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Using System Level Quality Measures to Improve Home and Community-based Services in Maine

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Executive Summary

The purpose of this project was to identify a set of quality measures that could be used to profile the performance of Maine's home and community based care (HCBS) system. The long term care system in Maine has been significantly restructured in the last five years. Funding for home care services has more than doubled and now represents approximately 20% of Medicaid and State funding for LTC. This has led to increased interest in assuring the quality of services that are being provided and developing ways to improve the delivery of services and outcomes for consumers.

Using assessment data from the Maine MECARE system, residential care facilities and nursing facilities, an initial set of potential indicators was examined. Key stakeholders identified priority areas for quality improvement. The Bureau of Elder and Adult Services identified, prevalence of falls, as the first area to initiate a quality improvement activity. The Bureau of Elder and Adult Services convened a multi-disciplinary group of professionals in Maine to learn more about existing fall evaluation and prevention programs. Using practice guidelines published in the Annals of Internal Medicine, the Bureau is currently examining a number of fall intervention and prevention strategies.

This project represented a first step in using long term care assessment data to improve the quality of home and community based services in Maine. Recommendations for future work include:

1. Continue to build support for quality measures through the involvement of key opinion leaders and stakeholder groups. Identify a short list of quality indicators that represent multiple dimensions of quality.

2. Identify at least one chronic condition for a quality improvement activity.

3. Develop, pilot and make available consumer friendly reports to the public on Maine's home and community based care system.

4. Develop a plan to maintain a sustainable and qualified workforce of people who provide home and community based services.

I. Using System Level Quality Measures to Improve Maine's Home & Community Based Care System

A. Goals and Objectives

The purpose of this project was to identify a set of quality measures that could be used to profile the performance of Maine's home and community based care (HCBS) system. The long term care system in Maine has been significantly restructured in the last five years. Funding for home care services has more than doubled and now represents approximately 20% of Medicaid and State funding for LTC. This has led to increased interest in assuring the value or quality of services that are being provided and developing ways to improve the delivery of services and outcomes for consumers.

This prompted the Bureau of Elder and Adult Services to pose the very broad policy question**: *What is the quality of Maine's home and community based care system?*** This question can then be posed as a series of more discrete policy and research questions, namely:

How do define quality?
How do we measure it?
How do we evaluate it?
How do we improve it?

While the State of Maine has experience with the use of quality indicators for nursing facilities and residential care facilities, the development of quality measures for home and community based services (HCBS) presents a unique set of challenges. Unlike the quality indicators for nursing and residential care facilities, the goal of this project was to develop **system level** measures rather than **provider level** indicators. Such measures could then be used to supplement and/or focus the State's quality management activities, to develop and prioritize educational or other intervention programs and to design system enhancements that would improve the quality of care and outcomes for consumers.

Quality indicators are often used to meet a variety of objectives for various audiences and end users. At the system level, they can be used to support state-level quality oversight and management systems, to focus and provide measures for quality improvement activities and to inform consumer choice and decision making. At the provider level, quality indicators can be used to target areas for education, to identify areas for focused study or improvement and to provide comparisons among peers. The quality indicators for nursing facilities and residential care facilities, for example, have been used in Maine by regulatory agencies to target facilities or cases for review; by providers for education and quality improvement and by consumers to inform choice and decision making.

Section I of this report provides a background on the significance of developing quality measures from the national and state perspective, discusses the gap in knowledge regarding the quality of HCBS services, and outlines the challenges associated with developing measures and designing quality improvement programs. Section II of this report covers the steps involved in identifying, prioritizing and selecting an initial set of measures and developing a plan for quality improvement based on the measures. Section III includes recommendations for future work.

B. Significance

1. National Policy Imperative – Growth of Home and Community Based Services

The quantity and diversity of health-related and other supportive services delivered in the home has increased dramatically over the past decade. The growth of home care has been fueled by abbreviated hospital stays, an expansion of services and procedures performed on an out-patient basis, advances in medical technology, and a desire to provide services in the most cost-effective manner possible. Perhaps most importantly, individuals needing care overwhelmingly prefer to remain in their homes and have lobbied for alternatives to institutional care.

The net result has been a doubling of public funding for home care in the past 10 years (Lutzky, Alecxih, Duffy, & Neill, 2000). Specifically, expenditures in Medicaid 1915(c) home and community based waiver programs grew from $3.8 million in 1982 to more than $8.1 billion in 1997, making up more than 14.4% of Medicaid long term care expenditures (Miller, Ramsland & Harrington, 1999). The 1915(c) waiver program has come to dominate Medicaid home and community based spending, with such programs making up almost two-thirds of state home care funding in 1999 (Lutzky et al., 2000).

Home and community based services are expected to expand even further, given the Supreme Court's 1999 Olmstead decision. It requires states to develop comprehensive plans "to strengthen community service systems and serve people with disabilities in the most integrated setting appropriate to their needs" (HCFA letter dated January 14, 2000, to all Medicaid directors.) The major premise of Olmstead is that failing to serve persons with disabilities in the most integrated setting appropriate to their needs is a form of discrimination under the Adults with Disabilities Act.

2. Maine Policy Imperative – Growth of Home and Community Based Services

Maine's home and community based service system has been transformed in the last 5 years. Almost one third of Maine's Medicaid expenditures are spent on long term care services and Maine ranks tenth in the nation in per capita long term care spending. Since 1994, Maine has implemented a number of major policy initiatives focused on reducing reliance on nursing home care and increasing the availability and accessibility of home and community based services. The success of these initiatives is reflected in the increase in the number of people receiving home care services, an increase in the use of residential care facilities and a reduced reliance on nursing facility care.

From 1995 to 2000, State and Medicaid spending for home care services more than doubled from $28.4 million to $65.9 million. The number of people receiving services in the home also more than doubled from 7,864 people to 13,944. During the same time period, payments to nursing facilities decreased from $239.6 million to $200.5 million (Maine Bureau of Elder and Adult Services, 2000).

Like other states and the nation, Maine faces many challenges associated with the changing demographics of its population. In 1999, about 14 percent of the population in Maine was over the age of 65 (compared with 12.7% nationally) and this is expected to increase by almost 50% in the next 20 years (AARP Public Policy Institute, 2000). The increase in the number of older adults will continue to place demands on Maine's health care system, its home and community care system, and families.

3. Quality Gap --- Home and Community Based Care

The quality of the long term care system has been the focus of concern for many years. Most of the current research has focused on the quality in facility-based long term care – nursing facilities and residential care/assisted living facilities. Less is known about the quality of home health, home care and personal care services. Research in this area has identified problems related to the lack of experience and credentials of administrators and staff in some agencies, inadequate processes of care (including patient teaching and follow-up) and the amount and appropriateness of care. The shortage of direct care workers is a major barrier to the availability and accessibility of home care and personal care services. In general, the variability in funding, service options and data have made it difficult to evaluate the quality of home and community based care (Institute of Medicine [IOM], 2001c).

Home and community based services include medical care services, health care services, personal care services, social services and are often complemented by significant involvement of family and friends. Defining and evaluating quality for these many types of services includes examining the components of the care processes, the credentials and training of the professionals and nonprofessional home care workers, the stability of the organizations providing the services and consumer satisfaction with these processes. Cutting across these dimensions are issues of quality of life, service system capacity, cost effectiveness and equity.

Furthermore, consumers, caregivers, providers and purchasers all have differing views of what constitutes quality and place different values and weights on those views (Kane, R, Kane, R, Illston, L, & Eustis, N, 1994). A recent report on Quality in Long Term Care made a number of recommendations for improvement in the nation's long term care system.

Box 1.0 Recommendations from The IOM Report
Improving the Quality of Long Term Care (IOM, 2001c)

- **Access to Appropriate Services**
  - More research on the impact of consumer centered and consumer-directed services on quality
- **Quality Assurance through External Oversight**
  - Further research and development of quality assessment instruments for different long term care settings
  - Increased information for consumers
  - Appropriate standards and oversight for all settings where people receive personal and nursing care
- **Strengthening the Workforce**
  - Improved nurse staffing in nursing homes
  - Education and training
  - Improved work environment for long term care workers
- **Building organizational capacity to manage and translate knowledge into practice**
- **Reimbursing to improve the quality of care**

4. Challenges

Consumers, payers and regulators alike struggle with how to measure and assure the quality of home care services. Both public and private payers want to know that the services they are buying are effective (i.e., yielding improved health, function and quality of life for clients). Consumers and their advocates want assurances that the care they receive will address their goals, maintain or improve their well-being, and not subject them to abuse. They may also want quality-related information to assist with their health-care decision-making and selection of service providers. Home care agencies seek tools with which to measure their performance, and provide a benchmark for quality improvement.

Yet, the home environment differs from other types of health care in a number of ways that complicate quality measurement. The home environment is conceptually and operationally much more difficult than other arenas in which quality indicators have already been developed or successfully implemented. There are several reasons for this:

- **Diversity of people receiving services at home** People who live at home and receive some kind of long term care services have very differing levels of disability, chronic illness and needs. Slightly over half of all HCBC service users are elderly (IOM, 1996). Other people receiving HCBS waiver services include persons with mental retardation and developmental disabilities, children with special health needs, adults and children with AIDS, and people with traumatic brain injuries. This diversity of population groups and needs requires the construction of indicators that can be adjusted for differences in risk and conditions.

- **Lack of uniform HCBS assessment or eligibility instrument** There is currently no requirement that states use a uniform assessment instrument for determining program eligibility, assessing care or service needs or developing service plans. Each state uses its own assessment instrument; few states have automated such information or data systems and the ability to construct indicators from assessment level data is in its infancy. The lack of uniform assessment instruments limits the ability to develop system wide quality measures.

- **Diffused locus of responsibility** Most HCBC workers who provide direct care are unskilled, with limited education or training. Supervision may come directly from the client or through case managers. Nurses or social workers, often in the role of case managers, may oversee treatment plans but provide only limited direct care themselves. Service quality in this context is highly dependent on the respectfulness, reliability, trustworthiness, and competence of the worker (Kinney ED, Freedman, JA and Cook, CAL, 1994).

- **Importance of consumer control, choice and risk taking.** Consumers value the ability to make choices and maintain control of their life and the care and services they receive. This increased demand for consumer direction and choice reduces the ability to rely on traditional oversight mechanisms.

- **Workforce Issues** Long term care providers report unprecedented vacancies and turnover rates for paraprofessional workers. Policymakers and others acknowledge the labor shortage crisis and the potentially negative consequences for quality of care and quality of life (Stone & Weiner, 2001). Failure to address the worker shortage issues will undermine other attempts to improve quality in home and community based services.

II. Approach

A. Background

Two recent reports by the Institute of Medicine provide a timely and helpful framework for approaching the development and use of system level quality measures for Maine's home and community based care system. The Institute of Medicine recently issued a call for action to close the quality gap in the American health care system. In its report, Crossing the Quality Chasm, (IOM, 2001a), the Committee on the Quality of Health Care in America concluded that major restructuring is needed in the organization and delivery of health care in the United States. To this end, the Committee identified six specific aims for improvement and made the following recommendation:

> **All health care organizations, professional groups and private and public purchasers should pursue six major aims; specifically, health care should be safe, effective, patient centered, timely, efficient and equitable.**

In a separate report, Envisioning the National Health Care Quality Report (IOM, 2001b), the Institute of Medicine set forth a vision for a national health care quality report that would focus on the performance of the health care delivery system as a whole rather than care delivered in specific settings or by specific providers. As envisioned, the Quality Report would be flexible enough to allow for reports on quality of care received at a state level, by people with specific health problems or conditions and to account for variations in quality of care based on personal characteristics. Of particular interest to this project was the fact that both reports identify chronic conditions as the leading cause of illness, disability, and death and recommend that efforts to develop quality measures and quality improvement programs start with chronic conditions.

The process for defining a vision for a National Quality Report includes the development of a conceptual framework, the selection of a set of quality measures, and the development of audience centered reports.

This report follows these suggested steps in discussing the activities undertaken in Maine to develop and present quality measures for improving the HCBS system. This section includes

- A discussion of a conceptual framework – its importance and usefulness
- Identification of potential measures – their purpose and use
- Selection of measures -- selection criteria and prioritization
- Next Steps --

B. Conceptual Framework

It is helpful to have a conceptual framework for developing quality measures to assure that all the dimensions and components of quality are potentially represented in any set of quality indicators. The classic conceptual model for quality was developed by Donabedian Donabedian 1980) and uses structure, process and outcome as the major dimensions of quality. Structural quality refers to health care organization characteristics, provider characteristics and population characteristics. Process quality refers to what occurs in the interaction between a patient and a provider. This is generally divided into technical

excellence and interpersonal excellence. Outcomes are the results of efforts to prevent, diagnose and treat various conditions (McGlynn & Brook, 2001). Within this broad framework, others have identified other important goals or themes of quality for home and community based services. Some of the goals identified as important in a series of focus groups with stakeholders included freedom from exploitation and abuse, satisfaction with care, physical safety, affordability, and maintenance or improvement of physical functioning. Other important themes included interpersonal component of home care, normalization, balancing quality of life with safety, flexible, negotiated care plans, affordability, appropriateness and accountability (Kane, Kane, Illston & Eustis, 1994).

More recently, the Institute of Medicine proposed a conceptual framework for a National Health Care Quality Report that addresses two dimensions: (1) components of health care quality and (2) consumer perspectives on health care needs. Components of health care quality include *safety, effectiveness, patient centeredness and timeliness*. Consumer perspectives on health care needs reflect changing consumer needs for care over the life cycle and include *staying healthy, getting better, living with illness or disability and coping with the end of life.* Quality can be examined along both dimensions for health care in general or for specific conditions. Equity in health care quality is considered a cross cutting issue and the framework provides for this through the comparison of quality care across populations, geographic areas and by conditions. (IOM, 2001b)

The Institute of Medicine uses a matrix as a way to visualize the framework and how various aspects of the framework work together.

Table 1.0 Framework for a National Health Care Quality Report

CONSUMER PERSPECTIVE ON HEALTH CARE NEEDS	Components of Health Care Quality			
	Safety	Effectiveness	Patient Centeredness	Timeliness
Staying Healthy				
Getting Better				
Living with illness or disability				
Coping with end of life				

The purpose of a framework is to provide a tool for organizing the way one thinks about health care quality and provides a foundation for quality measurement, data collection, and reporting. A framework provides durable dimensions and categories of measurement that outlast any specific measurements. It provides a way of specifying what should be measured while allowing variation in how it is measured over time (IOM, 2001b).

For purposes of this project, we did not attempt to develop a specific conceptual framework or dimensions of quality for home and community based services. In the future, however, it may be useful to re-examine the set of indicators that have been identified for potential use and compare them with this framework to see how comprehensive and balanced the set of measures is.

C. Identifying Possible Measures

1. Purpose and Use of Measures

A number of sets of indicators have been developed to measure quality in long term care settings. These indicators have usually been developed for a particular audience for a specific use.

The main uses of quality indicators are

- **For quality improvement** – to identify best practices or areas for education improvement
- **For quality oversight or monitoring** – to select facilities or cases for review
- **For system level monitoring and evaluation** – to benchmark the performance of a service system or determine the impact of policies and programs
- **To inform consumer choice and decision making** –to compare provider performance

The following table provides a summary of some of the more commonly used measures and indicators. These include indicators developed for nursing facilities, a variety of indicators and measures developed for home health and home care settings and system level indicators developed for use with the developmental disability system.

A more complete list of domains and actual indicators is included in the Appendices.

Table 2.0 Examples of Sets of Quality Measures for Long Term Care and Home and Community Based-Care Systems

Appendix	Indicator Set	Purpose	Audience	Data Source	Use
	Nursing Facility Indicators				
A	Quality Indicators for Nursing Facilities	To select facilities/cases for review For quality improvement To Inform decision making	▪ State survey agencies ▪ Providers ▪ General Public	MDS 2.0	National (required by CMS)
	Home Care Indicators				
B	OASIS Adverse Event and Outcome-Based Quality Improvement Reports (OBQI)	For internal quality improvement for agencies (initially)	▪ Home Health Agencies	OASIS data set for Medicare home health services	National
C	InterRAI MDS-HC Quality Indicators for Home Care	For quality improvement for agencies (initially)	▪ State Medicaid and Aging agencies ▪ Provider agencies	MDS-HC	Selected states
D	CHSRA Quality Indicators for Home Care	For quality improvement for agencies	▪ Provider agencies	OASIS data Or MDS-HC	Selected agencies –for ORYX
E	VA Quality Measures for Home Care Programs	Quality Assurance	▪ Veteran's Administration	Sample of Medical records	VA system
F	ORYX Home Care Measures	To target accreditation surveys For performance monitoring For quality improvement	▪ Hospital ▪ Long Term Care ▪ Home Care ▪ Behavioral health care programs	Various data sets	JCAHO organizations
	Home Care Satisfaction/Consumer Outcomes				
G	Satisfaction with Home Care (Developed by Scott Geron et al.)	Measure client satisfaction with home care use	▪ State agencies ▪ Provider agencies	Interview questionnaire	Selected states and programs
H	Waiver Consumer Experience Survey (MEDSTAT)	Measure consumer experience with services	▪ State Waiver agencies	Interview Questionnaire	In testing in selected states
I	Wisconsin Family Care and Community Options –Consumer Outcomes	Measure consumer outcomes	▪ Family Care and Community Options –Waiver Programs	Survey/ Interview	Wisconsin
	Other				
J	Core Indicators For Developmental Disabilities	To benchmark performance of the service system	▪ State DD Departments	Consumer/ Family Surveys State-level data	In use by selected states
K	MaineNET[1] Quality Indicators	To improve the quality of care to MaineNET members	▪ MaineNET providers	Medicare/Medicaid claims; Maine pharmacy claims	In MaineNET demonstration

[1] MaineNET is a managed fee-for-service demonstration for Older Adults and People with Disabilities in certain regions of Maine.

Many of the sets of indicators outlined above have been developed to measure quality at the provider or agency level. Only a few of the measures are used to benchmark system level performance. One of the major barriers to the use and development of indicators for Medicaid home and community based services is the lack of uniform assessment information at the state level for people using home and community-based services under Medicaid and Medicare.

2. Data Sources

For most states, statewide, reliable data for use in the development of quality indicators is unavailable or difficult to obtain. The following is a review of potential data sources available to states and to Maine in particular.

Assessment Data: While the development of system level quality indicators for home and community based services may seem like a daunting task, Maine has a number of advantages that other states do not. First and foremost, Maine has a uniform database of consumer level assessment information (through its MECARE System) that is available on every person seeking long term care services in the state. This includes information such as functional status including ADLs and IADLs, cognition, mood and depression, behavior, diagnosis, continence as well as demographic and family support information. Moreover, this database is captured at the state level – not at the provider level --- making it more amenable to system level analysis. This data is also available on a timely basis in a statewide database.

Claims Data: Other possible data sources include Medicaid and Medicare claims data and Medicaid pharmacy data. These data are most useful in determining utilization rates, diagnoses and medication use.

OASIS Data: Medicare requires the use of the OASIS[2] assessment instrument for Medicare certified home health agencies. This information is available on an agency specific basis and in the future will be used in conjunction with the Medicare certification process. However, the data is not available at this time, to examine statewide trends or for private pay beneficiaries who are receiving home health services.

Survey and Interview Data: Information on consumer choice, control, respect, dignity and other areas of interest to consumers will most likely be captured through consumer surveys or interviews. A number of surveys have been developed (Geron, S, Smith, K, Tennstedt, S, et al., 2000) or are being developed (by the MEDSTAT Group) to capture consumer experience with care.

3. Comparisons of Consumer Characteristics Across Settings

The State of Maine is fortunate in that it has assessment level data across three sectors of its long term care system – nursing facilities, residential care facilities and for people seeking long term care services at home. The elements of the three databases include common items, definitions and time frames for the large majority of data items. This provides an opportunity to profile some of the demographic and other characteristics of people across the long term care system in Maine.

[2] Outcome and Assessment Information Set

Table 3.0 Demographic Characteristics Across Long Term Care Settings in Maine [3] Year Ending June 2000

	Home Care[4] N=6,483	Residential Care[5] N=4,244	Nursing Facility[6] N=17,836
	Percent and (Mean)	Percent and (Mean)	Percent and (Mean)
Age			
Under 60	18.67	8.29	5.60
60-64	5.11	3.56	2.77
65-74	18.71	10.93	15.27
75-84	32.08	28.22	35.29
85+	25.44	48.64	41.08
Ave. Age	(73.07)	(80.69)	(80.39)
Gender			
Male	29.51	29.42	31.51
Female	70.49	68.87	68.49
Marital Status			
Never Married	10.15	20.17	11.20
Married	27.44	9.94	26.05
Widowed/Separated/ Divorced	62.41	69.81	62.74

While most of the quality indicators that have been developed are not disease specific, the Institute of Medicine recommends starting with the most common chronic diseases. It is therefore instructive to examine the prevalence of the leading diagnoses by long term care setting.

Table 4.0 Common Diagnoses Across Long Term Care Settings Year Ending June 2000

Diagnosis	Home Care N=6,483	Residential Care N=4,244	Nursing Facility N=17,836
	Percent	Percent	Percent
Any Psychiatric Diagnosis	37.41	45.97	32.29
Diabetes	28.27	20.64	24.10
Alzheimer's /other dementia	15.38	37.96	38.81
Arthritis	50.87	20.97	25.41
Osteoporosis	17.51	13.43	15.50
Congestive Heart Failure	22.95	16.16	22.47
Peripheral Vascular Disease	13.20	6.81	9.65
Cancer	11.55	7.23	13.71
Parkinson's	4.06	3.58	5.53
Emphysema	20.02	17.88	20.83
HIV	.08	.09	.06
Hypertension	49.64	43.52	46.37

[3] The percentages in this table were computed using the most current assessment completed on a person in the 12 month period ending June 2000. The "N" reported here is not the number of people in the particular setting at a point in time but the number of people over the 12 month period. Because of the high volume of Medicare short stays in the nursing facilities, the "N" for nursing facilities is significantly higher than the number of people in Maine nursing facilities at a point in time.

[4] From the MECARE data – for people accessing HCBS services

[5] From the Maine Minimu m Data Set for Residential Care Facilities (MDS-RCA) for Level II Facilities

[6] From the Minimum Data Set for Nursing Facilities that are cost reimbursed by Medicaid

Table 5.0 Comparison Across Long Term Care Settings
Year Ending June 2000

	Home Care (N=6,483)	Residential Care (N=4,244)	Nursing Facility (N=17,836)
	Mean	Mean	Mean
Ave. Age	73.07	80.69	80.39
Ave. ADL Score[7]	7.49	3.26	14.33
Ave. No. of Medications	5.42	7.73	9.50
Ave. CPS Score	1.58	1.90	2.39

4. Strengths and Weaknesses of Comparative Data

Analyzing and comparing the characteristics of people in different long term care settings is intuitively appealing. However it is important to approach such comparisons with some caution. While the comparisons provide a way to profile demographic and clinical characteristics, the measures in one setting do not represent benchmarks or standards for another setting. At a minimum, they provide a useful baseline picture for purposes of developing policies, monitoring improvements and setting priorities. They also provide descriptive information on the types of populations served by the service system which is helpful for planning purposes.

In addition, while the assessment instruments have many common elements and definitions, the differences in settings may influence some of the potential calculations. For example, the interval between assessments is different in each of the three settings above. For people in nursing facilities, assessments are completed upon admission, quarterly, annually and when there is a significant change. Medicare assessments have a more frequent assessment schedule in the first 90 days. In residential care facilities, assessments are completed upon admission, every 6 months and when there is a significant change. In the MECARE system, re-assessments are completed based on the schedule developed during the assessment process, depending on a person's needs. Thus, examining, for example, changes in ADL performance, or improvements or declines in conditions are problematic because the timeframes are not comparable.

Nevertheless comparing quality indicators across settings provides a useful starting point for identifying and prioritizing possible HCBS measures.

[7] Ave. ADL Score for bed mobility, transfer, toileting, eating, personal hygiene and dressing

D. Prioritizing Quality Measures

In order to build support for this project and to focus the scope of the project, the Bureau of Elder and Adult Services started by asking key informants and opinion leaders to identify the five areas of quality that were most important from their perspective. Members of four regional Quality Assurance Review Committees (QARCs) and members of Maine's Long Term Care Steering Committee were asked to rank the top 5 areas of quality out of a list of 9 possible areas. The results of this survey are below:

Table 6.0 Prioritizing Quality Areas

Rank	Quality Domains	Count
1	Medications	103
2	Safety	70
3	ADLs	67
4	Falls and Fractures	63
5	Skin Integrity	45
5	Nutrition	45
5	Cognitive Impairment	45
6	ER/Hospital/NF use	39
7	Mood/Depression	36
8	Behavior problems	24
9	Communication Difficulties	12

Using assessment data from MECARE, residential care facilities and nursing facilities, the prevalence of key indicators in the top domain areas identified above were examined.

Table 7.0 Clinical Profiles Across LTC Settings
Year Ending June 2000

Clinical Profiles	Home Care N=6483	Residential Care N=4,244	Nursing Facility N=17,836
	Percent	Percent	Percent
Medication Use			
0 meds	2.04	2.00	.58
1-4 meds	40.03	20.57	11.50
5-8 meds	42.79	31.09	31.98
9+ meds	15.15	38.83	55.94
Safety			
Fractures	3.87	3.16	10.70
Falls			
Falls –last 180 days	48.20	31.95	38.44
ADLS			
Limited/extensive assist. in late loss ADLs[8]	6.42	.01	32.80
Limited/extensive assist. in 2 early loss ADLs[9]	36.28	10.8	65.70
Skin Integrity			
Presence of ulcers –due to any cause	3.55	3.73	15.09

[8] Late loss ADLs including bed mobility, transfer, toileting, eating.
[9] Early loss ADLs including personal hygiene and dressing.

The Bureau of Elder and Adult Services wanted to focus the scope of this activity and to select measures where it was possible to identify an intervention strategy and action plan that could improve the quality of care provided to people receiving services in the community. This information was useful in selecting one indicator that could be used as a place to initiate a quality improvement activity.

Although the use of multiple medications was the top rated area for quality, it presented a number of difficulties as an indicator for initial review and use. First, the medication data in the MECARE database is not complete and comprehensive. While it is possible to count the number of medications, it is more difficult to identify possible poly-pharmacy effects and to identify potentially adverse drug interactions. Although the use of multiple medications is a huge issue for many people receiving services in the home, prescription of medicines is in the control of the physician and not the HCBS agencies that are accountable to the Bureau of Elder and Adult Services. In addition, Bureau staff thought it was more appropriate and effective to examine use of multiple medications as a risk factor or trigger for other conditions.

Safety and ADLs were the next highest areas of quality concern. In the safety domain, the percentage of people with fractures was low and thus the potential for significant impact was marginal. The ADL measure was thought to be an item that could be examined in relation to a particular condition rather than as a quality indicator per se.

Box 2.0 Criteria for Measure Selection

Importance of what is being considered

- What is the impact on health associated with the problem?
- Are policy makers and consumers concerned about this problem?
- Can the health care system meaningfully address the problem?

1. Scientific soundness

- Is the measure valid and reliable?
- Is there scientific evidence to support the measure?

2. Feasibility

- Is the measure in use?
- Is data available?
- What is the cost of data collection?
- Can the measure be used to compare different groups?

(IOM, 2001b)

E. Selection of a Measure -- Prevalence of Falls

The Bureau of Elder and Adult Services decided to select prevalence of falls as the first measure for which to develop a focused plan for quality improvement. The prevalence of falls fit a number of the criteria that are recommended for selecting indicators. First of all it is an issue that has implications for quality of life, quality of care and cost of care. In the

U.S., one of every three people age 65 and older falls each year (Tinetti, 1988; Sattin, 1992) Older adults are hospitalized for fall-related injuries five times more often than they are for injuries from other causes (Alexander, Rivera and Wolf, 1992). Of those who fall, 20-30% suffer moderate to severe injuries that reduce mobility and independence and increase the risk of premature death (Alexander et al., 1992).

In analyzing MECARE data, we found that 48% of those seeking long term care services in the home in Maine had fallen in the last six months. This was compared with 32% of the people in residential care facilities and 38% of people in nursing facilities.

Falls were also a problem identified as a concern of public health officials. At the same time that the Bureau of Elder and Adult Services was reviewing information on possible quality indicators for people receiving services in the home, the Bureau of Health released its report Healthy Maine 2000: A Decade in Review. One of the areas highlighted in this report was the rate of hospitalizations for nonfatal injuries in Maine. According to the report, "falls among the elderly are the leading cause of injury hospitalization in Maine. Although the main focus of statewide prevention efforts is on children and young adults, the magnitude of the problem confronting older adults warrants attention" (Bureau of Health, Maine Department of Human Services, 2000).

The significance and seriousness of falls is also highlighted in a recent special report issued by the American Geriatrics Society (JAGS, 2001). In its Guidelines for the Prevention of Falls in Older Persons, it is noted that falls are among the most common and serious problems facing elderly persons. Falling is associated with considerable mortality, morbidity, reduced functioning and premature nursing home admissions. Both the incidence of falls and the severity of fall-related complications rise steadily after age 60. The propensity for fall-related injury in older adults stems from a high prevalence of co-morbid conditions (e.g. osteoporosis) and age-related physiological decline that make a relatively mild fall potentially dangerous. Approximately 5% of older people who fall require hospitalization. (JAGS, 2001).

Further analysis of MECARE data for people who fell in the last 6 months also showed great variability among the different HCBS programs. People who were receiving Medicaid Home Health Care had the lowest percentage of falls while people in the consumer directed Personal Care Assistance (PCA) program had the highest percentage of falls.

Table 8.0 Individuals who Fell by Authorized Program

Authorized Program	N	Percent
Medicaid Home Health	109	32.8
At Risk PDN	531	47.0
Elderly Waiver	549	50.7
Adults with Disability Waiver	166	44.3
Consumer Directed PCA	85	55.2
Home-Based Care	1495	50.1

1. Falls: Analysis of Risk Factors and Development of Action Plan

Many programs and interventions have been developed to reduce the rate of falls among frail elders. Through a review of the literature, the major risk factors associated with falls were identified. These risk factors include (American Geriatrics Society, 2001):

- Muscle weakness
- History of Falls
- Gait Deficit
- Balance Deficit
- Use of Assistive Devices
- Visual Deficit
- Arthritis
- Impaired ADL
- Depression
- Cognitive Impairment
- Age > 80

The risk of falling increases dramatically with the number of risk factors involved. Risk factors can be classified as either intrinsic (e.g. lower extremity weakness, poor grip strength, balance problems, functional and cognitive impairment, visual deficits) or extrinsic (e.g. polypharmacy and environmental factors) (American Geriatrics Society, 2001).

An analysis of Maine's MECARE data was also conducted to identify variables on the assessment instrument that showed a statistically significant difference between people who fell and those who did not fall. The results of the MECARE analysis identified risk factors that were similar to those found through the literature review.

Table 9.0 Risk Factors Associated with Falls (Past 180 Days)
MECARE Community Population (n=6,483)
Year Ending June 2000

Risk Factors (Recorded on Most Recent Assessment)	No Falls (n=3,358) Percent or Mean	Falls (N=3,125) Percent or Mean
Age (mean age)**	72.2	74.0
Female gender*	72.3	68.6
Lives alone	45.4	44.2
Danger of falling*	84.1	94.0
Musculoskeletal disabilities:		
Arthritis*	49.6	52.3
Hip fracture*	0.2	1.9
Osteoporosis	17.7	17.3
Pathological bone fracture	1.5	2.0
Neurological disabilities:		
Alzheimer's Disease*	4.8	6.1
Dementia other than Alzheimer's Disease*	9.1	11.2
Any dementia diagnosis*	13.8	17.1
CPS Score (mean score)**	1.5	1.7
Stroke	16.8	18.3
Multiple sclerosis	2.2	2.5
Paraplegia*	1.1	0.5
Quadraplegia*	0.9	0.3
Parkinson's disease*	2.6	5.6
Other medical:		
Medications (9 or more meds)	14.6	15.7
Foot problems or infections	25.0	26.9
Visual impairment*	43.3	49.3
Weight loss*	10.7	15.6
Hypotension	1.2	1.8
Substance abuse*	1.6	3.0
Diagnoses count (mean count)*	4.8	5.3
Mobility limitations:		
Bed mobility (needs assistance)	26.6	27.8
Transfer (needs assistance)*	36.7	45.1
Locomotion (needs assistance)*	31.2	39.9
Use of wheelchair*	20.3	13.4
Use of any assistive device*	62.0	71.7
Gait and balance (unsteady gait)*	61.1	84.4
Home Safety:		
Lighting	0.1	0.3
Flooring	0.7	1.0
Bathroom	0.4	0.5
Access to home*	1.9	2.6

*Chisquare < .05, **Ttest < .05

2. Developing A Plan -- Meeting of Experts

In addition to conducting an analysis of risk factors associated with falls, the Bureau of Elder and Adult Services convened a multi-disciplinary group of providers, educators and advocates to learn more about existing programs in Maine on falls and fall prevention. A number of programs and activities are currently in place in the State including education programs at a number of AAAs; PT, OT and home environmental assessments conducted by home health agencies; information brochures on home modifications and environmental assessments; weight training programs; and incontinence clinics.

One of the suggestions that came out of the meeting was to conduct a demonstration program in one area of the State. Another suggestion was to train the personal care or other workers who are in the home to assist with an exercise program.

The concept of a demonstration had particular appeal because it would provide an opportunity to develop and pilot some intervention strategies, work with providers who have an interest in the project, and target education programs.

The purpose of a demonstration would be to use the MECARE assessment data to identify people who are at risk of falling, to develop targeted interventions to address the risks, to provide education and training to support the interventions and to incorporate these risk triggers and interventions within the overall system of assessment and care coordination of Maine's home and community based care system.

The Annals of Internal Medicine recently published proposed steps to include as part of a fall evaluation program. These include (1) ask vulnerable elders at least annually about falls, (2) detect balance and gait problems (3) conduct a basic fall evaluation if a person has more than two falls or a fall with an injury requiring treatment in the last year, (4) conduct a gait-mobility evaluation, (5) prescribe exercise and assistive devices as appropriate (Rubenstein, Powers & MacLean, 2001). These steps provide useful guidelines for the development of a pilot fall prevention program. Furthermore, the MECARE assessment data can be used to support the administration, tracking and evaluation of any such program.

3. Next Steps

The Bureau of Elder and Adult Services is in the process of identifying the next steps for developing a fall prevention and reduction program in one area of the State. Some of the questions and issues that are still under consideration include:

- How can particular fall intervention strategies be most efficiently targeted to those who will benefit from the intervention?
- Who should be involved (consumer, family, home care nurses, personal care attendants, physicians, pharmacists) in the fall prevention interventions and how should they be involved?
- What are the effective elements of the various intervention programs and how should they paid for?
- How should the program be monitored or evaluated?

III. Summary and Recommendations

In this project, the Muskie School of Public Service worked with the Maine Bureau of Elder and Adult Services to identify potential quality measures to benchmark the performance of Maine's home and community based care system. As an initial step, the Bureau, with input from key stakeholders, identified one measure, Prevalence of Falls and is developing a plan for identifying people at risk, offering a number of interventions and monitoring progress.

The Institute of Medicine proposes that a focused set of measures be identified, using its framework of quality and patient centeredness. The set of measures should meet the requirements of balance, comprehensiveness and robustness. As further measures are identified, the following criteria are helpful tips for defining a set of measures.

Toward an Ideal Measure Set

- An external body provides counsel on measure selection, updates and report production
- The individual measures and measure set meet the specified criteria
- The data set is based on a comprehensive approach to measurement rather than on a small number of leading indicators
- The measure set includes a balanced mix of process and outcome measures of quality of care
- Summary measures of the components of quality or health care needs are included when appropriate.

(IOM, 2001b)

From this project, we learned that it is possible to develop system level quality measures using Maine's MECARE assessment database. Other futures sources of data include consumer surveys and claims data. Information from these sources will provide opportunities to expand the number of dimensions included in a set of measures and incorporate additional consumer oriented information. Other areas for future consideration include some of the measures included in the domains and subdomains identified as part of the Core Indicators project. These include measures regarding the strength and stability of the service delivery system, system performance, and other consumer outcomes. The consumer surveys that have been developed by Geron and associates or are under development by The MEDSTAT Group provide another possible source of consumer outcome measures. Surveys and measures that have been tested and are in use by other states provide an opportunity to benchmark Maine's performance against national norms.

The identification and development of system level benchmarks is only the first step in improving the quality of home and community based care. Developing an action plan that addresses weaknesses in the system or focuses on improvement in one or more areas requires commitment and leadership at the state level. As we found from the review of the literature on the prevalence of falls in the elderly, the interventions that are effective in preventing falls are predominantly ones that do not involve additional health care services.

Rather the interventions require a multi-disciplinary and multi-factorial approach including appropriate geriatric assessments, consumer education, exercise programs and environmental modifications.

Some recommendations for the future include:

- **Continue to build support for quality measures through the involvement of key opinion leaders and stakeholder groups. Identify a short list of quality indicators that represent the multiple dimensions of quality identified in the IOM report.**

- **Identify at least one chronic condition for a focused intervention. Use established practice guidelines for developing an action plan.**

- **Develop, pilot and make available consumer friendly reports to the public on Maine's home and community based care system.**

Finally, any development of quality measures and quality management systems must be done within the context of solving the larger, more serious and fundamental issues confronting the home and community based care system – namely the need for a qualified and sustainable workforce. Efforts to improve the quality of health and social services available in the home must be done in tandem with other efforts to address issues related to the workforce shortage, salary levels, job satisfaction and job functions and performance of home care workers.

Appendix A

Quality Indicators for Nursing Facilities
Developed by CHSRA at the University of Wisconsin

Domain	Indicator
Accidents	▪ Incidence of new fractures ▪ Prevalence of falls
Behavior/Emotional Patterns	▪ Prevalence of behavioral symptoms affecting others (high risk/low risk) ▪ Prevalence of symptoms of depression ▪ Prevalence of symptoms of depression without antidepressant therapy
Clinical Management	▪ Use of 9 or more different medications
Cognitive Patterns	▪ Incidence of cognitive impairment
Elimination/Incontinence	▪ Prevalence of bladder or bowel incontinence (high risk/low risk) ▪ Prevalence of occasional or frequent bladder or bowel incontinence without a toileting plan ▪ Prevalence of indwelling catheter ▪ Prevalence of fecal impaction
Infection Control	▪ Prevalence of urinary tract infections
Nutrition/Eating	▪ Prevalence of weight loss ▪ Prevalence of tube feeding ▪ Prevalence of dehydration
Physical Functioning	▪ Prevalence of bedfast residents ▪ Incidence of decline in late loss ADLs ▪ Incidence of decline in ROM
Psychotropic Drug Use	▪ Prevalence of antipsychotic use, in the absence of psychotic or related conditions ▪ Prevalence of antianxiety/hypnotic use ▪ Prevalence of hypnotic use more than two times in last week
Quality of Life	▪ Prevalence of daily physical restraints ▪ Prevalence of little or no activity
Skin Care	▪ Prevalence of stage 1-4 pressure ulcers (high risk/low risk)

Appendix B-1

Outcome Based Quality Improvement (OBQI) System[10] (OASIS-derived Quality Indicators)

Improvement in grooming	Improvement in speech and language
Stabilization in grooming	Stabilization in speech and language
Improvement in dressing upper body	Improvement in pain interfering with activity
Improvement in dressing lower body	Improvement in number of surgical wounds
Improvement in bathing	Improvement in status of surgical wounds
Stabilization in bathing	Improvement in dyspnea
Improvement in toileting	Improvement in urinary tract infection
Improvement in transferring	Improvement in urinary incontinence
Stabilization in transferring	Improvement in bowel incontinence
Improvement in ambulation/locomotion	Improvement in cognitive functioning
Improvement in eating	Stabilization in cognitive functioning
Improvement in light meal preparation	Improvement in confusion frequency
Stabilization in light meal preparation	Improvement in anxiety level
Improvement in laundry	Stabilization in anxiety level
Stabilization in laundry	Improvement in behavioral problem frequency
Improvement in housekeeping	
Stabilization in housekeeping	
Improvement in shopping	**Utilization Outcomes**
Stabilization in shopping	Any emergent care provided
Improvement in phone use	Discharged to community
Stabilization in phone use	Acute care hospitalization
Improvement in management of oral meds	
Stabilization in management of oral meds	

[10] Center for Health Services and Policy Research, Denver, CO, 2002.

Appendix B-2

Outcome Based Quality Improvement System[11]

Adverse Event Outcomes
Emergent care for injury caused by fall or accident at home
Emergent care for wound infections, deteriorating wound status
Emergent care for improper medication administration, medication side effects
Emergent care for hypo/hyperglycemia
Development of urinary tract infection
Increase in number of pressure ulcers
Substantial decline in 3 or more activities of daily living
Substantial decline in management of oral medications
Unexpected nursing home admission
Discharged to the community needing wound care or medication assistance
Discharged to the community needing toileting assistance
Discharged to the community with behavioral problems
Unexpected death

[11] Center for Health Services and Policy Research, Denver, CO, 2002.

Appendix C

interRAI Home Care Quality Indicators (HCQI) for MDS-HC Version 2.0[12]

Domain	Indicator
Nutrition	▪ Prevalence of inadequate meals ▪ Prevalence of weight loss ▪ Prevalence of dehydration
Medication	▪ Prevalence of not receiving a medication review by a physician ▪ Failure to improve/incidence of bladder incontinence
Ulcers	▪ Failure to improve/incidence of skin ulcers
Physical Function	▪ Prevalence of no assistive device among clients with difficulty in locomotion ▪ Prevalence of ADL/rehabilitation potential and no therapies ▪ Failure to improve/incidence of decline on ADL long form ▪ Failure to improve/incidence of impaired locomotion in the home ▪ Prevalence of falls
Cognitive Function	▪ Prevalence of social isolation ▪ Failure to improve/incidence of cognitive decline ▪ Prevalence of delirium ▪ Prevalence of negative mood ▪ Failure to improve/incidence of difficulty in communication
Pain	▪ Prevalence of disruptive or intense daily pain ▪ Prevalence of inadequate pain control among those with pain
Safety	▪ Prevalence of neglect/abuse ▪ Prevalence of any injuries
Other	▪ Prevalence of not receiving influenza vaccine ▪ Prevalence of hospitalization

[12] Developed by John Hirdes,Ph.D, Brant Fries, Ph.D.,John Morris, Ph.d; Naoki Ikagami, M.D., Ph.D; Zimmerman, Ph.D ;Dawn Dalby,M.Sc.; Pabo Aliaga, M.A.; Suzanne Hammer,M.A.; Richard Jones, Ph.D

Appendix D

Home Care Quality Indicators
Developed by the Center for Health Systems Research and Analysis, University of Wisconsin

Indicator
Prevalence of:
Any Injuries
9 or More Scheduled Medications
Delirium
Cognitive Impairment
Bladder or Bowel Incontinence
Bladder or Bowel Incontinence – High Risk
Bladder or Bowel Incontinence – Low Risk
Depression
Weight Loss
Pain
Dependence in Late-Loss ADLs
Dependence in Late-Loss ADLs – High Risk
Dependence in Late-Loss ADLs – Low Risk
Dependence in Select IADLs
Dependence in Select IADLs – High Risk
Dependence in Select IADLs – Low Risk
Respiratory Impairment
Respiratory Impairment – High Risk
Respiratory Impairment – Low Risk
Stage 1-4 Pressure Ulcers
Stage 1-4 Pressure Ulcers – High Risk
Stage 1-4 Pressure Ulcers – Low Risk
Wounds that are not healing

Appendix E

Quality Measures Used In Veterans Administration Home Care Programs

Percent of patients:

- Receiving pneumovax vaccine
- Receiving influenza vaccine
- Screened for depression
- Receiving Quality of Life planning, which consists of 7 subscales:
  - Advanced directives
  - Pain assessment/management
  - Dyspnea management
  - Nutrition/hydration
  - Psychosocial
  - Depression
  - Discharge planning
- Receiving alcohol screening
- Counseled for smoking use/cessation
- Assessed using a 0-10 pain scale

Appendix F

ORYX Home Care Measures
Developed by the Association of Maryland Hospitals and Health Systems[13]

Domain	Indicator
Indicator HC-1: Unscheduled Transfers to Inpatient Acute Care	***Unscheduled Transfers due to:*** ▪ Respiratory Problems ▪ Gastrointestinal Problems ▪ Catheter-Related Urinary Tract Infections ▪ Medication Problems ▪ Injuries ▪ Cardiac Problems ▪ Endocrine Problems
Indicator HC-2: Use of Emergent Care Services	▪ Patients Experiencing Emergent Care Visits ▪ Emergent Care Visits to Emergency Room ▪ Emergent Care Visits to Outpatient Departments ▪ Emergent Care Visits to Doctor's Office/House Calls
Indicator HC-3: Discharge to Nursing Home Care	▪ Discharge to Nursing Home Care for Therapy Services ▪ Discharge to Nursing Home Care Because Unsafe for Care at Home
Indicator HC-4: Acquired Infections	▪ Surgical Wound Infection ▪ Symptomatic UTI/Patients with Indwelling Catheters ▪ Symptomatic UTI/Patients with Indwelling Catheters—Age<75 ▪ Symptomatic UTI/Patients with Indwelling Catheters—Age>75 ▪ TPN Patients with Sepsis ▪ Infusion Site Infections

[13] Association of Maryland Hospitals and Health Systems, 2000.

Appendix G

Satisfaction with Home Care[14]
Major Services and Dimensions

Service	Dimension
Homemaker	▪ Competency ▪ System adequacy ▪ Positive interpersonal ▪ Negative interpersonal
Home Health Aide	▪ Competency ▪ System adequacy ▪ Positive interpersonal ▪ Negative interpersonal
Care Management	▪ Competency ▪ Service Choice ▪ Positive interpersonal ▪ Negative interpersonal
Home-Delivered Meal	▪ Quality ▪ System adequacy ▪ Service dependability
Grocery	▪ Quality ▪ System dependability ▪ Service convenience

[14] Developed by Geron, Smith & Tennstedt, et al., 2000.

Appendix H

HCFA HCBS Waiver Consumer Experience Survey
In Development by The MEDSTAT Group

Major Domains
▪ Choice/Empowerment ▪ Satisfaction with Care ▪ Access to Care/Services ▪ Respect/Dignity ▪ Community Integration/Inclusion

Appendix I

Outcomes Used in Wisconsin Family Care and Community Options—Waiver Programs Developed in Collaboration with The Council on Quality and Leadership in Supports for People with Disabilities

1. People choose where and with whom they live.
2. People choose where they work.
3. People are satisfied with services.
4. People choose their daily routines.
5. People have time, space, and opportunity for privacy.
6. People participate in the life of the community.
7. People are respected.
8. People choose services.
9. People are connected to natural support networks.
10. People are safe.
11. People are treated fairly.
12. People have the best possible health.
13. People are free from abuse and neglect.
14. People experience continuity and safety.

Appendix J

Core Indicators Project: Phase II Indicators (Version 2.0) Developed by the Human Services Research Institute[15]

Domain	Subdomains and Indicators
Consumer Outcomes	**Work**
	1. Average monthly wage of people who receive work supports. 2. Average number of hours worked per month during the previous year. 3. Percent of people earning at or above the state minimum wage. 4. Percent of people who were continuously employed in community based settings during the previous year. 5. Proportion of all individuals who receive daytime supports of any type who are engaged in community integrated employment.
	Community Inclusion
	Proportion of people who participate in integrated activities in their communities, including: shopping, using public services, attending religious events, playing sports, attending arts/entertainment events, and dining out.
	Choice and Decision-making
	1. Proportion of people who make choices about important life decisions, including: housing, roommates, daily routines, support staff or providers, and social activities. 2. Proportion of people reporting that their service plan includes or is about things that are important to them. 3. Proportion of people reporting that they control their own spending money (i.e., have access to it and choose what to buy with it).
	Supporting Families
	Percentage of families with an adult family member living in the home who report satisfaction with the following areas: supports received by the family and the family member, information, choices/planning, access, linkages to supports, service coordination, and crisis response.
	Family Involvement
	Proportion of families/guardians of individuals NOT living at home who report (a) satisfaction with the services and supports their family member receives; and (b) the extent to which the system supports continuing family involvement.
	Relationships
	1. Proportion of people who report having friends and caring relationships with people other than support staff and family members. 2. Proportion of people who report having a close friend, someone they can talk to about private matters. 3. Proportion of people who are able to see their families and friends when they want to. 4. Proportion of people reporting feeling lonely.

[15] Human Services Research Institute, Retrieved November, 2001.

Consumer Outcomes (cont.)	**Satisfaction**
	1. Proportion of people who report satisfaction with where they live. 2. Proportion of people reporting satisfaction with their job or day program. 3. Proportion of people reporting that they work as many hours as they want to.
System Performance	**Service Coordination**
	1. Proportion of people reporting that service coordinators help them get what they need. 2. Proportion of people who are able to contact their service coordinators when they want to. 3. Proportion of people who report that they participated in the development of their service plan.
	Utilization and Expenditures
	1. The average annual expenditure per person overall, by living arrangement, type of service and category of support. 2. The annual expenditure for each living arrangement, type of service and category of support, as a percent of total expenditures. 3. The range of annual per person expenditures, by living arrangement, type of service and category of support.
	Access
	1. The number of persons receiving services and supports, by age and by type of service and category of support. 2. The proportion of people served, by race and ethnicity, relative to proportions in the general population of the service area. 3. The number of persons (unduplicated count), age-adjusted, receiving one or more services or supports. 4. The number of persons (unduplicated count), age-adjusted, in service per 100,000 general population. 5. The number of persons waiting for services/supports relative to the total service population. 6. The proportion of families reporting that consumers have access to adaptive equipment, environmental modifications, and assistive communication devices. 7. The proportion of people reporting that they received support to learn or do something new in the past year. 8. The proportion of people who report having adequate transportation when they want to go somewhere. 9. The rate at which people report that “needed” services were not available.

Health, Welfare and Rights	**Safety**
	1. The mortality rate of the MR/DD population compared to the general area population, by age, by cause of death (natural or medico-legal), and by MR or DD diagnosis. 2. The incidence of serious injuries reported among people with MR/DD in the course of service provision, during the past year. 3. The proportion of people who were victims of selected crimes reported to a law enforcement agency during the past year, by type of crime (rape, personal robbery, aggravated assault, burglary, and theft). 4. The proportion of people who report that they feel safe in their home and neighborhood.
	Health
	1. The proportion of people who have had a physical exam in the past year. 2. The proportion of women who have had an OB/GYN exam in the past year. 3. The proportion of people who have had a routine dental exam in the past six months. 4. The number of days in the past month people report that their normal routines were interrupted due to illness. 5. The proportion of people receiving psychotropic medications. 6. The incidence of chemical or physical restraints reported in the past year, by type of restraint and reason for use.
	Respect/Rights
	1. The proportion of people reporting that they have an “advocate” or someone who speaks on their behalf. 2. The proportion of people who report that their basic rights are respected by others. 3. The proportion of people who have participated in activities of self-advocacy groups or other groups that address rights. 4. The proportion of people reporting satisfaction with the amount of privacy they have.
Service Delivery System Strength and Stability	**Acceptability**
	1. The proportion of voting members on provider agency boards of directors who are primary consumers. 2. The proportion of voting members on provider agency boards of directors who are family members of primary consumers. 3. The proportion of families who are satisfied with the grievance process. 4. The proportion of people indicating that most support staff treat them with respect. 5. The proportion of people who have changed residences more than once in the past year.

Service Delivery System Strength and Stability (cont.)	**Stability**
	1. The crude separation rate, defined as the proportion of direct contact staff separated in the past year. 2. Average length of service for all direct contact staff who separated in the past year, and for all currently employed direct contact staff. 3. The vacancy rate, defined as the proportion of direct contact positions that were vacant as of a specified date. 4. The proportion of direct contact hours paid in overtime hours. 5. The capability of community service organizations to meet their near-term financial obligations (as measured by (a) the ratio of current assets to current liabilities; and (b) months of reserve funds on hand). 6. Community service organizations exhibit financial strength, stability, and long term solvency (as measured by (a) the ratio of total assets to total liabilities; (b) total assets (including depreciated assets) to total liabilities; and (c) total liabilities to net worth). 7. The extent to which community services organizations attract private contributions to strengthen their operations (as measured by the ratio of private revenue to total revenue).
	Staff Qualifications/Competency
	The proportion of families reporting that staff is available to communicate with individuals who use modes of communication other than spoken English.

Appendix K
Revised MaineNET Objectives and Performance Measures - November 5, 2001

Chronic care management		Your Practice	Comparison Group	MaineNET
1. Hospitalization for CHF	Number and percentage of members admitted to a hospital during the reporting period with a primary diagnosis of congestive heart failure.			
2. Cardio Vascular Disease	Number and percent of members with a recent myocaridal infarction or recent coronary bypass graft surgery receiving Phase II cardiac rehabilitation.			
3. Hospitalization for pneumonia	Number and percentage of members admitted to a hospital during the reporting period with a primary diagnosis of pneumonia.			
4. Hospitalization or ER for hip or wrist fracture	Number and percentage of members admitted to a hospital during the reporting period with a hip or wrist fracture.			
5. Diabetes	Number and percentage of members with a diagnosis of diabetes having glycated hemoglobin levels measured within the last 12 months.			
6. Diabetes	Number and percentage of members with a diagnosis of diabetes with a dilated eye examination in the last 12 months.			
7. Diabetes	Number and percentage of members with a diagnosis of diabetes attending adult diabetes education follow-up classes.			
8. Diabetes	Number and percentage of members with a diagnosis of diabetes with proteinuria or hypertension being treated with an ACE inhibitor.			
9. Falls	Number and percentage of members identified as high risk for falls receiving home fall evaluation and intervention.			
Pharmacy Management		Your Practice	Comparison Group	MaineNET
10. Nine or more medications	Number and percentage of members with 9 or more prescribed medications.			
11. Beers' List	Number and percentage of members with 1 or more prescribed medications on Beers' list.			
12. ACE inhibitors or ARB for CHF	Percentage of members with diagnosis of CHF being treated with ace inhibitors or ARB.			
13. Proper dosage for ACE or ARB	Percentage of members being treated with ace inhibitors or ARB that are at the target dosage.			
14. ACE or ARB for hypertension & diabetes	Percentage of members being treated with diagnoses of hypertension and diabetes who are being treated with ace inhibitors or ARB.			
Managing Costs		Your Practice	Comparison Group	MaineNET
15. Total costs	Total Medicaid costs per member per month.			
16. Pharmacy	Pharmacy costs per member per month.			
17. Long Term Care	Total LTC (institutional and community based) costs per member per month.			

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