial insurance claims.

55. Asthma Management

The percentage of persons with persistent asthma who are being prescribed appropriate medications, as determined by the National Heart, Lung and Blood Institute.

Importance and Rationale: Maine has a higher rate of chronic respiratory disease in its adult population than the United States as a whole, with an estimated 12% of the population having a diagnosis, and one of the highest self-reported prevalence rates of asthma in the country (Healthy Maine 2010: Longer and Healthier Lives. p. 26). Clinical studies have proven that the adverse affects of asthma can be greatly controlled if evidence-based clinical guidelines are followed for prescribing asthma medications (Agency for Healthcare Research and Quality). This indicator measures the extent to which healthcare providers prescribe evidence-based drug therapy for their patients with asthma.

Available Data or Recommended Data Source: Data for this indicator will be collected through an analysis of Medicare, Medicaid and commercial insurance claims.

56. Comprehensive Diabetic Management

The percentage of persons with Type I and Type II diabetes, ages 18 through 75 years old, who were screened according to guidelines administered by the American Diabetes Association.

Importance and Rationale: Diabetes is a leading cause of preventable death in the United States, and complications that arise from diabetes are physically and financially costly to the health care system. It is estimated that 6.2% of the US population has diabetes, at an annual cost of $98 billion (American Diabetes Association). Appropriate preventive care can have a positive impact on the health status of persons diagnosed with diabetes. This indicator measures the extent to which primary care providers are following established, clinical guidelines for treating diabetes that are proven to greatly reduce complications resulting from the disease.

Available Data or Recommended Data Source: Data for this indicator will be collected through an analysis of Medicaid, Medicare and commercial insurance claims.

57. Quality of Clinical Information Systems

The percentage of primary care practices that utilize established registries of their diabetic patients.

Importance and Rationale: The incidence of diabetes, a disease that is often associated with obesity, is increasing at very high rate in Maine. The complications associated with untreated diabetes are physically and financially costly. Physicians who have established registries of their diabetic patients can more easily ensure that their patients receive disease-specific treatment, which leads to improved health outcomes and cost savings to the system. The MacColl Institute for HealthCare Innovation includes registries in its list of important clinical information systems (MacColl Institute for Healthcare Innovation). This indicator measures the number of primary care practices in Maine that utilize registries of their patients with diabetes.

Available Data or Recommended Data Source: Data for this indicator will be collected through a survey of primary care practices in Maine.

58. Potentially Inappropriate Prescriptions

The percentage of inappropriate medications prescribed for persons 65 years and older, as determined by the Beers list.

Importance and Rationale: Older people are the greatest consumers of prescription medications, and are also a physically vulnerable population. Inappropriate medications are those that carry a risk that outweighs the potential benefit for older people (Leatherman and McCarthy, Chartbook, p. 69). The Beers list provides well-documented criteria that can determine inappropriate medication prescribing for this population. This indicator reflects the extent to which providers adhere to prescribing guidelines specific to older persons.

Available Data or Recommended Data Source: Data for this indicator will be collected through an analysis of commercial insurance and Medicaid claims.

59. Quality of Behavioral Health Treatment for Children

The percentage of children aged six years and older who received outpatient behavioral health treatment within 30 days of being discharged from a hospitalization to treat a behavioral health problem.

Importance and Rationale: The percentage of children being treated for behavioral health disorders is on the rise. Children who are hospitalized for behavioral health problems should be discharged with specific plans for continuing their treatment in a less restrictive setting. High quality, comprehensive behavioral health treatment for children provides an immediate positive outcome, and can reduce the incidence and acuity of the disease in adulthood.

Available Data or Recommended Data Source: Data for this indicator will be collected from an analysis of Medicaid and commercial insurance claims.

60. Quality of Primary Care for Children

The percentage of patients under the age of 18 who are seen in a primary care practice and have a completed risk assessment tool in their medical records.

Importance and Rationale: There is a growing body of evidence that supports clear prevention guidelines for primary care providers to follow when conducting routine exams of their patients. The Institute for Clinical Systems Improvement has a set of guidelines and recommendations for providers to follow, based on the extensive work of the United States Preventive Health Task Force. Included in these guidelines is a series of routine, evidence-based health risk assessments. The ICSI identified the need for primary care providers to increase their use of these assessments for their patients who are under that age of 18. This indicator measures the extent to which primary care providers are following evidence-based risk assessment strategies for their patients who are under the age of 18. (ICSI Health Care Guideline, Preventive Services for Children and Adolescents, p. 9).

Available Data or Recommended Data Source: Data for this indicator will be collected through a survey of primary care providers in Maine.

61. Quality of Communication

The percentage of persons who report that their doctors or other health providers always or usually explain things in a way they understand.

Importance and Rationale: Patient satisfaction with health care delivery is an important quality indicator of the health care system. One component of patient satisfaction that is particularly important is the quality of communication between the patient and the provider. Good communication results in improved compliance with follow-up treatment instructions, which can greatly impact the outcome of a health care intervention. This measure reflects the extent to which patients understand the information being conveyed to them by health care providers.

Available Data or Recommended Data Source: Data for this indicator will be collected through a survey of health care patients in Maine.

62. Preventive Care Reminder Systems

The percentage of primary care practices that utilize established systems to remind patients of the need to schedule age and gender specific preventive services.

Importance and Rationale: Consumers' participation in routine preventive care results in better health status for patients and lower costs to the system. Evidence shows that systematic patient reminder systems are an effective means of increasing the rate of patient participation in preventive care (Szilagyi, P). Office-based systems that automatically remind patients to schedule routine health services provide a systemic mechanism for improving participation in preventive care.

Available Data or Recommended Data Source: Data for this indicator will be collected through a survey of primary care practices.

63. Availability of Information for Clinical Decision-Making

The percentage of health care providers who have access to a patient's entire medical record before making treatment decisions.

Importance and Rationale: The easy availability of patient records to providers can result in efficiencies that greatly reduce medical errors, reduce duplication of services and paperwork, and improve health outcomes. In its landmark 1999 report "To Err is Human: Building a Safer Health Care System," the Institute of Medicine noted that the complexity of patients being treated by multiple providers in different settings "none of whom has access to complete information" can result in poor treatment and errors (p. 1). This indicator measures the extent to which the health care system is responding to this problem by developing systems that allow for safe and confidentially appropriate access to patient medical records before making treatment decisions.

Available Data or Recommended Data Source: Data for this indicator will be collected through a survey of health care providers.

Works Cited

Agency for Health Research and Quality, "United States Preventive Health Task Force Clinical Guidelines." Online at: www.ahcpr.gov

Agency for Health Research and Quality, "Use of Appropriate Medications for People with Asthma." National Committee on Quality Assurance, Hedis: 2001, Vol. 2. Online at: http://www.ahrq.gov/chtoolbx/usemed.htm

American Academy of Child and Adolescent Psychiatry. "Prescribing Psychoactive Medications for Children and Adolescents." Policy Statement 41, Approved September 20, 2001. Online at: http://www.aacap.org/publications/policy/ps41.htm

American Diabetes Association. "Direct and Indirect Costs of Diabetes in the United States." American Diabetes Association website. Online at: www.diabetes.org/main/info/facts/facts_costs.jsp 12/18/02.

Bates DW, et al. "Impact of Computerized Physician Order Entry on Medication Error Prevention." JAMIA. 1999. 6. 313-21.

Bureau of Health, Maine Department of Human Services. HealthyMaine 2010: Longer and Healthier Lives. Primary Author and Editor: Dora Anne Mills. Augusta, Maine: December, 2002.

Bureau of Health, Maine Department of Human Services. HealthyMaine 2010: Opportunities for All. Primary Author and Editor: Dora Anne Mills. Augusta, Maine: December, 2002.

Bureau of Health, Maine Department of Human Services. Maine Health 2000: A Health Planning Resource. Augusta, Maine: 2000.

Centers for Disease Control, Atlanta Georgia. Website: www.cdc.gov

Centers for Disease Control and Prevention (CDC). *Behavioral Risk Factor Surveillance System Survey Questionnaire*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 1999, 2000, 2001, 2002. (BRFSS Survey). Online at: http://www.cdc.gov/brfss/pubrfdat.htm

Chiang, Lillian; University of California at Los Angeles School of Medicine. MSJAMA Online, Pulse-report. Vol 279 pp. 1036-1037, April 1, 1998.

Henry J. Kaiser Family Foundation, State Health Facts Online. Health Coverage and the Uninsured. Online at: www.statehealthfacts.kff.org 12/27/02.

Institute for Clinical Systems Improvement, Health Care Guidlelines. Bloomington, MN, 2002. Online at: www.icsi.org 12/27/02.

Institute of Medicine. To Err is Human: Building a Safer Health System. Molla S. Donaldson et al. ed. National Academy Press, Washington DC: 2000. Online at: http://www.nap.edu/catalog/9728.html

Leatherman, Sheila and Douglas McCarthy. Quality of Health Care in the United States: A Chartbook. New York: Commonwealth Fund, April, 2002.

MacColl Institute for Healthcare Innovation, Group Health Cooperative. Center for Health Studies, Seattle. 2000. Online at: www.centerforhealthstudies.org 12/27/02.

Maine Hospital Association, "Quarterly Financial and Statistical Report" 12 months ending 3/31/02.

Morgan, Kathleen O'Leary and Scott Morgan, Ed. Health Care State Rankings 2002. Morgan Quitno Press, Lawrence KS: 2002.

National Library of Medicine Website. Online at: http://hstat.nlm.nih.gov

State of Maine, Department of Labor, Bureau of Labor Statistics. Augusta, Maine.

Stiell, Ian G, et al. "Decision Rules for the Use of Radiography in Acute Ankle Injuries," JAMA, March 3, 1993 – Vol 269, No. 9.

Szilagyi, P, Vann J, Bordley C, Chelminski A, Kraus R, Margolis P, Rodewald L. Interventions Aimed at Improving Immunization Rates (Cochrane Review). In: *The Cochrane Library,* Issue 4 2002. Oxford: Update Software.

Contributors

Working Group: Cost
Michael Brannigan, Maine Hospital Association
Rebecca Colwell, HealthReach Network
Mark J. Cook, L. L. Bean, Inc.
Eugene Gessow, Maine Bureau of Medical Services
Mark Granzier, Aetna
Frank Johnson, Maine Div. of Employee Health & Benefits
Warren Kessler, Health Care Consultant
Kathie Leonard, Auburn Manufacturing, Inc.
S. Catherine Longley, Maine Dept. of Professional & Financial Regulation
Christopher O'Neil, Maine House District #15 (Group Leader)
Brian Pearson, Maine Health Information Center
Roderick Prior, MD, Franklin Community Health Network
Jane Saxl, Former State Representative
Ellen Jane Schneiter, Maine Medical Assessment Foundation
Erik Steele, DO, Eastern Maine Medical Center
Allison Volchok, Muskie School of Public Service (Staff)

Working Group: Participation
Richard Batt, Franklin Community Health Network
Sandra Bernstein, MSAD #27/MSAD #10 (Group Leader)
Nona O. Boyink, HealthReach Network
Paul Campbell, Maine Center for Public Health
Kevin Concannon, Maine Dept. of Human Services
Jeff Dow, DMD
Lynn Duby, Maine Dept. of Behavioral & Developmental Services
Laura Fortman, Maine Women's Policy Center
Nate Nickerson, City of Portland
Alan M. Prysunka, Maine Health Data Organization
Connie Sandstrom, Aroostook County Action Program
Meredith Tipton, University of New England
Steve Walsh, HealthReach Community Health Centers
Richard White, CIGNA Healthcare of Maine
Christina Booth, Muskie School of Public Service (Staff)

Working Group: Quality
Karen Bell, MD, Anthem Blue Cross & Blue Shield
John Benoit, Employee Benefits Solutions (Group Leader)
Alice M. Chapin, Maine Health Information Center
John Fields, Central Maine Medical Center
Holly Gartmayer, Harrington Family Health Center
Brenda Harvey, Maine Dept. of Behavioral & Developmental Services
David Howes, MD, Martin's Point Health
Constance Jordan, Maine Nurse Practioner Assoc.
Douglas Libby, Maine Health Management Coalition
John Orestis, North Country Associates
Kathleen Stuchiner, Maine Hospital Association
Karl Turner, Maine Senate District #26
W. Godfrey Wood, Gr. Portland Chamber of Commerce
Carlotta Drane, Muskie School of Public Service (Staff)

Expert Presenters:
Blue Hill Hospital, Bruce Cummings, Dr. Dan Rissi
Andrew Coburn, Ph.D., Muskie School of Public Service
Kevin Concannon, Maine Dept. of Human Services
Joseph Ditre, Consumers for Affordable Health Care
Maggie Fortin, Medicare Expert
Peter Hayes, Hannaford Bros. Co.
Erin Hoeflinger, Anthem Blue Cross & Blue Shield
David Howes, MD, Martin's Point Health Care
Norm Ledwin, Eastern Maine Health Care
S. Catherine Longley, Maine Dept. of Professional & Financial Regulation
Maine Health Information Center - James Harnar, Suanne Singer, Brian Pearson
Dora Anne Mills, MD, Maine Bureau of Health
Trish Riley, National Academy of State Health Policy
David Simmons, MD, Calais
Robert Woodbury, Ph.D., Year 2000 Blue Ribbon Commission on Health Care

Written Comments Received From:
American Nurses Association of Maine
Norman Anderson, American Lung Association
Dr. Auciello, MaineGeneral Hospital
Bruce Bates, DO
Rebecca Colwell, HealthReach Network
Jeff Dow, DMD
Lynn Duby, Maine Dept. of Behavioral & Developmental Services
James Gagnon, MD, American Society of Anesthesiologists
Holly Gartmayer, Harrington Family Health Center
Christine Gianopoulos, Maine Bur. of Elder & Adult Services
Lani Graham, MD, Maine Bureau of Health
Gale Johnsen, Ph.D., Nurse Practitioner
Victoria Kuhn, Anthem Blue Cross & Blue Shield
Lisa Letourneau, MD, MaineHealth
Douglas Libby, Maine Health Management Coalition
Rita Molloy, Maine Medical Center
Anna Maschino on behalf of the Maine Chapter of American College of Emergency Physicians
Larry Mutty, MD, Psychiatrist
Susan Payne, Muskie School of Public Service
Kathryn Pears, Maine Alzheimers Association
Brian Pearson, Maine Health Information Center
Alan Prysunka, Maine Health Data Organization
Barbara Reinertsen, United Way Midcoast Chapter
Burtt Richardson, MD
Trish Riley, National Academy for State Health Policy
Michael Roy, MD, Maine Medical Center
George Shaler, Muskie School of Public Service
Edith Smith on behalf of the Maine Hospice Council
Erik Steele, DO, Eastern Maine Medical Center
Marie Syphers, United Way Midcoast Chapter
Meredith Tipton, University of New England
Richard White, CIGNA Healthcare of Maine
Wendy Wolf, MD, Maine Health Access Foundation

Consultants:
Muskie School of Public Service:
Gino Nalli, Christina Booth, Maureen Booth, Carlotta Drane, Julie Fralich, Allison Volchok, Julia Sells

Lead Staff:
Maine Development Foundation:
Henry Bourgeois, Katie Fullam Harris