Morbidity and Mortality in People with Serious Mental Illness

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I. Foreword

It has been known for several years that persons with serious mental illness die younger than the general population. However, recent evidence reveals that the rate of serious morbidity (illness) and mortality (death) in this population has accelerated.

In fact, persons with serious mental illness (SMI) are now dying 25 years earlier than the general population.

Their increased morbidity and mortality are largely due to treatable medical conditions that are caused by modifiable risk factors such as smoking, obesity, substance abuse, and inadequate access to medical care.

This report reviews the causes of excess morbidity and mortality in this population and makes recommendations to improve their care. It presents a roadmap for strategic approaches to reduce excess illness and premature death among the persons served by State Mental Health Authorities.

State Mental Health Authority (SMHA) stakeholders need to embrace two guiding principles:

1. *Overall health is essential to mental health.*
2. *Recovery includes <u>wellness</u>.*

This is the thirteenth technical report developed by the National Association of State Mental Health Program Directors (NASMHPD) Medical Directors Council. It is based on a relevant literature review, a series of work-group conference calls, and a two-day meeting of medical directors, commissioners, researchers, and other technical experts. This report provides the overarching context for two previous reports, *Polypharmacy* and *Integrating Primary Care with Behavioral Health* and our forthcoming report on *Smoking Policies and Practices*. We must all work together to fight this epidemic of premature death and its contributing causes.

Joe Parks, MD

Chair, Medical Directors Council

II. Executive Summary

A. Overview—The Problem

People with serious mental illness (SMI) die, on average, 25 years earlier than the general population. State studies document recent increases in death rates over those previously reported. This is a serious public health problem for the people served by our state mental health systems. While suicide and injury account for about 30-40% of excess mortality, *60% of premature deaths in persons with schizophrenia are due to medical conditions such as cardiovascular, pulmonary and infectious diseases.*

People with serious mental illness also suffer from a high prevalence of modifiable risk factors, in particular obesity and tobacco use. Compounding this problem, people with serious mental illness have poorer access to established monitoring and treatment guidelines for physical health conditions.

B. Increased Mortality and Morbidity are Largely Due to Preventable Conditions

Among persons with SMI, the "natural causes" of death include:
- Cardiovascular disease
- Diabetes (including related conditions such as kidney failure)
- Respiratory disease (including pneumonia, influenza)
- Infectious disease (including HIV/AIDS)

The rates of mortality from these diseases for the SMI population are several times those of the general population.

There are a number of other factors that place people with SMI at higher risk of morbidity and mortality[i], including:

- *Higher rates of modifiable risk factors*
  - Smoking
  - Alcohol consumption
  - Poor nutrition / obesity
  - Lack of exercise
  - "Unsafe" sexual behavior
  - IV drug use
  - Residence in group care facilities and homeless shelters (exposure to tuberculosis and other infectious diseases as well as less opportunity to modify individual nutritional practices)
- *Vulnerability due to higher rates of*

Cardiovascular Disease (CVD) Risk Factors

Modifiable Risk Factors	Estimated Prevalence and Relative Risk (RR)	
	Schizophrenia	Bipolar Disorder
Obesity	45–55%, 1.5-2X RR[1]	26%[5]
Smoking	50–80%, 2-3X RR[2]	55%[6]
Diabetes	10–14%, 2X RR[3]	10%[7]
Hypertension	≥18%[4]	15%[5]
Dyslipidemia	Up to 5X RR[8]	

1. Davidson S, et al. *Aust N Z J Psychiatry.* 2001;35:196-202. 2. Alison DB, et al. *J Clin Psychiatry.* 1999; 60:215-220. 3. Dixon L, et al. *J Nerv Ment Dis.* 1999;187:496-502. 4. Herran A, et al. *Schizophr Res.* 2000;41:373-381. 5. MeElroy SL, et al. *J Clin Psychiatry.* 2002;63:207-213. 6. Ucok A, et al. Psychiatry Clin Neurosci. 2004;58:434-437. 7. Cassidy F, et al. *Am J Psychiatry.* 1999;156:1417-1420. 8. Allebeck. Schizophr Bull. 1999;15(1)81-89.

- Homelessness
- Victimization / trauma
- Unemployment
- Poverty
- Incarceration
- Social isolation

- ***Impact of symptoms associated with SMI***
  - Example: paranoid ideation causing fear of accessing care
  - Example: disorganized thinking causing difficulty in following medical recommendations
- ***Symptoms can mask symptoms of medical/somatic illnesses***
- ***Psychotropic medications may mask symptoms of medical illness and contribute to symptoms of medical illness and cause metabolic syndrome***
- ***Polypharmacy***
- ***Lack of access to appropriate health care and lack of coordination between mental health and general health care providers***

C. The Impact of Medications

Beginning with the introduction of clozapine in 1991, and the subsequent introduction of five newer generation antipsychotics over the next decade or so, antipsychotic prescribing in the US has moved to the use of these second generation antipsychotics. This has occurred despite their significantly greater cost, largely due to a decrease in neurologic side effects and the perception that people using them may experience better outcomes, especially improvement in negative symptoms. However, with time and experience ***the second generation antipsychotic medications have become more highly associated with weight gain, diabetes, dyslipidemia, insulin resistance and the metabolic syndrome*** and the superiority of clinical response (except for clozapine) has been questioned. Other psychotropic medications that are associated with weight gain may also be of concern.

> Modifiable Risk Factors
> Affected by Psychotropics
> - Overweight/ obesity
> - Insulin resistance
> - Diabetes/hyperglycemia
> - Dyslipidemia

D. Access to Health Care

Druss[ii] suggests that having SMI may be a risk factor and lead to problems in access to health care because of:
- Patient factors: Amotivation, fearfulness, social instability
- Provider factors: Competing demands, stigma
- System factors: Fragmentation

He also provides us with examples from his research and that of colleagues regarding Overuse, Underuse, and Misuse (*Three Types of Poor Quality*, Chassin 1998) of services related to the population with SMI:

Overuse:
- Persons with SMI have high use of somatic emergency services (Salisberry et al 2005, Hackman et al 2006)

Underuse:
- Fewer routine preventive services (Druss 2002)
- Lower rates of cardiovascular procedures (Druss 2000)
- Worse diabetes care (Desai 2002, Frayne 2006)

Misuse:
- During medical hospitalization, persons with Schizophrenia are about twice as likely to have infections due to medical care postoperative deep venous thrombosis and postoperative sepsis (Daumit 2006)

E. What Should Be Done? – Recommendations and Solutions

These proposed recommendations and solutions are organized at four levels of action: national; state; provider agencies and clinicians; and, persons served, families and their communities. We have identified several major actions necessary to address the issues described in this report.

1. ***Prioritization of the public health problem of morbidity and mortality and designation of the population with SMI as a priority health disparities population.***

2. ***Tracking and monitoring of morbidity and mortality in populations served by our public mental health systems (surveillance).***

3. ***Implementation of established standards of care for prevention, screening, assessment, and treatment.***

4. ***Improved access and integration with physical health care services.***

National Level

1. Designate the Population with SMI as a Health Disparities Population

a. Federal designation of people with SMI as a distinct at-risk health disparities population is a key first step, followed by development and adaptation of materials and methods for prevention in this population as well as inclusion in morbidity and mortality surveillance demographics.

2. Adopt Ongoing Surveillance Methods

a. Establish a committee at the federal level to recommend changes to national surveillance activities that will incorporate information about health status in the population with SMI.

b. Engage at the national and state levels, per the IOM report, in developing the National Health Information Infrastructure (NHII) to assure that EHR and PHR templates include the data elements needed to manage and coordinate general health care and mental health care.

3. Support Education and Advocacy

a. Share information widely about physical health risks in persons with SMI to encourage awareness and advocacy. Educate the health care community. Encourage persons served and family members to advocate for wellness approaches as part of recovery.

b. Build on the development of SAMHSA evidence-based practices by creating a toolkit that is focused on health status and healthy lifestyles.

c. Promote adoption of recommendations in the NASMHPD Technical Reports on Polypharmacy and Smoking to implement policies and programs addressing these risk factors.

State Level

1. Prioritize the Public Health Problem of Morbidity And Mortality and Designate the Population with SMI as a Priority Health Disparities Population.

a. Collect surveillance data on morbidity and mortality in the population with SMI.

b. Apply a public health approach and population based interventions.

2. Improve Access to Physical Health Care

a. Require, regulate, and lead the public behavioral health care system to ensure prevention, screening, and treatment of general health care issues.

b. Build adequate capacity to serve the physical health care needs of the SMI population.

3. Promote Coordinated and Integrated Mental Health and Physical Health Care for Persons with SMI

a. Utilize the system transformation recommendations from the New Freedom Commission, Institute of Medicine and SAMHSA to achieve a more person-centered mental health system. Specifically, implement the following selected recommendations, as identified in the IOM report, and modified to address the morbidity and mortality issues.
- *Create high-level mechanisms to improve collaboration and coordination across agencies*
- *Promote integration of general healthcare and mental health records*
- *Revise laws and other policies to support communication between providers*

b. Implement the recommendations found in the 11th NASMHPD Technical Paper: Integrating Behavioral Health and Primary Care Services.

4. Support Education and Advocacy

a. Develop and implement toolkits and guidelines to help providers, self-help/peer support groups and families understand how to facilitate healthy choices while promoting personal responsibility.

b. Establish training capacity. A key component of this plan will be training and technical assistance for the mental health workforce on the importance of the issues.

c. Involve academic and association partners in planning and conducting training.

d. Address stigma / discrimination.

5. Address Funding

a. Assure financing methods for service improvements. Include reimbursement for coordination activities, case management, transportation and other supports to ensure access to physical health care services.

b. As a health care purchaser, Medicaid should:
- *Provide coverage for health education and prevention services (primary prevention) that will reduce or slow the impact of disease for people with SMI.*
- *Establish rates adequate to assure access to primary care by persons with SMI.*
- *Cover smoking cessation and weight reduction treatments.*
- *Use community case management to improve engagement with and access to preventive and primary care.*

6. Develop a Quality Improvement (QI) Process that Supports Increased Access to Physical Health care and Ensures Appropriate Prevention, Screening and Treatment Services.

a. Establish a system goal for quality health care with the same priority as employment, housing or keeping people out of the criminal justice system.

b. Join with the Medicaid and Public Health agencies at the state level to develop a quality improvement (QI) plan to support appropriate screening, treatment and access to health care for people being served by the public mental health system, whether Medicaid or uninsured.

c. Assure that all initiatives to address morbidity and mortality have concrete goals, timeframes and specific steps. Gather performance measurement data and use to manage overall system performance.

d. Use regulatory, policy and other programming opportunities to promote personal responsibility for making healthy choices by changing the locus of control from external (program rules, regulations, staff) to the individuals we serve (self-control and management).

e. Continue to promote adoption of recommendations in the NASMHPD Technical Reports on Polypharmacy and Smoking to implement policies and programs addressing these risk factors.

Provider Agencies / Clinicians

1. Adopt as Policy that Mental Health and Physical Healthcare Should Be Integrated.

2. Help Individuals to Understand the Hopeful Message of Recovery, Enabling their Engagement as Equal Partners in Care and Treatment.

3. Support Wellness and Empowerment of Persons Served, to Improve Mental and Physical Well-Being

a. Support personal empowerment and individual responsibility, enabling individuals to make healthy choices for recovery to promote their individual recovery efforts; this means engaging people with SMI in their health care in new ways.

4. Ensure the Provision of Quality, Evidence-Based Physical and Mental Health Care by Provider Agencies and Clinicians.

a. Utilize the system transformation recommendations from the New Freedom Commission, Institute of Medicine and SAMHSA to achieve a more person-centered mental health system.

b. Implement standards of care for prevention, screening and treatment in the context of better access to health care.

c. Improve comprehensive health care evaluations.

d. Assure that all initiatives to address morbidity and mortality have concrete goals, timeframes and specific steps. Gather performance measurement data and use to manage overall system performance.

5. Implement Care Coordination Models.

a. Assure that there is a specific practitioner in the MH system who is identified as the responsible party for each person's medical health care needs being addressed and who assures coordination all services.

Persons Served / Families / Communities

1. Encourage the Persons We Serve, Families and Communities to Develop a Vision of Integrated Care.

a. Share information so that the mental health community and others become more aware of the co-morbid physical health risks and integrated care approaches.

2. Encourage Advocacy, Education and Successful Partnerships to Achieve Integrated Physical and Behavioral Health Care.

a. Encourage integrated physical and behavioral health care as a high priority similar to employment, housing and staying out of the criminal justice system.

3. Pursue Individualized Person Centered Care that is Recovery and Wellness Focused.

a. Support individualized partnerships, between the person served and the care provider, for integrated behavioral and physical health care.

III. Overview—The Problem

People with serious mental illness served by our public mental health systems die, on average, 25 years earlier than the general population. This has been demonstrated in a number of recent studies. While suicide accounts for about 30% of excess mortality, about 60% of premature deaths are due to "natural causes", such as cardiovascular and pulmonary disease. ***Cardiovascular mortality in Schizophrenia increased from 1976 to 1995, with the greatest increase in Standardized Mortality Ratios in men from 1991 to 1995.*** Many of the risk factors for these "natural causes" of death, such as smoking, obesity, and inadequate medical care, are modifiable. Increased attention from policy makers as well as persons served, family members, and the mental health and general health care system is needed. Since about 5,865,000 people[iii] are served by the public mental health system each year, this is a serious public health problem that is poorly recognized and rarely addressed.

A. Findings from Studies at the State Level

1. Sixteen State Study

Mortality data were submitted by public mental health agencies in eight states as part of the *Sixteen-State Study on Mental Health Performance Measures* (Lutterman et al., 2003). Seven of the eight states (Arizona, Missouri, Oklahoma, Rhode Island, Texas, Utah, and Vermont) submitted data on persons served in both inpatient and outpatient services during the period 1997 through 2000. These data were analyzed using age-adjusted death rates, standardized mortality ratios, and years of potential life lost. The Age-Adjusted Death Rate (AADR) is the crude death rate adjusted to US standard population—the age-specific death rate population percentage for that age group. The Standardized Mortality Ratio (SMR) is the actual number of deaths divided by the expected number of deaths. The Mean Years of Potential Life Lost (YPLL) is the sum of (life expectancy - age of death) divided by the number of deceased individuals.[iv]

16 State Study Results: Years of Potential Life Lost

Year	AZ	MO	OK	RI	TX	UT	VA (IP only)
1997		26.3	25.1		28.5		
1998		27.3	25.1		28.8	29.3	15.5
1999	32.2	26.8	26.3		29.3	26.9	14.0
2000	31.8	27.9		24.9			13.5

- Previous research suggested that people with schizophrenia died 10 years earlier than age-matched contemporaries
- This data suggests that people with SMI are dying at least <u>25 years earlier</u>

(Lutterman et al., 2003)

In all eight states ***it was found that people served by the public mental health system had a higher relative risk of death***, with the SMR ranging from 4.9 to 1.2, higher than the general populations of their states. ***Deceased public mental health clients had died at much younger ages and lost decades of potential life*** when compared with their living cohorts nationwide. For the six states that could provide detailed data, ***individuals with a major mental illness diagnosis died at an even younger age***, on average 1 to 10 years earlier, than those with a non major mental illness diagnosis.

Most of these individuals died of natural causes. The leading causes of death were similar to those found in the general population nationwide and statewide. The causes include heart disease, cancer and cerebrovascular, respiratory and lung diseases. Heart disease was the leading

cause of death among people served by the public mental health system as well as in general state populations and the United States. Cancer was second in the general populations of the states and the United States. Percentages of those served by the mental health system who died of cancer were lower than for the general population. The percentages of those who died from suicide and accidents were higher than the general population and contribute significantly to the years of life lost.

16 State Study Results: Age Adjusted Death Rate

(Lutterman et al., 2003)

AADR of 8 states
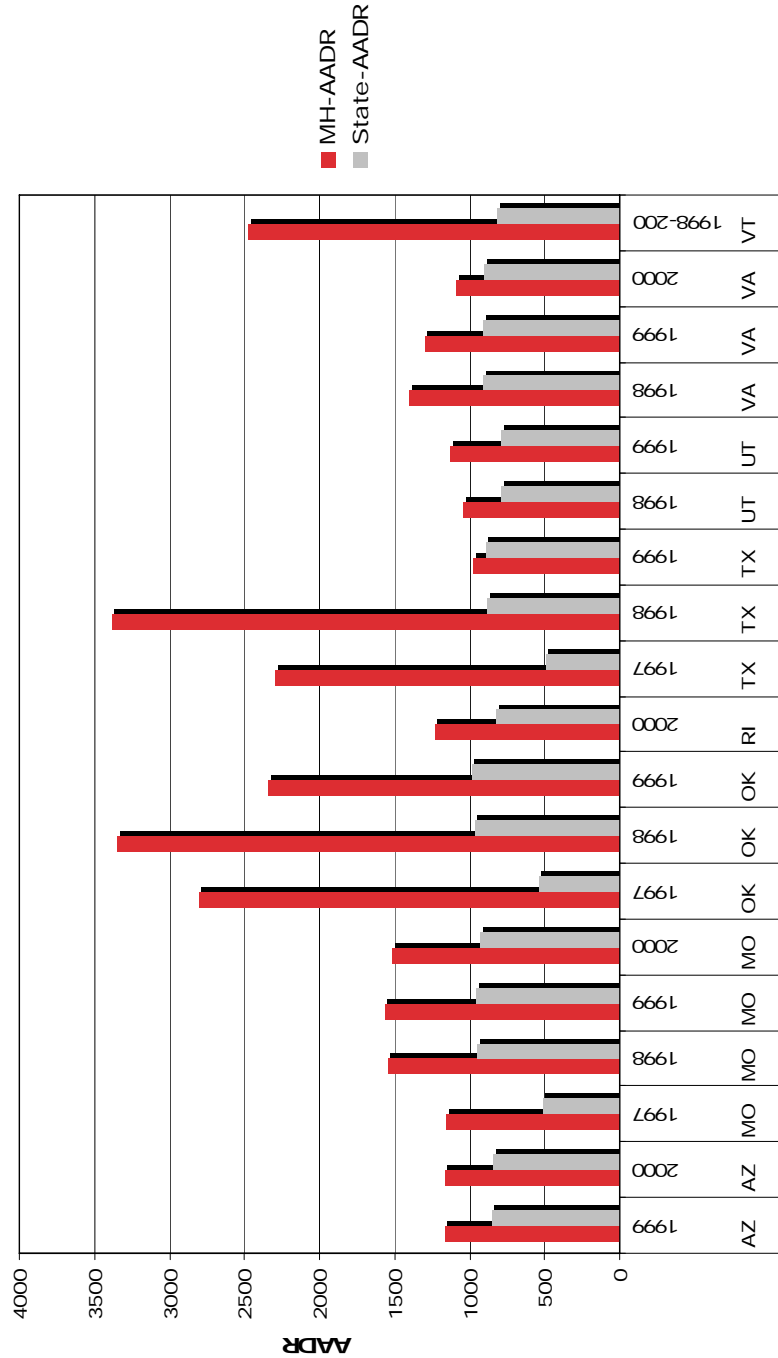
2. Massachusetts Study

The Massachusetts Department of Mental Health (DMH) first conducted and presented the results of a study that led to the Sixteen State Mortality Study as well as other states' surveillance studies. Of note are the *increased rates of death from heart disease, particularly in DMH populations under 55. In 1998 – 2000, among persons 25 to 44, cardiovascular mortality was 6.6 times higher among DMH clients than the general population.*

Age and selected disease specific rate comparisons are illustrated in the accompanying graphs. The DMH deceased population was younger, less educated, and had a higher proportion of African Americans than the general population.[v]

Massachusetts Study: Deaths from Heart Disease by age group/DMH Enrollees with SMI compared to Massachusetts 1998-2000

Massachusetts Study: Mortality from Pneumonia/Influenza DMH clients, ages 25-64

1998-99 Age Specific Death Rates
DMH compared to Massachusetts
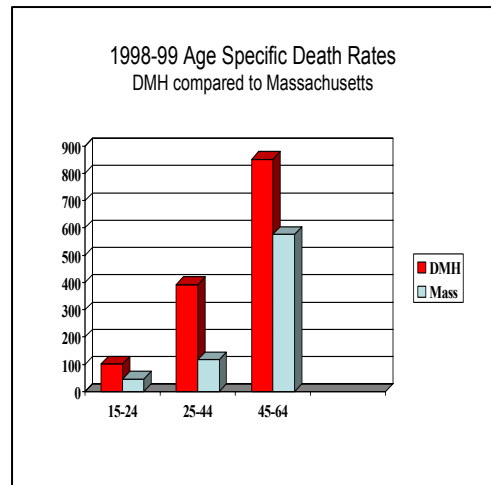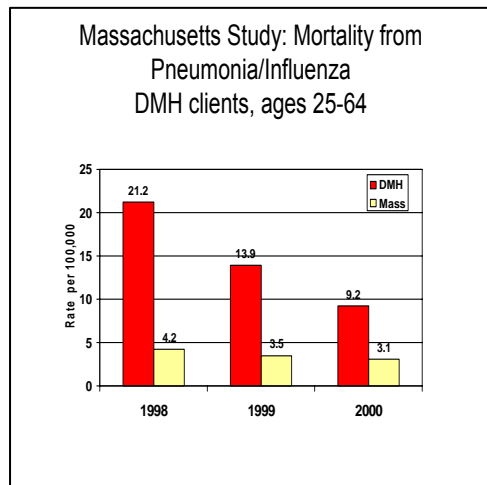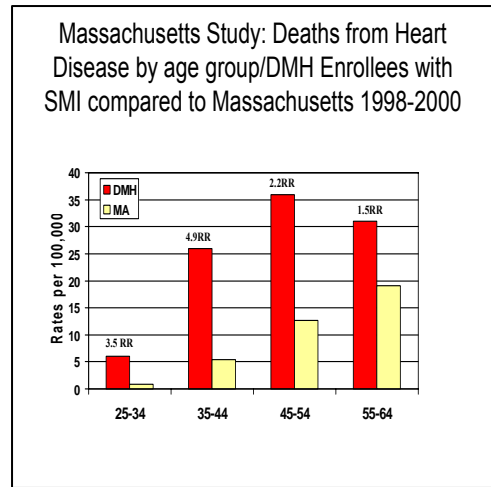
3. Ohio Study

Persons discharged from Ohio public psychiatric hospitals were matched against Ohio Department of Health death records. This resulted in identifying 608 deaths among 20,018 unique individuals over the five year period 1998 – 2002.

Major mental illness diagnoses of Schizophrenia, Schizoaffective Disorder, Bipolar Disorder and Major Depression were present on 70% of discharge diagnoses. *Alcohol and substance use disorders were frequent co-occurring Axis I disorders.* The

Table 1: Years of Potential Life Lost (YPLL)			
Cause	M	F	Total
All causes of death	31.8	32.5	32.0
Intentional self-harm (Suicide)	41.4	42.7	41.7
Assault (homicide)	42.3	35.8	41.6
Accidents (unintentional injuries)	39.5	43.1	40.4
Symptoms, signs, and abnormal clinical and laboratory findings NEC	32.8	35.0	33.4
Diabetes mellitus	25.8	37.2	30.2
Pneumonia and influenza	29.4	25.0	28.3
Diseases of the heart	27.7	26.6	27.3
Cerebrovascular disease	20.7	32.8	25.5
Malignant neoplasms (cancers)	24.3	26.9	25.3
Chronic lower respiratory diseases	18.6	24.1	21.1

mean age at death for all decedents was 47.7 corresponding to an average of 32 years of potential life lost per patient.

Table 2: Standardized Mortality Ratios		
Cause	N	Ratio
All causes of death	608	3.2*
Intentional self-harm (Suicide)	108	12.6*
Symptoms, signs, and abnormal clinical and laboratory findings NEC	32	9.7*
Pneumonia and influenza	16	6.6*
Chronic lower respiratory diseases	31	5.5*
Accidents (unintentional injuries)	83	3.8*
Diseases of the heart	126	3.4*
Diabetes mellitus	18	3.4*
Assault (homicide)	10	1.7
Cerebrovascular disease	10	1.5
Malignant neoplasms (cancers)	44	0.9

Standardized mortality rates for all causes were 3.2 times greater than expected when compared to the U.S. general population. Suicide, symptoms, signs and abnormal laboratory findings, pneumonia and influenza, chronic lower respiratory diseases, accidents, heart disease and diabetes mellitus were all significantly increased (3 times or greater) causes of death than expected. Death from cancer, which is the second leading cause of death in the total population and most frequently arises in persons 55 years and older, was not increased in this sample, perhaps because people tended to die before reaching the age of greatest risk for death from cancer.

The leading cause of death was heart disease representing 126 (21%) decedents with a mean age at death of 51, and 27 years of potential life lost. The study found that the Axis III diagnosed medical co-morbidities for persons dying from heart disease were consistent with known risk factors. Smoking, as a risk factor, was typically not included in the discharge diagnoses. [vi]

Table 3: Axis III Diagnosis Among 126 Deaths Due to Heart Disease	
Cause	%
Hypertension	35
Obesity	34
Diabetes mellitus	19
Lipid Disorders	8
Heart failure	5
Myocardial Infarction	5
Atherosclerosis	3

Note: The percentage of patients adds to greater than 100% since some patients had more than one Axis III diagnosis

4. Maine Study

Using an age-matched sample of Medicaid enrollees with SMI and Medicaid enrollees without SMI, Maine has added to the knowledge base in regard to morbidity in the population with SMI. *Rates of disease for the population with SMI exceed those of the non-SMI population in every disease category*. Not surprisingly, the *populations with SMI or SMI and Substance Use diagnoses also exceed the non-SMI/SU population in the percent of individuals with multiple medical conditions.* Individuals with both SMI and Substance Use Diagnoses, while almost equivalent to the population with SMI in percent of population with multiple medical conditions, have average health care expenses that exceed the SMI and non-SMI/SU populations.[vii]

Maine Study: Burden of Medical Illness

Maine Study Results: Comparison of Health Disorders Between SMI & Non-SMI Groups
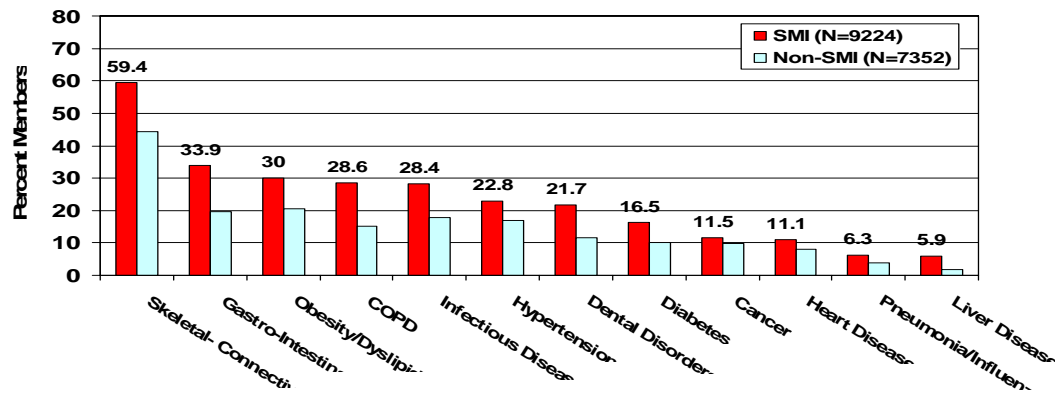
B. Increased Mortality and Morbidity are Largely Due to Preventable Conditions

1. Overview

Increased death rates in the population with SMI are often associated with modifiable medical risk factors. As previously described, *people with serious mental disorders are dying from similar causes as found in the general population and their standardized mortality rates are higher than those of the general public*. Schizophrenia, Bipolar Disorder and Major Depressive Disorder have all been associated with medical causes of death which are often 2 to 3 times that of the general population.

Schizophrenia: Natural Causes of Death

- Higher standardized mortality rates than the general population from:
  - Diabetes — 2.7x
  - Cardiovascular disease — 2.3x
  - Respiratory disease — 3.2x
  - Infectious diseases — 3.4x
- Cardiovascular disease associated with the largest number of deaths
  - 2.3 times the largest cause of death in the general population

a. Medical Risk Factors In The General Population

Medical risk factors are often modifiable. Heart disease is the leading cause of death for persons in the United States. Risk factors for cardiovascular disease are well studied. The Framingham study described major risk factors and the cumulative sum of their individual risks.

Smoking, obesity, hypercholesterolemia, diabetes mellitus and hypertension are described in the attached graphic. As suggested by the Framingham study, they are often interrelated and one may influence the other. For example, obesity may influence insulin needs and eventual insulin resistance and the development of

Cardiovascular Risk Factors – Overview
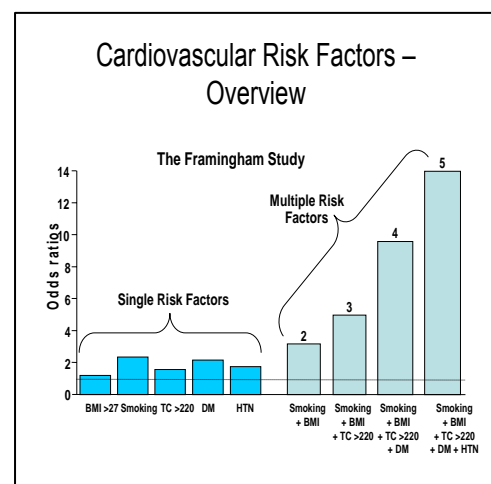
diabetes. Diabetes may influence not only blood sugar but lipid metabolism and all together they may accumulate to increase the risk of the metabolic syndrome and coronary heart disease and stroke.

b. Cardiovascular Risk Factors Among Persons With SMI

The cardiovascular relative risks associated with Schizophrenia and Bipolar Disorder are identified in the graphic on the right. Many of these are clearly modifiable risk factors.

c. Patient, Provider And System Factors Contributing To Morbidity And Mortality In Persons With SMI

There are a number of factors that place people with SMI at higher risk of morbidity and mortality.[viii]
Druss[ix] suggests that having SMI may be a risk factor because of:

Cardiovascular Disease (CVD) Risk Factors

Modifiable Risk Factors	Estimated Prevalence and Relative Risk (RR)	
	Schizophrenia	**Bipolar Disorder**
Obesity	45–55%, 1.5-2X RR[1]	26%[5]
Smoking	50–80%, 2-3X RR[2]	55%[6]
Diabetes	10–14%, 2X RR[3]	10%[7]
Hypertension	≥18%[4]	15%[5]
Dyslipidemia	Up to 5X RR[8]	

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- Patient factors: amotivation, fearfulness, social instability, unemployment, incarceraton
- Provider factors: attitude and comfort level with SMI population, coordination of care, and stigma
- System factors: fragmentation between mental health and general health care; funding

Other factors that place people with SMI at higher risk of morbidity and mortality[x] include:

- *Higher rates of modifiable risk factors*
    - Smoking
    - Alcohol consumption
    - Poor nutrition / obesity
    - Lack of exercise
    - "Unsafe" sexual behavior
    - IV drug use
    - Residence in group care facilities and homeless shelters (Exposure to TB and other infectious diseases as well as less opportunity to modify individual nutritional practices)

- *Vulnerability due to higher rates of*
    - Homelessness
    - Victimization / trauma
    - Unemployment
    - Poverty
    - Incarceration
    - Social isolation

- *Impact of symptoms associated with SMI*
    - Impaired reality testing
    - Disorganized thought processes
    - Impaired communication skills
    - Impulsivity
    - Paranoia
    - Mood instability
    - Decreased motivation

- Feelings of hopelessness and powerlessness
- Learned helplessness
- *Symptoms can mask symptoms of medical/somatic illnesses*
- *Psychotropic medications may mask symptoms of medical illness and contribute to symptoms of medical illness and cause metabolic syndrome*
  - Reduction in pain sensitivity associated with the use of some antipsychotic drugs
  - Medication side effects
  - Weight gain
  - Metabolic syndrome
  - Hypertriglyceridemia
  - Diabetes
- *Polypharmacy*
  - Identified as risk factor for sudden death
  - Affects adherence to treatment regimen
- *Lack of access to health care and lack of coordination between mental health and general health care providers*
- *Lack of financing for coordination of care across mental health and general health care providers*

2. Smoking

Smoking as a natural risk factor for increased mortality is very common among the US population. The World Health Association states that half of long-term smokers will die from their tobacco use[xi]. The Centers for Disease Control and Prevention found that fourteen percent of all state Medicaid expenditures are related to smoking[xii]. Adult men and women smokers lost 13.2 and 14.5 years of life respectively due to their smoking.[xiii] Smoking prevalence is among the highest for people with mental illness. *Seventy-five percent of individuals with either addictions or mental illness smoke cigarettes as compared with 23% of the general population.* Rates of smoking among treatment staff in mental health and addictions treatment facilities are also higher than the general population. On average, in mental health settings, approximately 30-35% of staff smoke.[xiv]

Mental Disorders and Smoking

- Higher prevalence (56-88% for patients with schizophrenia) of cigarette smoking (overall U.S. prevalence 25%)
- More toxic exposure for patients who smoke (more cigarettes, larger portion consumed)
- Smoking is associated with increased insulin resistance
- Similar prevalence in bipolar disorder

George TP et al. Nicotine and tobacco use in schizophrenia. In: Meyer JM, Nasrallah HA, eds. Medical Illness and Schizophrenia. American Psychiatric Publishing, Inc. 2003; Ziedonis D, Williams JM, Smelson D. Am J Med Sci. 2003(Oct);326(4):223-330

Smoking cessation may be the modifiable risk factor intervention that is likely to have the greatest impact on decreasing mortality. NASMHPD is currently finalizing a Medical Directors' Technical Report on Smoking that will serve as a resource for State Mental Health Authorities (SMHAs) in developing initiatives targeted at reduction in smoking.

Key thoughts on smoking cessation from the Morbidity and Mortality work group include:[xv]
- Combat discriminatory beliefs:
  - One of the few pleasures
  - Hopeless to try to quit

- Cessation will aggravate mental state
- A combination of behavioral and pharmacological approaches to smoking cessation are safe
- Support for cessation needs to be tailored to the population
- There is a strong correlation between contact time with a provider and rates of success and abstinence
  - Assessment of readiness of change
  - Motivational Interviewing

3. The Obesity and Diabetes Epidemics and Related Risk Factors and Conditions

a. The General Population

We begin by looking first at what has happened with the general population in regard to diabetes and cardiovascular risk factors. There is an epidemic of obesity and diabetes. There is a relationship between obesity and increasing risk of multiple medical conditions, including cardiovascular disease.

The obesity and diabetes epidemic since 1990 is depicted by the following graphics. By 2010 it is estimated that 10 % of the US population will have diabetes mellitus.

Obesity Trends* Among US Adults
BRFSS, 1991, 1996, 2003

(*BMI ≥30, or about 30 lbs overweight for 5'4" person)

1991   **1996**

2003

No Data ☐   <10% ■   10%-14% ■   15%-19% ■   20%-24% ■   ≥ 25% ■

Diabetes and Gestational Diabetes Trends: US Adults, BRFSS 1990

No Data | Less than 4% | 4% to 6% | Above 6%

Mokdad et al. *Diabetes Care.* 2000;23:1278-1283.

Diabetes and Gestational Diabetes Trends: US Adults, BRFSS 2000

No Data | Less than 4% | 4% to 6% | Above 6%

Mokdad et al. *JAMA.* 2001;286(10).

Diabetes and Gestational Diabetes Trends: US Adults, Estimate for 2010

No Data | Less than 4% | 4% to 6% | Above 6% | Above 10%

www.diabetes.org.

BMI Distributions for General Population and Those With Schizophrenia (1989)

Allison DB et al. *J Clin Psychiatry.* 1999;60:215-220.

b. Increased risk of diabetes in people with Schizophrenia

Obesity among persons with serious mental disorders is far greater than among the general population. See graphic above. Increased Body Mass Index (BMI) is one of the strongest predictors for insulin resistance and diabetes, thus there is a significantly increased risk of Type II diabetes (onset in adult years) in the SMI population.

People with Schizophrenia are at increased risk for developing diabetes. Several hypotheses have been proposed for this link. There may be a genetic link between Schizophrenia and diabetes. The medications taken for treating Schizophrenia may increase insulin

Prevalence of Diagnosed Diabetes in General Population Versus Schizophrenic Population

Harris et al. *Diabetes Care.* 1998; 21:518.
Mukherjee et al. *Compr Psychiatry.* 1996; 37(1):68-73.
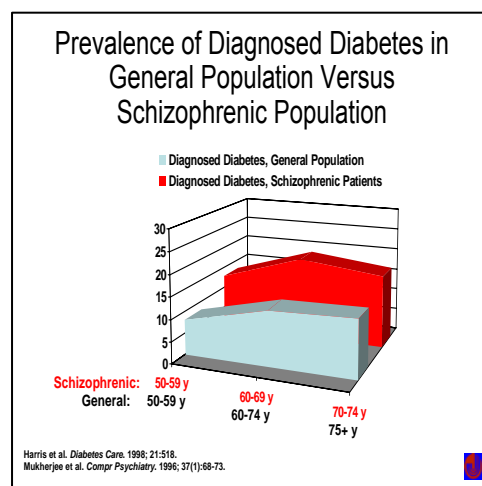
resistance. The medication or the illness may increase the caloric intake or reduce the activity level. [xvi]

Diabetes also strikes some ethnic groups with greater prevalence. The increased prevalence is thought to be due to poorer control of blood sugar levels, lower access and quality of diabetes care, cultural, social and perhaps, biological factors. There is also higher prevalence of chronic complications in minorities than in whites:[xvii]

- Lower leg amputations, 2-4 times
- Retinopathy and blindness, 2-4 times
- Stroke, 2 times
- Kidney failure, 4-6 times

The Health Resources And Services Administration (HRSA)/Institute for Healthcare Improvement (IHI) Health Disparities Collaboratives and the CHCs serving at-risk ethnic populations have focused on these ethnic disparities by initiating quality improvement projects specifically targeted at diabetes as well as cardiovascular conditions.

If populations with SMI are at higher risk than the general population, we can postulate that ethnic populations with SMI are at even higher risk, and this should be a consideration as we plan strategies as a public mental health system.

c. Obesity, Insulin Resistance, Metabolic Syndrome and Diabetes: Interrelationships, Morbidity and Mortality Risks

Insulin resistance, in which the normal actions of insulin are impaired, develops as early as 10 years prior to meeting the diagnostic threshold for diabetes.[xviii] Insulin resistance requires the pancreas to increase the production of insulin in order to maintain a normal blood sugar. Many are able to maintain this increased insulin production. However, over time for some people the insulin production begins to fail and ensuing blood sugar rises resulting in the onset of Type II diabetes. Insulin resistance can develop due to inherited and/or acquired influences.[xix] Inherited insulin resistance is rare. Acquired insulin resistance can be due to obesity, inactivity, smoking, aging, medications, illness, and high blood sugar.

Insulin resistance is associated with early risk factors for cardiovascular and other diseases. Type II Diabetes damage may begin even before the diagnosis. Hypertension, abnormal blood lipids and changes in blood clotting may also occur.

US Diabetes Prevalence by Ethnic Group

Men and Women, Age 45-74 Years

Harris et al. *Diabetes.* 1987;36:523.
Flegal et al. *Diabetes Care.* 1991;14(suppl 3):628.
Knowler et al. *Diabetes Care.* 1993;16(suppl 1):216.
Fujimoto et al. *Diabetes Res Clin Pract.* 1991;13:119.
Fujimoto et al. *Diabetes.* 1987;36:721.

Natural History of Type 2 Diabetes

IGT = impaired glucose tolerance.
Adapted from: International Diabetes Center (IDC). Available at: www.parknicollet.com/diabetes/disease/diagnosing.cfm. Accessed March 26, 2006.

Manifestations of Insulin Resistance: The Deadly Quartet

Adapted from Opara JU, Levine JH. *South Med J.* 1997;90:1162-1168.

Prolonged insulin resistance can eventually result in Type II Diabetes, which is more common in persons with SMI. Diabetes is associated with tissue damage in many organs. Diabetes is[xx]

- A major cause of vascular disease
- #1 cause of adult blindness
- #1 cause of end-stage kidney disease
- #1 cause of non-traumatic amputations

Insulin resistance is linked to developing metabolic syndrome.

d. Identification of The Metabolic Syndrome

The cumulative effect of multiple risk factors can lead to metabolic syndrome. Metabolic syndrome is associated with increased risk of heart attack and stroke. [xxi]

Metabolic syndrome is diagnosed when 3 or more of the following risk factors are present: obesity, hypertension, insulin resistance (as demonstrated by an elevated blood glucose level), and abnormal blood lipid (cholesterol and triglycerides) levels. *These are important factors to consider because obesity, insulin resistance, metabolic syndrome and Type II diabetes may be modifiable risk factors for the causes of increased death among persons with serious mental illnesses.*

e. Increased Incidence of Metabolic Syndrome in Population with SMI

In regard to metabolic syndrome, we return to our focus

Identification of the Metabolic Syndrome	
≥3 Risk Factors Required for Diagnosis	
Risk Factor	*Defining Level*
Abdominal obesity 　Men 　Women	Waist circumference 　>40 in (>102 cm) 　>35 in (>88 cm)
Triglycerides	≥150 mg/dL (1.69mmol/L)
HDL cholesterol 　Men 　Women	 <40 mg/dL (1.03mmol/L) <50 mg/dL (1.29mmol/L)
Blood pressure	≥130/85 mm Hg
Fasting blood glucose	≥110 mg/dL (6.1mmol/L)

on the population with SMI. Research examined the frequency of metabolic syndrome criteria (levels of hypertension, high cholesterol, increased blood clotting and insulin dependent diabetes) in the Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) subjects as compared with a sample of the general population. CATIE male and female subjects exceeded general population criterion prevalence for metabolic syndrome on every measure, except for males on one criterion.[xxii] The New York Times recently featured a front page story on the *connection between these chronic medical conditions and use of antipsychotic medications.*[xxiii]

4. Alcohol and Substance Use Disorders

Studies report that alcohol and other substance use disorders co-occur in 40-70% of the population with SMI. Accidents, suicide and aggressive actions are known to be increased among persons with co-occurring disorders. Although not a focus of this review, substance use disorders are a known health risk for many health conditions and also associated with early death.

5. Infectious Diseases

The prevalence of hepatitis and HIV are reported to be increased in persons with SMI, (Rosenberg, 2004). The risk of tuberculosis associated with group living and poverty may also be increased among persons with SMI.

6. Suicide

The New Freedom Commission noted that, "Suicide is a serious public health challenge that has not received the attention and degree of national priority it deserves. Many Americans are unaware of suicide's toll and its global impact. It is the leading cause of violent deaths worldwide." Many states have initiated Suicide Prevention campaigns targeted at the broader community, with educational materials that focus on age and gender cohorts. Suicide has traditionally been a focus of concern for mental health professionals.
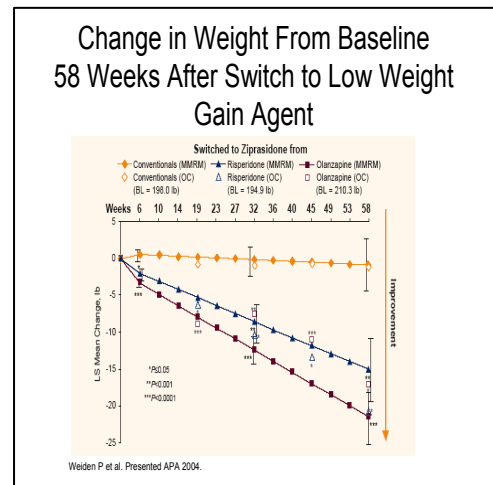
Broadening our view to the other causes of death should not reduce our vigilance regarding the risk of suicide in the people we serve.

C. The Impact of Medications

Beginning with the introduction of clozapine in 1991, and the subsequent introduction of five newer generation antipsychotics over the next decade or so, antipsychotic prescribing in the US has moved to the use of these second generation antipsychotics. This has occurred despite their significantly greater cost, largely due to a decrease in neurologic side effects and the perception that people

Modifiable Risk Factors Affected by Psychotropics
• Overweight/ obesity
• Insulin resistance
• Diabetes/hyperglycemia
• Dyslipidemia

using them may experience better outcomes, especially improvement in negative symptoms. However, with time and experience the ***second generation antipsychotic medications have become more highly associated with weight gain, diabetes, dyslipidemia, insulin resistance and the metabolic syndrome*** and the superiority of clinical response (except for clozapine) has been questioned. Other psychotropic medications that are associated with weight gain may also be of concern. One example is mood stabilizing agents such as valproic acid and lithium. The concern may be heightened especially when these agents are used in combination with second generation antipsychotics.

1-Year Weight Gain: Mean Change From Baseline Weight

Nemeroff CB. *J Clin Psychiatry*. 1997;58(suppl 10):45-49; Kinon BJ et al. *J Clin Psychiatry*. 2001;62:92-100; Brecher M et al. American College of Neuropsychopharmacology; 2004. Poster 114; Brecher M et al. *Neuropsychopharmacology*. 2004;29(suppl 1):S109; Geodon® [package insert]. New York, NY:Pfizer Inc; 2005. Risperdal® [package insert]. Titusville, NJ: Janssen Pharmaceutica Products, LP; 2003; Abilify® [package insert]. Princeton NJ: Bristol-Myers Squibb Company and Rockville, Md: Otsuka America Pharmaceutical, Inc.; 2005.

Change in Weight From Baseline 58 Weeks After Switch to Low Weight Gain Agent

Weiden P et al. Presented APA 2004.

Much has been written about the issue, for example, in the report of the recently completed CATIE trials, an NIMH study comparing second generation antipsychotics with each other and

with an older antipsychotic, perphenazine. Data in the CATIE study are far less likely to be influenced by drug company influences than many previously reported studies.

Comparison of Metabolic Syndrome and Individual Criterion Prevalence in Fasting SMI Subjects and Matched General Population Subjects

	Males		Females	
	SMI N=509	Gen.Pop. N=509	SMI N=180	Gen.Pop. N=180
Metabolic Syndrome Prevalence	36.0%	19.7%	51.6%	25.1%
Waist Circumference Criterion	35.5%	24.8%	76.3%	57.0%
Triglyceride Criterion	50.7%	32.1%	42.3%	19.6%
HDL Criterion	48.9%	31.9%	63.3%	36.3%
BP Criterion	47.2%	31.1%	46.9%	26.8%
Glucose Criterion	14.1%	14.2%	21.7%	11.2%

CATIE source for SMI data
NHANES III source for general population data
Meyer et al., Presented at APA annual meeting, May 21-26, 2005.
McEvoy JP et al. *Schizophr Res*. 2005;(August 29).

D. Access to Health Care

1. System Issues

a. Structure and Funding of Health Care Delivery System Affects Access to Care

Access to physical health care for people with SMI is hindered by both the structure and the under-funding of the publicly supported physical health and behavioral health systems of care. Issues include:

- Lack of reimbursement for coordinated care across service systems
- Lack of reimbursement for health education, support and family services
- Inadequate and under-skilled case management services to support self management and linkage to services
- Poor coordination between health care and behavioral health care systems
- Lack of integrated treatment for co-occurring mental health and substance use disorders which lead to inadequate diagnosis and treatment of substance use disorders. [xxiv]
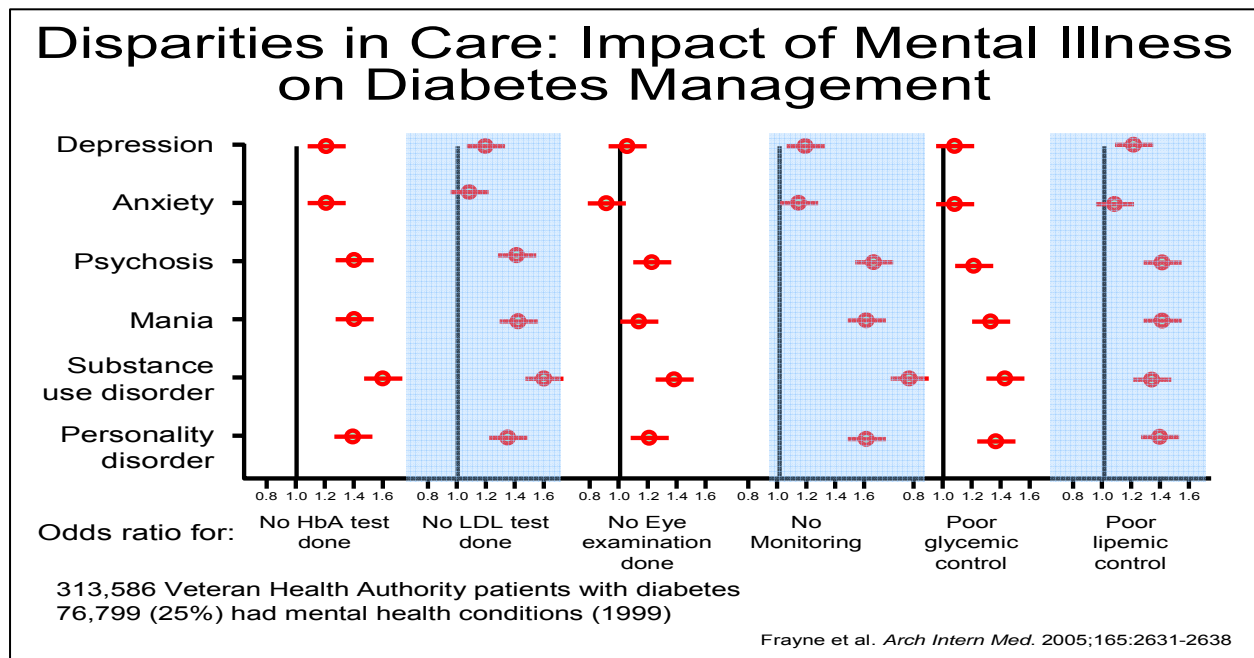
b. Lack of Capacity

Rural communities may not have any health care providers. In many states, safety net health care clinics are stretched to capacity.

c. Stigma / Discrimination

Research suggests that people with SMI frequently face discrimination in accessing and receiving appropriate health care. This may be due to:

- Unease of primary care providers with the needs of the SMI population
- Decreased expectations of clients as partners in care

The graphic below tells us that there is a difference (which could be labeled discrimination) in the care that people receive. The VA system offers better health care access and more support for recommended monitoring and disease management than is available to many people with SMI. Yet, in the VA system, the ***odds were greater that a diabetic with a psychosis or substance use disorder would not receive standard of care diabetic monitoring*** (e.g., HbA testing, LDL testing, eye examination), with predictable results of poor blood sugar and blood pressure control. This may be "the best case scenario" currently experienced by diabetic individuals with SMI—those without health care coverage and/or a medical home would likely receive less monitoring and disease management.

Disparities in Care: Impact of Mental Illness on Diabetes Management

313,586 Veteran Health Authority patients with diabetes
76,799 (25%) had mental health conditions (1999)

Frayne et al. *Arch Intern Med.* 2005;165:2631-2638

d. Poor Quality / Poor Provision of Services

Druss provides us with examples from his research and that of colleagues regarding Overuse, Underuse, and Misuse (*Three Types of Poor Quality*, Chassin 1998) of services related to the population with SMI:

Overuse:
- Persons with SMI have high use of somatic emergency services (Salisberry et al 2005, Hackman et al 2006)

Underuse:
- Fewer routine preventive services (Druss 2002)
- Lower rates of cardiovascular procedures (Druss 2000)
- Worse diabetes care (Desai 2002, Frayne 2006)

Survival Following Myocardial Infarction

- 88,241 Medicare patients, 65 years of age and older, hospitalized for MI
- Mortality increased by
  - 19%: any mental disorder
  - 34%: schizophrenia
- Increased mortality explained by measures of quality of care

Druss BG et al. *Arch Gen Psychiatry.* 2001;58:565-572.

Misuse:
- During medical hospitalization, persons with Schizophrenia are about twice as likely to have infections due to medical care postoperative deep venous thrombosis and postoperative sepsis (Daumit 2006)

e. Lack of Adequate Health Care Coverage

It is challenging for people with Medicaid or no insurance to find primary care and specialty physicians who will see them. Lack of health care coverage represents an enormous barrier to addressing the health care needs of the uninsured population with SMI.

A large proportion of the people served by the public mental health system are insured for their health care needs by Medicaid and Medicare (many are dual eligibles). The morbidity and mortality described in this report suggests an enormous impact on the past and future costs of these programs.

It is often difficult for Medicaid enrollees to find providers who will see them. One of the rationales for Medicaid managed care is to improve access to routine care and to reduce use of emergency room care. Yet in many states, the population with SMI, covered under the disability aid codes of Medicaid, is not included in Medicaid managed care contracts. Further, work on integrating mental health services into primary care settings has demonstrated that there is a number of barriers in how Medicaid reimbursement is structured (e.g., disallowance of more than one type on encounter on the same day).

2. Monitoring and Treatment Guidelines are Underutilized with SMI Populations

Approaches to improve the detection of medical comorbidities in people with Schizophrenia and other serious mental disorders are available. They focus on the prevalence and causes of medical comorbidities, providing quality health care, improving lifestyle, and guidelines for integrated models of care for persons with SMI. [xxv][xxvi][xxvii][xxviii] These approaches identify patient related elements, the nature of the illness, the medical system and available resources, and practitioners attitudes.

Early detection, diet, physical activity, smoking, obesity, alcohol use, lipids, diabetes and the role of antipsychotics are some of the guidance provided (see tables in Lambert and guidelines in Goff). Interventions can have very meaningful effects, as demonstrated in the graphic at right or the following example: The National Heart, Lung & Blood Institute has outlined the health benefits of modest weight loss (5-10%): [xxix]

- Decreased blood glucose and insulin levels
- Decreased blood pressure
- Decreased bad cholesterol (LDL-C/triglycerides)
- Increased good cholesterol (HDL-C)

Goals: Lower Risk for CVD

- Blood cholesterol
  - 10% ↓ = 30% ↓ in CHD (200-180)
- High blood pressure (> 140 SBP or 90 DBP)
  - 4-6 mm Hg ↓ = 16% ↓ in CHD; 42% ↓ in stroke
- Cigarette smoking cessation
  - 50%-70% ↓ in CHD
- Maintenance of ideal body weight (BMI = 25)
  - 35%-55% ↓ in CHD
- Maintenance of active lifestyle (20-min walk daily)
  - 35%-55% ↓ in CHD

Hennekens CH. Circulation. 1998;97:1095-1102.

- Decreased sleep apnea
- Reduced degenerative joint disease symptoms

We should begin our interventions in the mental health system, which we manage, versus recommending actions that cannot be accomplished without major modifications (e.g., cross system funding, staffing primary care within the CMHC, etc). Thus we should begin with psychiatric medical staff, add focus and requirements such as the APA/ADA guidelines, add time to do this, add staff (e.g., RN, APN) to support care and improve referral protocols (e.g., to primary care medical staff) within and without the mental health system.

The American Diabetes Association, American Psychiatric Association, American Association of Clinical Endocrinologists, and the North American Association for the Study of Obesity held a Consensus Development Conference on Antipsychotic Drugs and Obesity and Diabetes in 2004. [xxx] ***Despite having been available for the past several years, these ADA/APA guidelines are often not followed.*** Patient, physician and system factors are not well aligned to promote this practice. For example, adequate time to explain the risk factors and to encourage adherence to medication use along with physical status and laboratory monitoring, requires change in practice. This must be supported by funding and availability of resources (e.g., measuring blood pressure, weight and abdominal circumference at regular intervals), blood drawing and laboratory testing, and funding and time to discuss these more recently recommended services.

<table>
<tr><td colspan="2">

ADA Consensus Conference on Antipsychotic Drugs and Obesity and Diabetes: Baseline Screening

- Personal / family history of obesity, diabetes, dyslipidemia, hypertension, or cardiovascular disease
- Weight and height, to calculate BMI
- Waist circumference at umbilicus
- Blood pressure
- Fasting plasma glucose
- Fasting lipid profile

Diabetes Care. 2004;27:596-601.
</td></tr>
</table>

ADA Consensus on Antipsychotic Drugs and Obesity and Diabetes: Monitoring Protocol*

	Start	4 wks	8 wks	12 wks	3 mos.	12 mos.	5 yrs.
Personal/family Hx	X					X	
Weight (BMI)	X	X	X	X	X		
Waist circumference	X					X	
Blood pressure	X			X		X	
Fasting glucose	X			X		X	
Fasting lipid profile	X			X		X	X

*More frequent assessments may be warranted based on clinical status
Diabetes Care. 27:596-601, 2004

Health status should be a part of mental health assessment, goal setting, and service planning for every person with SMI. It is recommended that planning for physical activity and diet be integrated into activities that are/were pleasurable for the individual—handing a person educational material and telling them that they need to exercise and diet will not have the desired effect. Motivational interviewing techniques will be useful as a part of staging and framing the change process.

The ADA has developed widely available patient education materials that are in multiple languages and currently being modified for people with SMI. These materials can be used by individuals, family members, peers, and care managers as well as by psychiatrists and nurses to initiate individual education and health planning.

Preventive strategies for people with Schizophrenia at risk for diabetes include:[xxxi]

- Screen for diabetes: Fasting Plasma Glucose (FPG) or 75-g Oral Glucose Tolerance Test (OGTT), particularly before prescribing
- Minimize risk of weight gain:
  - Lifestyle changes
  - Appropriate medication selection
- Check weight/BMI/waist circumference regularly
- Baseline lipids and blood pressure
- Repeat baseline measures in 6 weeks and fasting blood sugar every 3 months on medication
- Be alert to possibility of diabetic coma
- Patient education

A single metabolic screening and monitoring form that is based on ADA and ATPIII guidelines[xxxii] summarizes the standard of care for the general population (see Appendix H). *The standard of care for the general population should also be the standard of care for the population with SMI, as the data shows higher degrees of risk and disease for the population with SMI than that of the general population.*

IV. National Policy Background

A. The President's New Freedom Commission

This report is grounded in the Final Report of the *President's New Freedom Commission on Mental Health,* which asserted that there must be a relationship between mental health and general health and that Recovery is integral to the work of the public mental health system (Appendix B extracts key references).[xxxiii]

These ideas are reflected in the excerpts below from the Final Report. For each, we have proposed a corollary statement.

New Freedom Commission	NASMHPD Proposed Corollary
Goal 1: Americans Understand that Mental Health is Essential to Overall Health Understanding that mental health is essential to overall health is fundamental for establishing a health system that treats mental illnesses with the same urgency as it treats physical illnesses.	Understanding that overall health is essential to mental health is fundamental for establishing a mental health system that treats physical illnesses with the same urgency as it treats mental illnesses.
Goal 2: Mental Health Care is Consumer and Family Driven The plan of care will be at the core of the consumer-centered, recovery-oriented mental health system.	The plan of care addresses the whole person, including health status and wellness, to ensure that recovery goals are not impeded by the individual's early death or chronic medical illnesses.

B. Institute of Medicine

The Institute of Medicine (IOM) convened the Committee on Crossing the Quality Chasm: Adaptation to Mental Health and Addictive Disorders in 2004. The committee was charged with adapting the quality improvement framework contained in the predecessor IOM report, *Crossing*

the Quality Chasm—A New Health System for the 21st Century. The scope of adaptation is across mental and substance-use (M/SU) conditions, the public and private sectors, and the comprehensive range of issues identified and addressed in the *Quality Chasm* report. The report of the Committee, *Improving the Quality of Health Care for Mental and Substance-Use Conditions*, was published in late 2005. There are two overarching recommendations:

- ***IOM Overarching Recommendation 1***: Health care for general, mental, and substance-use problems and illnesses must be delivered with an understanding of the inherent interactions between the mind/brain and the rest of the body.

- ***IOM Overarching Recommendation 2***: The aims, rules and strategies for redesign set forth in *Crossing the Quality Chasm* should be applied throughout mental/substance use health care on a day-to-day operational basis but tailored to reflect the characteristics that distinguish care for these problems and illnesses from general health care. (See Appendix E for the *Quality Chasm* Ten Rules.)

Within the IOM report, Chapter 5: *Coordinating Care for Better Mental, Substance-Use and General Health,* provides definitions, summarizes the body of research and makes recommendations specific to the issues of integration of care. The definitions include:

- ***Communication*** exists when each clinician caring for the patient shares needed clinical information about the patient to other clinicians also treating the patient.

- ***Collaboration*** is multidimensional, requiring:
    - A shared understanding of goals and roles,
    - Effective communication, and
    - Shared decision making.

- ***Care coordination*** is the outcome of effective collaboration and corresponds to clinical integration.

- ***Clinical integration*** is the extent to which patient care services are coordinated across people, functions, activities, and sites over time so as to maximize the value of services delivered to patients.

The recommendations in Chapter 5 include:

- Recommendation 5-1**:** To make collaboration and coordination of patients' M/SU health care services the norm, providers of the services should establish clinically effective linkages within their own organizations and between providers of mental health and substance use treatment. The necessary communications and interactions should take place with the patient's knowledge and consent and be fostered by:
    - Routine sharing of information on patient's problems and pharmacologic and nonpharmacologic treatments among and between providers of M/SU treatment
    - ***Valid, age-appropriate screening of patients for comorbid mental, substance-use and general medical problems*** in these clinical settings and reliable monitoring of their progress.

- Recommendation 5-2: To facilitate the delivery of coordinated care by primary care, mental health, and substance-use treatment providers, government agencies, purchasers, health plans, and accreditation organizations should ***implement policies and incentives to***

continually increase collaboration among these providers to achieve evidence-based screening and care of their patients with general, mental, and/or substance-use health conditions. (Detailed specific measures follow this recommendation; please see full report.)

- Recommendation 5-3: To ensure the health of persons for whom they are responsible, M/SU providers should:
  - Coordinate their services with those of other human-services and education agencies, such as schools, housing and vocational rehabilitation agencies and providers of services for older adults, and
  - Establish referral arrangements for needed services.

  Providers of services to high-risk populations—such as child welfare agencies, criminal and juvenile justice agencies, and long-term care facilities for older adults—should use valid, age-appropriate and culturally appropriate techniques to screen all entrants into their systems to detect M/SU problems and illnesses.

- Recommendation 5-4: To provide leadership in coordination, *DHHS should create a high-level continuing entity reporting directly to the secretary to improve collaboration and coordination across its mental, substance-use and general health care agencies*…DHHS also should implement performance measures to monitor its progress toward achieving internal interagency collaboration and publicly report its performance on these measures annually. State governments should create analogous linkages across state agencies.

Daniels and Adams have integrated the findings and recommendations of the original IOM Quality Chasm report, the President's New Freedom Commission report, SAMHSA's Federal Action Agenda and the 2005 IOM report specific to mental health and substance use, with the intent of creating a consensus framework and tools for system transformation. The 2005 IOM report provides a table of recommendations for a broad spectrum of stakeholder groups. These recommendations include specific steps that each group—alone and in collaboration—can take to promote meaningful transformative change and make the mental health system more person-centered. [xxxiv]

C. Bazelon Center

The Bazelon Center report, *Get It Together: How to Integrate Physical and Mental Health Care for People with Serious Mental Disorders,* was published in 2004. The report focuses primarily on integration and the problems stemming from a fragmented health care system. The report states "*In a recovery-oriented mental health system, physical health care is as central to an individual's service plan as housing, job training or education.*" [xxxv] The report describes barriers to integrated care and highlights four service delivery models for integrating care. Additional models are described in the Recommendations section of this report.

D. NASMHPD

The NASMHPD Medical Directors Council 11th Technical Report, *Integrating Behavioral Health and Primary Care Services: Opportunities and Challenges for State Mental Health Authorities,* identifies three principles that continue to frame thinking about the relationship between behavioral health (mental and substance use conditions) and general health.

- Increased integration of behavioral health and health care services is a priority at the national, state, local and person levels. Good public policy will work to sustain, support and require integration of services between the two "safety net" systems of CHCs and SMHA providers with integration ranging from coordination of care to full integration of medical and behavioral services.

- Physical health care is a core component of basic services to persons with serious mental illness. Ensuring access to preventive health care and ongoing integration and management of medical care is a primary responsibility and mission of mental health authorities.

- Behavioral health care is a core component of essential services to persons seeking primary health care. Ensuring access to preventive, ongoing, and appropriate behavioral health service is a primary responsibility and mission of general health care providers. (Appendix D contains the Executive Summary of the full report.)[xxxvi]

This report on morbidity and mortality points the way to a new focus on assuring that the people served by the public mental health system have access to effective, high quality health care and that all care is coordinated. ***Quality health care should have the same priority as employment, housing or keeping people out of the criminal justice system.***

V. Recovery and Wellness

The American Heritage dictionary defines Wellness as "The condition of good physical and mental health, especially when maintained by proper diet, exercise, and habits." We assert that**:**

- ***Wellness is one of the ultimate goals of, and an integral part of, Recovery***
- ***Recovery principles and approaches are necessary to achieve Wellness***

There are multiple aspects to Recovery, as described in the Substance Abuse and Mental Health Services Administration's (SAMHSA) *Consensus Statement on Recovery[xxxvii]*, the full text of which can be found in Appendix C.

- Self-Direction
- Individualized and Person-Centered
- Empowerment
- Holistic
- Non-Linear
- Strengths-Based
- Peer Support
- Respect
- Responsibility
- Hope

Mental Health Recovery
...is a journey of healing and transformation enabling a person with a mental health problem to live a meaningful life in a community of his or her choice while striving to achieve his or her full potential.

| Holistic |
| --- |
| Recovery encompasses an individual's whole life, including mind, body, spirit, and community. Recovery embraces all aspects of life, including housing, employment, education, mental health and healthcare treatment and services, complementary and naturalistic services (such as recreational services, libraries, museums, etc.) addictions treatment, spirituality, creativity, social networks, community participation and family supports as determined buy the person. Families, providers, organizations, systems, communities and society play crucial roles in creating and maintaining meaningful opportunities for consumer access to these supports. |

Of these, the Holistic principle particularly speaks to the issues under consideration in this report. The holistic nature of Recovery includes "body…and healthcare treatment and services".

The essential role of Recovery principles in good health care is clear from the IOM definition of *Patient-centered—"providing care that is respectful of and responsive to individual patient preferences, needs and values and ensuring that patient values guide all clinical decisions."*

An inherent link between Recovery and Wellness is noted in the New Freedom Commission Report under Goal 2: Mental Health Care is Consumer and Family Driven: "Giving consumers the ability to participate fully in their communities will require a few essentials: ….Access to health care".
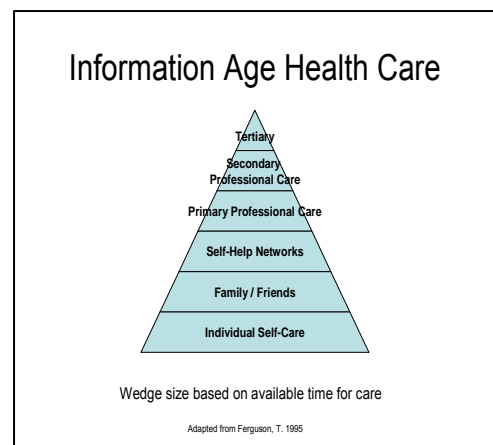
The Wellness model developed by Dr. Bill Hettler[xxxviii] is strikingly consistent with the SAMHSA Consensus Statement on Recovery:

- Wellness is an active process of becoming aware of and making choices toward a more successful existence. Wellness involves 'process' and 'awareness' - which means developing awareness that there is no end point and that we never arrive at a point where there is no further possibility of improving; health and happiness are definitely attainable. The key words in the previous sentence are *process, aware, choices,* and *success*

- Wellness is a way of life—a lifestyle we design to achieve an optimal level of well-being.

- Wellness involves *choice*—which means that we have considered a variety of options and select those that seem to be in our best interest—a decision we make toward optimal health.

- Wellness is the positive acceptance of oneself.

- Wellness is the interaction of the body, mind, and spirit—the appreciation that everything we do, think, feel, and believe has an impact on our state of health.

- Success is determined by each individual to be their personal collection of accomplishments for their life.
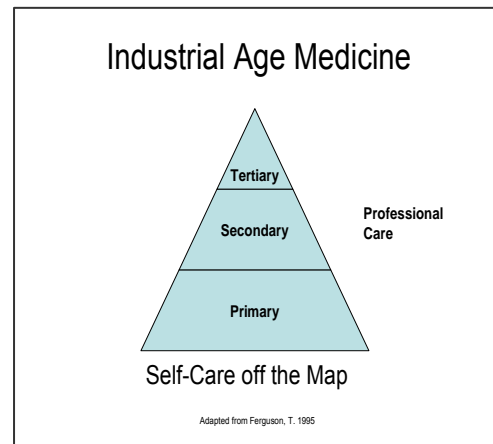
Successful recovery, as well as the lifestyle changes necessary to address morbidity and mortality, necessitates empowering individuals with decision making skills acquired through practice. ***Choice of lifestyle changes among persons with SMI will be an important component—lifestyle changes require individual changes—and hope drives lifestyle and the assertive pursuit of health.***

Recovery must incorporate a substantial focus on Wellness. Addressing the epidemic of chronic medical illness and premature death is essential to realizing the promise of recovery. Poor physical health puts additional barriers on the path to recovery, stealing time, energy, and personal resources that could go towards recovery. Even more tragically, premature death

Industrial Age Medicine

Tertiary

Secondary

Primary

Professional Care

Self-Care off the Map

Adapted from Ferguson, T. 1995

Information Age Health Care

Tertiary

Secondary
Professional Care

Primary Professional Care

Self-Help Networks

Family / Friends

Individual Self-Care

Wedge size based on available time for care

Adapted from Ferguson, T. 1995

robs the recovering individual of the fruits of a long, hard effort—a meaningful life in the community. Most persons with SMI don't reach recovery until their mid-40's. Now that people with SMI are dying 25 years sooner than the general population, they are left with many fewer years of life to enjoy their recovery.

We must engage people with SMI in their health care in new ways, empowering them to take personal responsibility for making health choices to promote their individual recovery and wellness efforts. As noted in the Recommendations, there are multiple strategies to pursue in addressing morbidity and mortality, most of them in partnership with other systems such as the general health care system, Medicaid or Public Health. But, *for any of these strategies to be successful, our principal partnership must be with the people we serve.*

V. What Should Be Done? – Recommendations and Solutions

A. Introduction

These proposed recommendations and solutions are organized at four levels of action: national; state; provider agencies and clinicians; and, persons served, families and their community. We have identified several major actions necessary to address the issues described in this report.

1. *Prioritization of the public health problem of morbidity and mortality and designation of the population with SMI as a priority health disparities population.*

2. *Tracking and monitoring of morbidity and mortality in populations served by our public mental health systems (surveillance).*

3. *Implementation of established standards of care for prevention, screening, assessment, and treatment.*

4. *Improved access and integration with physical health care services.*

B. National Level

The federal government and other national groups have resources that can support efforts to improve care to people with SMI served in our public mental health care systems. We recommend three major areas of focus:

NATIONAL LEVEL RECOMMENDATIONS:

1. *Designate the population with SMI as a health disparities population.*

2. *Adopt ongoing surveillance methods.*

3. *Support education and advocacy.*

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1. Designate the Population with SMI as a Health Disparities Population

a. Federal designation of people with SMI as a distinct at-risk health disparities population is a key first step, followed by development and adaptation of materials and methods for prevention in this population as well as inclusion in morbidity and mortality surveillance demographics.

HRSA has sponsored the Health Disparities Collaboratives in partnership with IHI, based on this vision: ***Reduce disparities in health outcomes for poor, minority, and other underserved people***. Using the methodology of IHI's Breakthrough Series Model, The Model for Improvement and the Care Model (see the NASMHPD Report summarized in Appendix D for more on this model), health care providers are making a positive difference in the lives of hundreds of thousands of Americans. To date, these and other federal initiatives focused on Health Disparities have not identified people with SMI as an included target population. ***The research that is presented in this report documents the considerable health disparity experienced by the population with SMI and should be the basis for such a designation.***

Some of the populations served by the public mental health system are uninsured, or move in and out of eligibility for Medicaid. Inclusion of the population with SMI as a designated health disparity population may assist somewhat in their access to health care services for the uninsured; however, the lack of health care coverage represents an enormous barrier to addressing the mental health and medical care needs of the uninsured population with SMI. ***SAMHSA and CMS in conjunction with NASMHPD and the National Association of State Medicaid Directors (NASMD) should work together to assure that that funding and billing mechanisms are in place to support the recommendations for preventive care, integration of primary care and mental health services, and effective access to primary care and mental health services for persons with SMI.***

2. Adopt Ongoing Surveillance Methods

a. Establish a committee at the federal level to recommend changes to national surveillance activities that will incorporate information about health status in the population with SMI.

Existing national morbidity and mortality surveillance activities need to include mental health measures. ***In addition, this group should develop standard definitions for tracking of deaths and key data elements of morbidity in the SMI population across states.***

At present, there is little in national health surveillance activity that addresses the surveillance needs of the mental health system, but there are opportunities to work at adding key information components[xxxix]:

- National Comorbidity Survey
  - Definitive survey on epidemiology of mental disorders, conducted 1990-2 and 2001-3
  - Relatively limited measures of medical comorbidity or medical service use
  - Recommendations:
    ⇒ Add more complete measures of medical comorbidity
    ⇒ Add fuller measures of health behaviors (e.g. diet, exercise, BMI, smoking)

⇒ Add more robust measures of health service use (e.g. preventive services; primary care and specialty services)

- National Health Interview Survey
  - Largest annual survey of the health in the US
  - Mental health questions in all years include self-reported mental health diagnoses and some brief Depression screens; 1989 was the only survey year that specifically subsampled persons with SMI
  - Recommendations:
    ⇒ New supplement for persons with SMI
    ⇒ Include mental health screening questions regularly
    ⇒ Analyze data with mental illness as both a dependent and an independent variable
- National Ambulatory Medical Care Survey
  - Surveys office visits to physicians
  - Psychiatrist sample very small
  - Recommendations:
    ⇒ NAMCS-like survey for CMHCs (HRSA has done both a NAMCS and NHIS for CHCs)
- National Health and Nutrition Examination Survey
  - Best survey on the epidemiology of illness in the US; Physical examination, laboratory tests allow for definitive diagnosis
  - Several NHANES surveys have included brief Depression measures, but there is no way of identifying individuals with other SMI
  - Recommendations:
    ⇒ NHANES to assess health status for a random sample of persons with SMI in the community
    ⇒ Include questions such as the K-6 or PHQ 9 in all surveys, permitting analysis of co-occurrence of mental illness and medical comorbidity
- Behavioral Risk Factor Surveillance System (BRFSS)
  - Identifies risk factors such as smoking, diet in a very large sample
  - Both the BRFSS and NHIS will be adding the K6, a symptom measure, not for the SMI population, but for persons with self reported frequent mental distress
  - Maine has utilized BRFSS as a surveillance tool for the SMI population
  - Because the K-6 is only a nonspecific symptom measure, it may not capture the population with severe mental illness in the public sector who are at greatest risk and of highest policy relevance
- CMHS Client-Patient Sample Survey
  - Done every 5 – 7 years
  - Contains basic data on SMI and physical health problems
  - Recommendations:
    ⇒ Information on physical health problems and services needs to be enhanced
- Uniform Reporting System/National Outcome Measurement System
  - Prior developmental work was done on mortality (Lutterman et al., 2003)
  - Recommendations:
    ⇒ An indicator needs to be added on use physical health screening and services

- Medicaid, Medicare and Private Insurance Data
  - CMHS has a large scale contract with RTI to analyze encounter data
  - Contract needs to be supplemented to investigate patterns of physical health care
  - Recommendations:
    ⇒ System lacks an indicator of SMI

b. Engage at the national and state levels, per the IOM report, in developing the National Health Information Infrastructure (NHII) to assure that EHR and PHR templates include the data elements needed to manage and coordinate general health care and mental health care.

In the future, Electronic Health Records (EHRs) and Personal Health Records (PHRs) will provide a data set that can be mined for surveillance data, likely replacing the surveys and other reporting systems that we now use. Engage at the national and state levels in development of the National Health Information Infrastructure (NHII) to assure that EHR and PHR templates include the data elements needed to manage and coordinate general health care and mental health care. These systems need careful design to ensure that critical health status and service information for the purposes of surveillance and performance measurement can be extracted.

Regional Health Information Organizations (RHIOs) are now being formed to develop electronic networks containing data elements essential to care coordination and accessible by diverse participating health care organizations in a defined geographic region.

Chapter 6 of the IOM report, *Ensuring the National Health Information Infrastructure Benefits Persons with Mental and Substance-Use Conditions*, outlines the actions needed to ensure that the developing National Health Information Infrastructure (NHII) serves consumers of health care for mental and/or substance use conditions as well as it does those with general health care needs and notes that our information technology systems lag behind those of general health care, as does our coding of services provided. Clearly, if we intend that mental health systems integrate services more directly with general health care, especially if we include the provision of general health care in mental health provider sites, these issues must be addressed.

3. Support Education and Advocacy

a. Share information widely about physical health risks in persons with SMI to encourage awareness and advocacy. Educate the health care community. Encourage persons served and family members to advocate for wellness approaches as part of recovery.

b. Build on the development of SAMHSA evidence-based practices by creating a toolkit that is focused on health status and healthy lifestyles.

c. Promote adoption of recommendations in the NASMHPD Technical Reports on Polypharmacy and Smoking to implement policies and programs addressing these risk factors.

C. State Level

The state level is where partnerships among the SMHA, Public Health, Medicaid and the health care delivery system must be created, in order to address the health care needs of the populations with SMI. We recommend six major areas of focus:

STATE LEVEL RECOMMENDATIONS

1. *Prioritize the public health problem of morbidity and mortality and designate the population with SMI as a priority health disparities population.*

2. *Improve access to physical health care.*

3. *Promote coordinated and integrated mental health and physical health care for persons with SMI.*

4. *Support education and advocacy.*

5. *Address funding.*

6. *Develop a quality improvement (QI) process that supports increased access to physical health care and ensures appropriate prevention, screening and treatment services.*

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1. Prioritize the Public Health Problem of Morbidity And Mortality and Designate the Population with SMI as a Priority Health Disparities Population.

a. Collect surveillance data on morbidity and mortality in the population with SMI.

SMHAs must work with Medicaid and Public Health agencies to build state level surveillance data bases to provide surveillance data on both morbidity and mortality in the population with SMI. Our public mental health system must track morbidity and mortality in public mental health populations.

Each SMHA should know who has died while an active client and why. Currently there are a range of policies regarding reportable deaths; the SMHAs do not have comparable data. The Sixteen State Mortality Study provided valuable new data, but also demonstrated the variability of data collection within the states. Two state-level surveillance methods have demonstrated use of data from other systems to match data from the MHSA system:

- For morbidity, match to the Medicaid encounter data to obtain information on the diagnoses and treatments being provided by the health care system for the population served by the MHSA. The data in the Maine study is an example.

- For mortality, match to the State Department of Health death records to obtain information on numbers and causes of death in the population served by the MHSA. The data from Ohio is an example, although only matched to inpatients.

As noted in the National level recommendations, it is proposed that the standard for surveillance should be set at the national level, to assure comparability of data. Implementation must be carried out at the State level.

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b. Apply a public health approach and population based interventions.

It is currently popular to talk about using a Public Health approach in mental health. What exactly does this mean? "Public Health includes the activities that society undertakes to assure the conditions in which people can be healthy. These include organized community efforts to prevent, identify and counter threats to the health of the public."[xl] While the role of Public Health as a safety net health care provider varies considerably across the states, the Three Core Functions and Ten Essential Services of Public Health (identified by the IOM in 1988 and subsequently refined by the Public Health Functions Steering Committee) [xli] is a template used by Public Health systems nationally:

Assessment
1. Monitor health status of the community
2. Diagnose and investigate health problems and hazards
3. Inform and educate people about health issues
Policy Development
4. Mobilize partnerships to solve community problems
5. Support policies and plans to achieve health goals
Assurance
6. Enforce laws and regulations to achieve health goals
7. Link people to needed personal health services
8. Ensure a skilled public health workforce
9. Evaluate effectiveness, accessibility, and quality of health services
10. Research and apply innovative solutions

The focal activity under the Assessment function is surveillance, "systematic monitoring of the health status of a population."[xlii] Another Public Health concept is population based intervention with differential levels of prevention, using the tools of health promotion, health education and linking people to appropriate treatment.

- Primary Prevention consists of strategies that seek to prevent the occurrence of disease or injury, generally through reducing exposure or risk factor levels. These strategies can reduce or eliminate causative risk factors (risk reduction).

- Secondary Prevention consists of strategies that seek to identify and control disease processes in their early stages before signs and symptoms develop (screening and treatment).

- Tertiary Prevention consists of strategies that prevent disability by restoring individuals to their optimal level of functioning after a disease or injury is established and damage is done. [xliii]

We need Public Health as a partner in implementing standard surveillance methodologies for morbidity and mortality in people with SMI and in utilizing Public Health's primary, secondary and tertiary prevention and treatment strategies with the population we serve.

A growing body of literature has reported on the epidemics of obesity and diabetes in the general population, and the Public Health system has developed strategies to address these issues, collaborating with public and private insurers and the health care delivery system to intervene

with primary, secondary and tertiary prevention initiatives related to obesity, diabetes and cardiovascular disease, which are intertwined issues. These approaches and materials need to be customized for use in the public mental health system (for example, the ADA is currently revising its educational materials for use with the population served by the public mental health system).

Populations with SMI are at higher risk than the general population. Some ethnic populations with SMI are at even higher risk of morbidity and mortality from diabetes and other medical conditions, and this should be a consideration as we plan strategies as a public mental health system.

Health Disparities refer to differences in populations' health status that are avoidable and can be changed. These differences can result from environmental, social and/or economic conditions, as well as public policy. These and other factors adversely affect population health.[xliv] It could be argued that many of the causes of morbidity and mortality are related to the vulnerability of the population with SMI. Efforts to address these conditions should include:

- Safe housing
- Adequate income
- Skills-based prevention programs to reduce vulnerability to victimization
- Addressing substance use
  - Impairment
  - Environment associated with illegal drug use
- Case management services

Research conducted in the VA system assessed treatment and quality of life for U.S. veterans with chronic and persistent mental illness and found that increased exposure to case management resulted in an improved quality of life across several domains, including both objective and subjective dimensions for health, general, leisure, and social, and the subjective dimension only for housing.[xlv]

As an example of what a SMHA might do in partnership with other systems, Maine DHHS has directed senior clinicians to participate in workgroups on behavioral health/health integration with Medicaid, Public Health, provider and consumer groups, Federally Qualified Health Centers and several other public and private groups. The bulk of the work of this collaboration has been directed at early screening and treatment for Depression in general medical settings, and in the implementation of the chronic care model for Depression, as well as for diabetes and heart disease. Examples of collaborative projects have included a HRSA funded Public Health project on integrating behavioral health for women of child bearing age, examination of BRFSS data

Medical Expenses for MaineCare service users, 2002 (Muskie)		
MH/SA Behavioral Services	MH/SA Medical Services	General MaineCare Medical Services
$359 PUPM	$422 PUPM	$163 PUPM

for the interaction between poor mental health and health risks, a Medicaid project involving implementation of the chronic care model and Depression care for members with complex

conditions and inclusion of Depression as a priority condition to be addressed in the Maine State Health Plan.

The SMHA is also on the steering committee for a multiyear integration effort funded by the Maine Health Access Foundation, Maine's largest health care foundation. In working with these partners the SMHA has acquired a knowledge of quality programming for chronic health conditions that can be leveraged to implement a system of effective and accessible health care for persons with serious mental illness. Next steps for Maine's SMHA include analysis of the utilization, quality and cost of care for diabetes, cardiovascular disease and other health conditions for persons with serious mental illness, with the expectation that the results of this integrated data analysis will provide direction for future policy and program changes. The results of these analytic efforts are currently being shared with mental health providers and persons serves in order to engage them at the outset in planning for collaborative projects that address health issues within mental health programs.

Maine: Coronary Artery Disease Care

	SMI	Non-SMI	Stat Sig
Number	514	335	
Med-Surg Costs	$11,825	$14,832	ns
Cardiac Diagnostics	44.2%	48.7%	ns
Therapy Events Per person	1.5	2.1	.08
Bypass/Stents Valve/Pacemaker	2.3%	5.1%	.03
Cardiac Rehab	3.3%	7.2%	.01
Emergency	42.8%	31.9%	.001
Outpatient	49.4%	64.2%	.001

2. Improve Access to Physical Health Care

a. Require, regulate, and lead the public behavioral health care system to ensure prevention, screening, and treatment of general health care issues.

Implement standards of care for prevention, screening and treatment utilizing practice guidelines. Since damage from diabetes begins before the diagnosis, there should be substantial investment in primary prevention activities as well as screening.

There is much that is applicable from the quality improvement work in the health care delivery system, as led by IHI. For example, a current initiative is the 100,000 Lives Campaign. The campaign aimed to enlist thousands of hospitals across the country in a commitment to implement changes in care that have been proven to prevent avoidable deaths in hospitals, estimated by the IOM at 98,000 per year.

Six changes (Deploy Rapid Response Teams, Deliver Reliable, Evidence-Based Care for Acute Myocardial Infarction, Prevent Adverse Drug Events, Prevent Central Line Infections, Prevent Surgical Site Infections, Prevent Ventilator-Associated Pneumonia), each supported by specific improvement tools and expertise, have been implemented voluntarily by hospitals that have joined the Campaign, with results routinely tracked and measured.[xlvi] The public mental health system could employ the IHI model in crafting an initiative to prevent avoidable early death and chronic medical illness in people with SMI.

b. Build adequate capacity to serve the physical health care needs of the SMI population.

This is challenging for a number of reasons: people with Medicaid or no insurance have difficulties finding primary care and specialty physicians who will see them; research suggests that people with SMI face additional barriers, including discrimination, in receiving appropriate health care; rural communities may not have any health care providers; and, safety net health care clinics (Federally Qualified Health Centers/Community Health Centers and Public Health clinics in states where Public Health also provides safety net health care) are stretched to capacity. These are issues that will need to be addressed state by state, in partnership with the health care delivery system, especially the safety net providers.

3. Promote Coordinated and Integrated Mental Health and Physical Health Care for Persons with SMI

a. Utilize the system transformation recommendations from the New Freedom Commission, Institute of Medicine and SAMHSA to achieve a more person-centered mental health system. Specifically, implement the following selected recommendations, as identified in the IOM report, and modified to address the morbidity and mortality issues.

- *Create high-level mechanisms to improve collaboration and coordination across agencies*
- *Promote integration of general healthcare and mental health records*
- *Revise laws and other policies to support communication between providers*

In a systematic review of the literature, Druss and von Esenwein found that a range of models may help improve quality and outcomes of care in persons with mental and substance use disorders.[xlvii] An emerging practice is to bring health care services into the public mental health system. Some examples include:

- Cherokee Health System in east Tennessee has primary care physicians on the teams serving people with SMI. The Cherokee model was featured as one of several examples in the publication issued by the Bazelon Center.[xlviii]

- Research conducted in the VA system used a randomized trial to evaluate an integrated model of primary medical care for a cohort of patients with serious mental disorders. Veterans who received care in the integrated clinic received on-site primary care and case management that emphasized preventive medical care, patient education and close collaboration with mental health providers to improve access to and continuity of care. Analyses compared health process (use of medical services, quality of care, and satisfaction and outcomes (health and mental health status and costs) between the groups in the year after randomization. On-site, integrated primary care was associated with improved quality and outcomes of medical care.[xlix]

- Bartels reported on a pilot study using a community mental health nurse who is trained in psychiatric and medical care management. The nurse care manager role was to monitor, facilitate, and coordinate primary medical care in education and illness management, simultaneously addressing psychiatric and medical needs through rehabilitation, health care management, and skills training. This model, focused on older adults, links interventions to enhance independent functioning, health outcomes and quality of life, including rehabilitation/skills training and medical case management.[l] A similar model has been employed in the Vermont site participating in the Robert Wood Johnson Foundation (RWJF) program, Depression in Primary Care: Linking Clinical and System Strategies.

- NIMH is currently funding a large randomized trial of a nurse care manager intervention designed to improve primary medical care for individuals served by a community mental health center. This randomized, controlled trial is located in an inner-city community mental health center in Atlanta, Georgia. Subjects assigned to medical case management will be provided a manualized, stepped-care intervention that includes patient education and activation, communication and advocacy with medical providers and help in overcoming system-level barriers to primary care. The study is testing the impact of the intervention on quality of primary care, health outcomes, and costs.

- The Washtenaw Community Health Organization (WCHO) in Michigan, a collaboration between the University of Michigan, the county mental health center, and local private health clinics, used the NCCBH Four Quadrant Model to organize its integrated services. The services provided to people with SMI include nurse practitioners from the School of Nursing who operate side by side with psychiatrists and social workers at two mental health clinics. Persons served with urgent health needs and those without primary care providers can receive health care services at the time of their mental health appointment. Additionally, researchers from the University of Michigan and the WCHO have designed a health risk appraisal instrument that assists mental health staff in identifying specific health risk behaviors and potential health conditions. This electronic tool flags the data and notifies the person completing the form of needed health follow-up based on the answers in the tool.[li]

- In Massachusetts, the Northeast Health System (NHS), a large community-based health care delivery system (which includes a full continuum of acute inpatient, outpatient and long-term care services) and Health & Education Services (HES), a large behavioral health care network that is part of NHS, initiated a performance improvement projects which evolved into a controlled field study and then into a partially funded program. They chose to embed primary care for adults with SMI within the mental health setting, creating one-stop shopping in a familiar environment. Patients were randomly assigned to experimental and control groups. The experimental group received routine primary health care from a nurse practitioner in the mental health setting. Those in the control group received treatment as usual with regard to their primary care. One goal was to reduce ER visits by 33%; ER visits were actually 42% lower in the experimental group compared with the control group. The most dramatic differences were found in the health care screens for hypertension and diabetes. For both indicators, the experimental group experienced a 44% rate of access compared with 0% in the control group.[lii]

b. Implement the recommendations found in the 11th NASMHPD Technical Paper: Integrating Behavioral Health and Primary Care Services.

As the mental health system initiates preventive measures, monitoring and screening, it must address the barriers of access to treatment and ongoing medical care for people with SMI and other complex conditions. NASMHPD issued a Technical Report on this topic in 2005. See Appendix D for the Executive Summary, which includes all of the recommendations. Work with persons served and family groups to advocate for improved access and quality of physical health care services to the population with SMI.

4. Support Education and Advocacy

a. Develop and implement toolkits and guidelines to help providers, self-help/peer support groups and families understand how to facilitate healthy choices while promoting personal responsibility.

b. Establish training capacity. A key component of this plan will be training and technical assistance for the mental health workforce on the importance of the issues.

c. Involve academic and association partners in planning and conducting training.

d. Address stigma / discrimination.

5. Address Funding

a. Assure financing methods for service improvements. Include reimbursement for coordination activities, case management, transportation and other supports to ensure access to physical health care services.

b. As a health care purchaser, Medicaid should:
- *Provide coverage for health education and prevention services (primary prevention) that will reduce or slow the impact of disease for people with SMI.*
- *Establish rates adequate to assure access to primary care by persons with SMI.*
- *Cover smoking cessation and weight reduction treatments.*
- *Use community case management to improve engagement with and access to preventive and primary care.*

There are two aspects of Medicaid financial impact: the opportunity to provide health education and prevention services (primary prevention) that will reduce or slow the impact of disease for people with SMI, and the cost of providing appropriate health care services (secondary and tertiary prevention) to people with SMI.

6. Develop a Quality Improvement (QI) Process that Supports Increased Access to Physical Health Care and Ensures Appropriate Prevention, Screening and Treatment Services.

a. Establish a system goal for quality health care with the same priority as employment, housing or keeping people out of the criminal justice system.

b. Join with the Medicaid and Public Health agencies at the state level to develop a quality improvement (QI) plan to support appropriate screening, treatment and access to health care for people being served by the public mental health system, whether Medicaid or uninsured.

Common causes of increased mortality and chronic medical illness in the SMI population should be targeted for QI action planning and programmatic interventions.

Assure integrated data analysis of utilization, cost and quality outcomes for both health care and mental health, including analysis of degree to which improvements in one system of care leads to changes in the other system of care.

c. Assure that all initiatives to address morbidity and mortality have concrete goals, timeframes and specific steps. Gather performance measurement data and use to manage overall system performance.

Integration projects, such as the state level work underway in Maine or projects initiated by individual organizations, need to plan from the beginning to gather and use data to learn from their work, determine if they are meeting their goals, and demonstrate to themselves and to policy makers the significance of the efforts. Some questions posed in the Morbidity and Mortality Work Group that would benefit from regular data collection are:

- How widespread is screening?
- How many cases are detected?
- How many cases are prevented?
- In how many case are outcomes improved?
- How much does it cost?
- Who has paid?

Performance measurement must be a part of these new programs as they are designed and implemented. We are fortunate in not having to start anew to develop performance measures for this work on integrated care and co-occurring conditions. The Center for Quality Assessment & Improvement in Mental Health has presented three sets of quality measures for use:

- Quality measures for patients with co-occurring medical and psychiatric conditions treated in primary care settings
- Quality measures for patients with co-occurring medical and psychiatric conditions treated in the mental health specialty setting
- Quality measures for patients with co-occurring substance use and psychiatric conditions treated in the mental health specialty setting

Each set includes structure, process, and outcome measures. (The full set of measures can be found in Appendix I.)

d. Use regulatory, policy and other programming opportunities to promote personal responsibility for making healthy choices by changing the locus of control from external (program rules, regulations, staff) to the individuals we serve (self-control and management).

e. Continue to promote adoption of recommendations in the NASMHPD Technical Reports on Polypharmacy and Smoking to implement policies and programs addressing these risk factors.

D. Provider Agencies / Clinicians

The direct service delivery system is where we must focus improvement activities. We recommend five major areas of focus:

PROVIDER AGENCY / CLINICIAN LEVEL RECOMMENDATIONS:

1. *Adopt as policy that mental health and physical healthcare should be integrated.*

2. *Help individuals to understand the hopeful message of recovery, enabling their engagement as equal partners in care and treatment.*

3. *Support wellness and empowerment in persons served, to improve mental and physical well-being.*

4. *Ensure the provision of quality, evidence-based physical and mental health care by provider agencies and clinicians.*

5. *Implement care coordination models.*

1. Adopt as Policy that Mental Health and Physical Healthcare Should Be Integrated.

The methods to achieve integration will vary from provider to provider, but the commitment of leadership to achieving integration will be critical to addressing the issues of morbidity and mortality in the population with SMI. See the discussion on models for integration, under the recommendation to States to *Promote Coordinated and Integrated Mental Health and Physical Health Care for Persons with SMI*. Depending on the model adopted, assure that the operational details, staffing, and financing are aligned to achieve the goal of integrated care.

2. Help Individuals to Understand the Hopeful Message of Recovery, Enabling their Engagement as Equal Partners in Care and Treatment.

Person-centered care is one of the six Quality Chasm aims. The pathway to recovery and health will be different for each individual. This requires that we develop strategies at many levels throughout the public mental health system to incorporate the full range of primary, secondary and tertiary interventions needed to reduce morbidity and mortality. These multiple strategies to address morbidity and mortality will best be accomplished through partnership with other systems, but for any of these strategies to be successful, *our principle partnership must be with the people we serve*.

To create change, recovery and wellness, individuals must have hope for a different tomorrow that is more aligned with their goals and dreams than exists today. Unless we can help the individuals that we serve find hope for a better tomorrow, then change, recovery and wellness will never be realized.

Agree On A Treatment Plan
"Adherence" is the goal because it implies sticking to a collaboratively developed plan, as opposed to the more directive term "compliance." Six specific actions can increase the likelihood of adherence:
• Keep the regimen simple
• Write out treatment details
• Give specifics about the expected benefits of treatment and the timetable
• Prepare the patient for side effects and optional courses of action
• Discuss obstacles to moving forward with the regimen,
• Get patient feedback.
John Allen Jr.

3. Support Wellness and Empowerment of Persons Served, to Improve Mental and Physical Well-Being

a. Support personal empowerment and individual responsibility, enabling individuals to make healthy choices for recovery to promote their individual recovery efforts; this means engaging people with SMI in their health care in new ways.

In engaging people with SMI in their health care, we should avoid the trap of mandating changes in lifestyle, instead focusing on true collaboration through engagement. The Bayer Institute and Health-Partners, based on data from studies, found that when clinicians use a relationship-centered interviewing style, patients become more responsible and active participants in their health care and more adherent to their treatment plan (See Appendix G).

- *Engagement*: skills that support development of rapport with patients
- *Empathy*: skills that help clinicians reflect concern for the patient's condition
- *Education*: skills needed for discovering and developing the patient's understanding of his condition
- *Enlistment*: skills that help in motivating and changing behavior

Two important components of partnering for recovery and health are the development of natural supports and assuring cultural competence in treatment planning and implementation. Successful services engage and empower people with plans that are appropriate to their needs, maximize the benefits derived from use of culturally appropriate strategies and supports and thus reduce under-utilization of services that puts the people at-risk of placement in more restrictive settings, including incarceration.

- Focusing on person-centered goals that are culturally relevant empowers individuals to engage in services and maintain that engagement, extending the time they can live in a community setting
- Culturally competent services are sensitive to the person's cultural identity, available in the person's primary language and use the natural supports provided by the person's culture and community
- Goal setting and planning processes are culturally sensitive and build on an individual's context. Plans incorporate culturally relevant strategies, including alternative therapies and the use of families and extended families to provide natural supports for persons served. Service plans reflect and respect the spirituality, healing traditions and healers of each individual. The use of these culturally relevant strategies also builds commitment to treatment and individual service plans

4. Ensure the Provision of Quality, Evidence-Based Physical and Mental Health Care by Provider Agencies and Clinicians

a. Utilize the system transformation recommendations from the New Freedom Commission, Institute of Medicine and SAMHSA to achieve a more person-centered mental health system.

Specifically, implement the following selected recommendations, as identified in the IOM report, and modified to address the morbidity and mortality issues. Direct care providers should:

- Support individual decision making and treatment preferences (regarding physical health as well as mental health, giving information to make healthy choices, such as weight implications of psychotropic drugs, education about the effects of smoking, obesity and lack of exercise)
- Use illness self-management practices (expand opportunities for individuals to practice and develop decision making skills in regard to physical as well as mental health)
- Have effective linkages with community resources (including access to health care and engage families and other collateral service providers in understanding how to support individuals in maintaining their healthy choices)
- Screen for co-morbid conditions (obesity, diabetes, high blood pressure)
- Routinely assess treatment outcomes (physical as well as mental health)
- Routinely share clinical information with other providers (primary and specialty health care providers as well as mental health providers)
- Practice evidence-based care coordination (coordinate care of the whole person). (See Appendix F for the full summary of IOM recommendations for all stakeholder groups.)

Diet, Nutrition and Eating Right Barriers
- Not responsible for menu / meal planning / preparation
- Lack of knowledge and skills on cooking
- Time to prepare
- Cost

Diet and Nutrition Interventions
- Communal meals at clubhouses and residential settings, where persons served design and prepare meals
- Other skill building methods

Physical Activity Barriers
- Lack of interest
- Lack of role models
- Inability to overcome sedation effects of medications
- Lack of financing to cover participation
- Lack of support

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Physical Activity Interventions
- Create MOUs with Parks and Recreation agencies
- Point-of-decision prompts
- Family-based social support
- Social support interventions
- Individually-adapted health behavior change programs
- Creation of or enhanced access to places for physical activity

Adapted from Task Force on Community Preventive Services, National Library of Medicine

b. Implement standards of care for prevention, screening and treatment in the context of better access to health care.

First-line therapies for all lipid and nonlipid risk factors associated with the metabolic syndrome are weight reduction and increased physical activity, which will effectively reduce all of these risk factors…Beyond the underlying risk factors, therapies directed against the lipid and nonlipid risk factors of the metabolic syndrome will reduce CHD risk. These include treatment of hypertension, use of aspirin in patients with CHD…and treatment of elevated triglycerides and low HDL cholesterol…[liii] Management of the metabolic syndrome in the general population has a two-fold objective:
- Reduce underlying causes (i.e., obesity and physical inactivity)
- Treat associated nonlipid and lipid risk factors

Using the monitoring tools recommended here, assure consistent diabetes screening for all individuals actively being served by the public mental health system. Assure priority for those receiving second generation antipsychotic medications and/or high risk ethnic populations.

The mental health system should adopt the U.S. Public Health Service guidelines for prevention and intervention in regard to modifiable risk factors—assuring at least the same standard of care as that available to the general population. Use guidelines for prevention and intervention to assure there is consistent monitoring of individuals receiving psychotropic medications as a part of medication evaluation and follow up services in outpatient mental health settings as well as inpatient settings.

- Whenever possible, avoid use of medications that are more strongly associated with conditions such as obesity, diabetes and hyperlipidemia
- Reduce polypharmacy
- Prescribers should be accountable for screening to assure adequate treatment of medical risk factors such as metabolic syndrome and its consequences to the same extent that they are for Extra-Pyramidal Symptoms and Tardive Dyskinesia
- Adopt consistent use of a metabolic screening and monitoring tool (see Appendix H)

Diagnosis of Diabetes, Who Should be Screened?
• All adults ≥45 y, and, if normal, at 3-year intervals
• Younger age or more frequently for those at higher risk: --Obese: ≥20% above ideal body weight --First-degree relative with diabetes --High-risk ethnic group --Delivered baby >9 lb, or history of gestational diabetes
• Hypertensive: BP ≥140/90 mm Hg
• Dyslipidemia: HDL ≤35 mg/dL and/or triglycerides ≥250 mg/dL
• Previous IFG or IGT
ADA. *Diabetes Care.* 2004;27 (suppl 1):S11-S14

Numerous studies document that physician prescribing practices frequently deviate from clinical guidelines, with potentially significant implications for quality of care. At the same time, spending on prescriptions has soared. New York State has developed a health information tool designed to support decision making by clinicians and improve the quality of medication prescribing practices in their public mental health system. The Web-based clinical decision support system uses state administrative databases to provide information at the point of care. Use of this tool in the state hospitals has resulted in a 60% decrease in the number of persons prescribed three or more antipsychotics during 2005.[liv] For additional information on the topic, the NASMHPD Medical Directors Technical Report on Polypharmacy is available on the website.[lv]

What are the basic standards of diabetes care? [lvi]
- A1C every 3-6 months: Target <7% (or 6.5%)
- Self-monitoring of blood glucose (SMBG)
- Regular weight and blood pressure monitoring
- Lipid profile yearly
- Urinary microalbumin screen yearly
- *Dilated* eye examination yearly
- Foot examination yearly
- Vascular prophylaxis
- Smoking cessation
- Regular medical follow-up

Treating Type 2 Diabetes in people with Schizophrenia or Bipolar Disorders: [lvii]
- Underlying pathophysiology is *probably* the same as in people without psychiatric illness
- Obesity worsens insulin resistance

- Significant impact of hyperglycemia and macrovascular risk
- Lifestyle components impact severity
- Changing lifestyle impact is usually more difficult than in general population
- Pharmacologic treatments are important

Since damage from diabetes begins before the diagnosis there should be substantial investment in primary prevention activities as well as screening. Insulin resistance, in which the normal actions of insulin are impaired, is closely linked to developing metabolic syndrome which includes hypertension, high cholesterol, increased blood clotting and eventually insulin dependent diabetes.

For the general population, the *Centers for Disease Control and Prevention (CDC) Office of Disease Prevention and Health Promotion* observed:

- Effective interventions that address personal health practices are likely to lead to substantial reductions in the incidence and severity of the leading causes of diseases and disability in the U.S.

- Primary prevention as it relates to such risk factors as smoking, physical inactivity, poor nutrition, alcohol and other drug abuse, and inadequate attention to safety precautions holds greater promise for improving overall health than many secondary preventive measures such as routine screening for early disease.

- Therefore, clinician counseling that leads to improved personal health practices may be more valuable to patients than conventional clinical activities, such as diagnostic testing.

Uncomplicated Monitoring
• Fasting Plasma Glucose
• Lipids
• Weight/ Body Mass Index
• Signs and symptoms of diabetes
• Blood pressure

Indications and Methods for Intensifying Monitoring

↑ Glucose
- Consult/consider referral
- ΔSGA (UK exception)

↑ Weight/ Body Mass Index
- ΔSGA
- Weight management plan

↑ Glucose monitoring

↑ Lipids
- ΔSGA
- Consult

+ Family History
- Intensify monitoring

+ Medical history (CV disease, smoking, sedentary lifestyle, poor diet)
- Intensify monitoring

c. Improve comprehensive health care evaluations.

Current approaches to "comprehensive evaluation" lack: important clinical details; important clinical assessment, diagnostic and treatment prompts and reminders; and standardized approaches. They are often multidisciplinary, but not interdisciplinary and therefore often redundant. The conceptual standards for truly comprehensive evaluations include:

- Has to be timely.

- Has to have uniform initiation and follow-up criteria regardless of time or setting.

- Has to cover all the important clinical areas: functional and behavioral declines, medical, psychiatric and iatrogenic conditions, and psychosocial and environmental stressors.

- Within each clinical area, has to rule out important clinical details and conditions.

- Has to structure and guide the clinical team through the assessment, formulation, diagnostic, and treatment stages of the evaluation so that no clinical details identified in any stage are forgotten.

- Has to be interdisciplinary and adaptable to all types of settings and clinical teams.
- Allows flexibility in narrative-based assessments at any level: network, facility, unit or service.
- Has to be user friendly to all types of health care disciplines.
- Has to be efficient and streamlined from start to finish (report generation).
- Has to be seamless from one point of care to the next with all the important historical clinical information from the most recent comprehensive evaluation being forwarded automatically.
- Network-connected and secure with only PCs and a Server (either site-based or hosted).
- All inputted or accessed clinical data is automatically linked to the specific assessor or reader for total compliance with medical-legal and HIPAA notification regulations.
- All inputted clinical data is setup to be reviewed and then either edited or approved via the clinical supervisor before it becomes medical record.
- Does not require any other form of electronic health record (HER) to completely function.
- Can exchange clinical information with other types of EHR to ensure the most accurate and up to date information being used during the comprehensive evaluation process. [lviii]

d. Assure that all initiatives to address morbidity and mortality have concrete goals, timeframes and specific steps. Gather performance measurement data and use to manage overall system performance.

5. Implement Care Coordination Models

a. Assure that there is a specific practitioner in the MH system who is identified as the responsible party for each person's medical health care needs being addressed and who assures coordination all services.

Assure health status assessment and planning are a part of treatment planning and goal setting for every person with SMI, throughout the system.

E. Persons Served / Families / Communities

The persons we serve, their families and communities are necessary partners in this change process. We recommend three major areas of focus:

PERSONS SERVED / FAMILY / COMMUNITY RECOMMENDATIONS

1. *Encourage the persons we serve, families and communities to develop a consumer-driven vision of integrated care.*

2. *Encourage advocacy, education and successful partnerships to achieve integrated physical and behavioral health care.*

3. *Pursue individualized person centered care that is recovery and wellness focused.*

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1. Encourage the Persons We Serve, Families and Communities to Develop a Vision of Integrated Care.

a. Share information so that the mental health community and others become more aware of the co-morbid physical health risks and integrated care approaches.

In the public mental health system the increased risks of excess mortality for persons with SMI are not often directly addressed. Although Recovery documents such as the SAMSHA National Consensus Statement on Recovery include wellness, holistic and healthcare treatment, the findings and recommendations in this report on morbidity and mortality regarding 25 years of potential life lost beg for a more directed approach. Care should be individual and family driven and we encourage the people we serve and their families to address the risks and integrated care approaches described in this report with a vision of integrated care.

2. Encourage Advocacy, Education and Successful Partnerships to Achieve Integrated Physical and Behavioral Health Care.

a. Encourage integrated physical and behavioral health care as a high priority similar to employment, housing and staying out of the criminal justice system.

Grassroots advocacy will be necessary for successful national, state and community campaigns to achieve quality and overcome the barriers to fragmented and separated mental health and physical health care systems. The priority for integrated physical and behavioral health care should be articulated as strongly as other priorities such as employment, housing and staying out of the criminal justice system. Integrated care may help to reduce the stigma associated with a separated mental health care system. A clear and well articulated vision, education and advocacy approach can guide major change.

3. Pursue Individualized Person Centered Care that is Recovery and Wellness Focused.

a. Support individualized partnerships, between the person served and the care provider, for integrated behavioral and physical health care.

Individualized and Person-centered care is one of the 10 Fundamental Components of Recovery in the SAMSHA National Consensus Statement on Recovery. Person Centered Care is one of the six Quality Chasm aims. It is defined as "care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions." The core values include:
- Respect for patients' values, preferences, and expressed needs
- Coordination and integration of care
- Information and communication
- Education
- Physical comfort
- Emotional support
- Involvement of family and friends

It is the person who makes the important choices that affect his or her health and well being, and indeed it is the person who is in control and experiences the consequences of his or her choices. Implementation of the person centered care model for persons with diabetes is described in Better Diabetes Care http://www.betterdiabetescare.nih.gov/WHATpatientcenteredcare.htm. People with diabetes who are partners in their care are experiencing improved diabetes outcomes. People with SMI who partner with clinical teams and focus on wellness and recovery and integrated physical and behavioral healthcare are likely to experience recovery with longer lives and improved general health. Individuals are encouraged to:

- Take an active role in care and treatment in partnership with providers
- Create and take advantage of peer and family support networks
- Surround themselves with positive individuals who support change efforts. This may include helping family and friends receive education so that they may be more supportive of recovery and healthy lifestyle changes

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B. New Freedom Commission: Excerpts Related to Morbidity and Mortality

Goal 1: Americans Understand that Mental Health Is Essential to Overall Health.

Goal 1.2 Address mental health with the same urgency as physical health.

Understanding that mental health is essential to overall health is fundamental for establishing a health system that treats mental illnesses with the same urgency as it treats physical illnesses.

- Mental disorders frequently co-exist with other medical disorders
- Depression increases the risk of dying from heart disease by as much as three-fold
- People with both diabetes and Depression have a greater likelihood of experiencing a greater number of diabetes complications
- Examine the impact of mental health and mental illnesses on physical illnesses and health
- New studies should focus on innovative and effective ways to enhance the balance between mental and physical health
- Better coordination is needed between Mental Health Care and Primary Health Care
- Improving services for individuals with mental illnesses requires paying close attention to how mental health care and general medical care interact
- While mental health and physical health are clearly connected, a chasm exists between the mental health care and general health care systems

Goal 2: Mental Health Care Is Consumer and Family Driven

Giving consumers the ability to participate fully in their communities will require a few essentials:

- Access to health care

Goal 4: Screening, Assessment, and Referral Are Common Practice

- Specialty mental health providers often have difficulty providing adequate medical care to consumers with co-existing mental and physical illnesses
- Individuals with serious mental illnesses, … have high levels of non-psychiatric medical illnesses and excess medical mortality, this is also a troubling situation

Goal 5: Excellent Mental Health Care Is Delivered and Research Is Accelerated

- All DSM-IV diagnostic criteria have an exclusion for "can be attributed to a general medical condition"
- Excellent mental health diagnosis is not possible without screening for physical illness
- The Commission recommends that Medicare, Medicaid, the Department of Veterans Affairs, and other Federal and State-sponsored health insurance programs and private insurers identify and consider payment for core components of evidence-based collaborative care, including:
  - Case management,
  - Disease management,
  - Supervision of case managers, and
  - Consultations to primary care providers by qualified mental health specialists that do not involve face-to-face contact with clients.

Goal 6:

Goal 6.2 Develop and implement integrated electronic health record and personal health information systems.

C. Substance Abuse and Mental Health Services Administration's (SAMHSA) National Consensus Statement on Recovery

The 10 Fundamental Components of Recovery

Self-Direction:

- Consumers lead, control, exercise choice over, and determine their own path of recovery by optimizing autonomy, independence, and control of resources to achieve a self-determined life. By definition, the recovery process must be self-directed by the individual, who defines his or her own life goals and designs a unique path towards those goals.

Individualized and Person-Centered:

- There are multiple pathways to recovery based on an individual's unique strengths and resiliencies as well as his or her needs, preferences, experiences (including past trauma), and cultural background in all of its diverse representations. Individuals also identify recovery as being an ongoing journey and an end result as well as an overall paradigm for achieving wellness and optimal mental health.

Empowerment:

- Consumers have the authority to choose from a range of options and to participate in all decisions—including the allocation of resources—that will affect their lives, and are educated and supported in so doing. They have the ability to join with other consumers to collectively and effectively speak for themselves about their needs, wants, desires, and aspirations. Through empowerment, an individual gains control of his or her own destiny and influences the organizational and societal structures in his or her life.

Holistic:

- Recovery encompasses an individual's whole life, including mind, body, spirit, and community. Recovery embraces all aspects of life, including housing, employment, education, mental health and healthcare treatment and services, complementary and naturalistic services (such as recreational services, libraries, museums, etc.), addictions treatment, spirituality, creativity, social networks, community participation, and family supports as determined by the person. Families, providers, organizations, systems, communities, and society play crucial roles in creating and maintaining meaningful opportunities for consumer access to these supports.

Non-Linear:

- Recovery is not a step-by step process but one based on continual growth, occasional setbacks, and learning from experience. Recovery begins with an initial stage of awareness in which a person recognizes that positive change is possible. This awareness enables the consumer to move on to fully engage in the work of recovery.

Strengths-Based:

- Recovery focuses on valuing and building on the multiple capacities, resiliencies, talents, coping abilities, and inherent worth of individuals. By building on these strengths, consumers leave stymied life roles behind and engage in new life roles (e.g., partner, caregiver, friend, student, employee). The process of recovery moves forward through interaction with others in supportive, trust-based relationships.

Peer Support:

- Mutual support—including the sharing of experiential knowledge and skills and social learning—plays an invaluable role in recovery. Consumers encourage and engage other consumers in recovery and provide each other with a sense of belonging, supportive relationships, valued roles, and community.

Respect:

- Community, systems, and societal acceptance and appreciation of consumers — including protecting their rights and eliminating discrimination and stigma—are crucial in achieving recovery. Self-acceptance and regaining belief in one's self are particularly vital. Respect ensures the inclusion and full participation of consumers in all aspects of their lives.

Responsibility:

- Consumers have a personal responsibility for their own self-care and journeys of recovery. Taking steps towards their goals may require great courage. Consumers must strive to understand and give meaning to their experiences and identify coping strategies and healing processes to promote their own wellness.

Hope:

- Recovery provides the essential and motivating message of a better future— that people can and do overcome the barriers and obstacles that confront them. Hope is internalized; but can be fostered by peers, families, friends, providers, and others. Hope is the catalyst of the recovery process.

D. Integrating Behavioral Health and Primary Care Services: Opportunities and Challenges for State Mental Health Authorities

Executive Summary

The National Association of State Mental Health Program Directors (NASMHPD) Medical Directors Council developed this eleventh technical paper through a series of pre-meeting conference calls, review of materials and a work group summit of medical directors and commissioners as well as researchers and other technical experts.

The work group reviewed current literature, consulted with leading researchers and provider organizations that are successfully implementing integration models for "safety net" populations, and shared examples of efforts underway at state and local levels. There is ongoing research regarding the medical cost offsets that may accrue through provision of Behavioral Health (mental health and substance abuse) as well as Behavioral Medicine services to the primary care population, including early screening for and delivery of Substance Abuse (SA) services in Primary Care (PC)—thus, the report generally references Behavioral Health (BH) services rather than solely Mental Health (MH) services.

The discussion considered both population-based and person-centered approaches to care. Recognizing that the emphasis and level of activity will vary from state to state, the report focuses separately on the need for overall system coordination, the needs of persons with serious mental illness, and needs of populations served in primary care.

The report integrates two conceptual models that assist in thinking about population-based and systemic responses. The first, *The Four Quadrant Clinical Integration Model*, is a population-based planning tool developed under the auspices of the *National Council for Community Behavioral Healthcare (NCCBH)*. Each quadrant considers the Behavioral Health (SA and MH) and physical health risk and complexity of the population subset and suggests the major system elements that would be utilized to meet the needs of the individuals within that subset of the population. The quadrants can be briefly described as:

I.   The population with low to moderate risk/complexity for both behavioral and physical health issues.

II. The population with high behavioral health risk/complexity and low to moderate physical health risk/complexity.

III. The population with low to moderate behavioral health risk/complexity and high physical health risk/complexity.

IV. The population with high risk and complexity in regard to both behavioral and physical health.

Additionally, the report references *The Care Model*, which summarizes the basic elements for improving care in health systems at the community, organization, practice and patient levels. *The Care Model* was developed by the *Improving Chronic Illness Care Program* to speed the

transformation of health care, from a system that is essentially reactive — responding mainly when a person is sick — to one that is proactive and focused on keeping a person as healthy as possible.

The Council commissioned this report with attention to:

1. The new role of Community Health Centers in providing behavioral health services and the need for collaborative planning due to this new role;

2. The needs of the people served by state mental health authorities; and,

3. The evidence for integrating behavioral health services into primary care.

Each of these are briefly discussed below, along with selected recommendations from the full technical report, which is organized into segments on Overarching Focus: Overall System Coordination (Quadrants I, II, III and IV); Population Focus: Serious Mental Illness/Substance Abuse (Quadrants II and IV); and Population Focus: Primary Care (Quadrants I and III). Each segment includes an overview and discussion of related research as well as detailed action recommendations. Footnotes can be found at the end of the full report.

The New Role of Community Health Centers and The Need for Collaborative Planning

The Health Resources and Services Administration (HRSA) Primary Care Integration Initiative is currently being implemented across the country in Federally Qualified Health Centers (FQHCs), more broadly referred to as Community Health Centers (CHCs).

Existing sites may apply for expansion grant funding to add BH services. Additionally, all newly funded CHC sites must provide dental, mental health and substance abuse services. Grant applications must specify planned staffing, and if services are to be provided by contract, a copy of the contract. CHCs are making decisions about hiring their own BH staff or contracting for BH services as they prepare their grant applications.

As "safety net" providers, CHCs serve a broader scope of patients than just the Medicaid population. Many states focus their public mental health systems on the SMI Medicaid population, with minimal levels of support for non-SMI or uninsured populations— consequently, there isn't a good match of target populations between the two systems. The recent financing and development of behavioral health services in CHCs was intended to address this gap. Attachment B provides more extensive background information on CHCs.

Currently, there is no role for the State Mental Health Authority (SMHA) or the local system in the planning, distribution or coordination of these additional CHC services. The implications for system-wide duplication and competition for the scarce resources of BH staff and funding, as well as the opportunity to improve consumer access to behavioral health and healthcare services, suggests that coordination is a priority at the national, state and local levels.

The American Association of Community Psychiatrists has recommended that behavioral healthcare providers at the local level incorporate a systematic program for coordinating or integrating with primary care provider organizations in their communities. Such a program would include, at a minimum:

- Effective means of bi-directional communications with Primary Care Providers (PCPs);

- Determination of what information is most essential to share; and,

- Adoption of appropriate confidentiality and consent protocols.

The **Overarching Focus: System Coordination (Quadrants I, II, III, and IV)** segment of the report speaks to this set of issues and is grounded in the following principle: **Increased integration of behavioral health and healthcare services is a priority at the national, state, local and person levels. Good public policy will work to sustain, support and require integration of services between the two "safety net" systems of CHCs and SMHA providers with integration ranging from coordination of care to full integration of medical and behavioral services.**

Communication is the key to coordinating care for all populations. Future policy should acknowledge the importance of BH/PC integration and support the expectation of communication and coordination at the federal, state, local and person level. The communication and coordination gap exists at all levels, but will require federal leadership to change the current "silo" environment and address cross-cutting issues.

The New Freedom Commission recommends the development of a comprehensive state plan across all mental health activities. The guidelines for the comprehensive state plan and waiver submissions should include a requirement to address primary care integration issues:

- For persons with SMI, how will health issues be identified and addressed by providers of mental health services?

- For persons served in primary care, how is coordination achieved at both the system level and the person level, especially in regard to HRSA funded sites?

SMHA Directors, along with the Directors of Substance Abuse, Medicaid, and the Office of Primary Care/State Health Officer, should be convened into a State Integration Team that meets regularly to achieve the following (see the full report for a complete listing of detailed recommendations):

- Adopt and disseminate a model HIPAA-compliant release of information form to be used at entry into mental health, substance abuse or healthcare services funded by the state.

- Review the state Primary Care Strategic Plan prepared for HRSA regarding current and future distribution of CHCs.

- Review new CHC site and BH expansion applications to HRSA.

- Develop coordination of financing mechanisms and a shared interest in managing the pools of funding towards better outcomes.

- Assure that the state Medicaid Plan appropriately reflects all strategies developed.

Recommendations for federal entities include:

- SAMHSA should amend its matrix to add primary care integration to the areas of top focus for the organization.

- SAMHSA and HRSA should work together on a site planning tool that intersects with other planning efforts and would be used in the Primary Care Association state strategic plans. This would include consideration of SMHA providers as new FQHC site applicants and provision of technical assistance to them in areas where development of an applicant organization is needed.

- HRSA's Bureau of Health Professions and Bureau of Primary Health Care need to spell out a coordinated agenda in regard to workforce issues. HRSA and SAMHSA, along with the Department of Labor (DOL) should develop a master agenda in regard to meeting BH workforce needs, including the focused skills needed in PC settings.

- SAMHSA, HRSA and CMS should collaborate in policy and financing approaches to establish shared goals for BH/PC Integration and develop financing methods that support implementation of the Care Model in BH and PC settings.

- The National Associations (NASMHPD, NASADAD, NASMD, NACHC, and NCCBH) should develop a model Memorandum of Understanding for communication and coordination at the state and local level.

The Needs of the People Served by State Mental Health Authorities

Through the evolution of public mental health services, people principally served by state mental hospitals were (and are) provided with health, dental and vision services as well as mental health services. In the community, however, persons with serious mental illness (SMI) frequently have difficulty accessing health, dental and vision services and often rely on emergency rooms (ERs) for their care, which burdens the ER system, results in discontinuous care for the individuals, and may contribute to polypharmacy issues. Many of these individuals also have co-occurring SA disorders. When persons with SMI are able to access healthcare, their medical conditions are often missed; also, their healthcare concerns may not be taken seriously or treated appropriately [1] Research has demonstrated that persons with SMI have high levels of medical co-morbidity. More recently, research has described a relationship between some second generation antipsychotic medications and increased risk for diabetes, obesity and high cholesterol.[2]

In some states, as Medicaid or SMHA program eligibility has been restricted, individuals formerly served by the SMHA have moved into CHCs to receive ongoing management of their psychotropic medications, as well as brief counseling services in some sites. CHCs recognize their responsibilities in serving these individuals, but are concerned about being able to appropriately serve the needs of this population.

The **Population Focus: Serious Mental Illness/Substance Abuse (Quadrants II and IV)** segment of the report speaks to this set of issues and is grounded in the following principle:

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[1] Druss, Rohrbaugh, Levinson, Rosenheck, *Integrated medical care for patients with serious psychiatric illness*; Archives of General Psychiatry, 58:9; September 2001; pp 861-868

[2] *Consensus Development Conference on Antipsychotic Drugs and Obesity and Diabetes*; American Diabetes Association, American Psychiatric Association, American Association of Clinical Endocrinologists, North American Association for the Study of Obesity, Diabetes Care; 27:2, February 2004

Physical healthcare is a core component of basic services to persons with serious mental illness. Ensuring access to preventive healthcare and ongoing integration and management of medical care is a primary responsibility and mission of mental health authorities. Recommendations for SMHAs include:

- Develop a partnership between the SMHA and the State Medicaid Agency (SMA) regarding opportunities to better manage resources and assure the best clinical outcomes for the populations in Quadrants II and IV.

- Develop a population-based plan for the healthcare needs of persons with SMI. This should include a set of preventive assessment standards and guidelines for healthcare monitoring.

- Assign the same SMHA priority to a stable primary care home as to stable housing and medication adherence.

- Sponsor training for PCPs in treating persons with SMI for medical conditions, including recognition and appropriate treatment of presenting healthcare concerns.

- Support the creation of parallel service integration models for persons with developmental disabilities and pilot/research these models.

There will always be a need for specialty BH services. The SAMHSA specialty BH Evidence-Based Practices (EBPs) are frequently not office-based, but community-based; to assure fidelity, the EBP should be delivered by an individual with specific training, skills and knowledge. Recommendations for delivery system improvements include:

- Adopt the Care Model for organizing and tracking BH services. Demonstrate the ability of the SMHA providers to deliver outcomes comparable to those being delivered by CHCs for healthcare concerns.

- Assure that assessment of healthcare status is an ongoing component of BH services and that there is a high level of communication between BH providers and PCPs.

- Recognize that, for the population in Quadrant IV, the BH/PCP/specialist team is the true "medical home" that needs to be developed, based on person-centered and individualized planning and specifically identified responsibilities for each member of the team.

- Clarify the role of local mental health authorities in provision of a crisis response system that is responsive to all components of the system, including the Quadrant IV population.

- Support the use of BH case managers to accompany consumers to primary care visits, with the consent of the consumer, to assist in medical advocacy and incorporation of self-care recommendations into ongoing wellness planning.

- Consider opportunities for SMHA provider and CHC co-location or merger.

The Evidence for Integrating Behavioral Health Services into Primary Care

Many integration initiatives and research reports have focused on depression because of the broad scope of the problem (more than 19 million Americans each year are diagnosed and treated for some type of depression) and the degree to which it is under-recognized and under-treated in primary care settings (30-40% not identified and about 10% only on

benzodiazepines[3]). The cost of depression in healthcare and the workforce has been well documented—among the five conditions (mood disorders, diabetes, heart disease, hypertension, and asthma) that account for 49% of total healthcare costs and 42% of illness-related lost wages, mood disorders rank third in healthcare costs, first in work loss costs and second in total costs.[4] As discussed in detail in the full report, there is a robust body of research about the incidence of depression in the population seeking healthcare services and the interventions that result in improved healthcare outcomes.

The **Population Focus: Primary Care (Quadrants I and III)** segment of the report speaks to this set of issues and is grounded in the following principle: **Behavioral healthcare is a core component of essential services to persons seeking primary healthcare. Ensuring access to preventive, ongoing, and appropriate behavioral health service is a primary responsibility and mission of general healthcare providers.**

The Council recognizes that a focus on Quadrants I and III will be dependent on the context and system development in each state. While the recommendations in the other two focus segments (System Coordination, Serious Mental Illness) are intended for all SMHAs, this segment in intended for use by SMHAs that are additionally planning for the population served in primary care. Recommendations for SMHAs include:

- Use the State Team and State Plan recommended in System Coordination as the venue for creating a state level framework to provide guidance for local partnerships.

- Develop approaches in which some financing comes from the SMHA and some from the healthcare system.

- Develop a response to HRSA PIN 2004-05 (see Attachment B) that explores the funding options from both budget streams, assuming sufficient evidence of cost effectiveness is established.

- Work with the Medicaid agency to implement and utilize appropriate CPT codes for provision of services (e.g., adoption of the 96150-96155 CPT codes [see Attachment B] or use of E&M codes as appropriate) and describe the clinical professional status and skill sets required for billing.

- Assure that the models adopted for reimbursement are consistent with the research base (e.g., algorithms, registry tracking, collaborative, and stepped care).

Recommendations for SMHA providers and CHCs working together to meet the needs of the "safety net" populations include:

- Clarify the mission and roles between the organizations and develop specific transfer of care protocols.

- Explore opportunities to "rent" or place SMHA provider staff in CHCs (see Attachment C).

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[3] Ford, D. M.D.,M.P.H., *Decision Support/Depression*. Power Point presentation to HRSA Health Disparities Collaboratives National Congress, September 2004. Based upon materials from Cole et al and Egener et al.
[4] Bartels, S. M.D., M.S, *Integrating Mental Health In Primary Care: An Overview of the Research Literature* PowerPoint presentation to NASMHPD Technical Report: Behavioral Health/Primary Care Integration—Guidance for Public Sector Implementation Work Group, June 2004

- Consider shifting more psychiatry into CHCs, while case management and the SMI evidence-based BH services remain in SMHA provider agencies.

The Council is aware that considerable work is necessary to heal the long-standing "mind-body split". We hope that this report and its recommendations provide support and direction for those working on the healing process.

E. The Quality Chasm's Ten Rules to Guide the Redesign of Health Care

1. *Care based on continuous healing relationships*. Patients should receive care whenever they need it and in many forms, not just face-to-face visits. This rule implies that the health care system should be responsive at all times (24 hours a day, every day) and that access to care should be provided over the Internet, by telephone, and by other means in addition to face-to-face visits.

2. *Customization based on patient needs and values*. The system of care should be designed to meet the most common types of needs, but have the capability to respond to individual patient choices and preferences.

3. *The patient as the source of control*. Patients should be given the necessary information and the opportunity to exercise the degree of control they choose over health care decisions that affect them. The health system should be able to accommodate differences in patient preferences and encourage shared decision making.

4. *Shared knowledge and the free flow of information*. Patients should have unfettered access to their own medical information and to clinical knowledge. Clinicians and patients should communicate effectively and share information.

5. *Evidence-based decision making*. Patients should receive care based on the best available scientific knowledge. Care should not vary illogically from clinician to clinician or from place to place.

6. *Safety as a system property*. Patients should be safe from injury caused by the care system. Reducing risk and ensuring safety require greater attention to systems that help prevent and mitigate errors.

7. *The need for transparency*. The health care system should make information available to patients and their families that allows them to make informed decisions when selecting a health plan, hospital, or clinical practice, or choosing among alternative treatments. This should include information describing the system's performance on safety, evidence-based practice, and patient satisfaction.

8. *Anticipation of needs*. The health system should anticipate patient needs, rather than simply reacting to events.

9. *Continuous decrease in waste*. The health system should not waste resources or patient time.

10. *Cooperation among clinicians*. Clinicians and institutions should actively collaborate and communicate to ensure an appropriate exchange of information and coordination of care.

Crossing the Quality Chasm: A New Health System for the 21st Century, Institute of Medicine, 2001, pp 61-62

F. Institute of Medicine, Recommendations for Stakeholders

Improving the quality of health care for mental and substance-use conditions:

Direct care supporters should:
- Support consumer decision-making and treatment preferences
- Use illness self-management practices
- Have effective linkages with community resources
- When coercion unavoidable, make the process transparent
- Screen for co-morbid conditions
- Routinely assess treatment outcomes
- Routinely share clinical information with other providers
- Practice evidence-based care coordination
- Be involved in designing the National Health Information Infrastructure (NHII)

Provider organizations such as clinics, hospitals, and local mental health centers, should:
- Have policies to enable and support all actions required of clinicians
- Involve patients / families in design, administration and delivery of services
- If serving a high-risk population (e.g. child welfare, criminal and juvenile justice) screen all entrants for M/SU problems
- Involve leadership and staff in developing the National Health Information Infrastructure (NHII)

Health plans and purchasers should:
- Pay for peer support and illness self-management programs that meet standards for consumers with chronic M/SU illnesses
- Use and provide consumers with comparative info on the quality of M/SU services to select providers
- Remove payment, service exclusion, benefit limits and other coverage barriers to accessing effective screening, treatment and coordination
- Support development of a quality measurement and reporting infrastructure
- Require all contracting organizations to appropriately share patient information
- Provide incentives for the use of electronic health records and other information technology methods
- Use tools to reduce adverse risk selection of M/SU treatment consumers
- Use measures of quality and coordination of care in purchasing and oversight

State and local policy-makers should:
- Make coercion policies transparent, use information on the comparative quality of providers and evidence-based treatment, and offer consumers choice
- Revise laws and other policies that obstruct communication between providers
- Create high-level mechanisms to improve collaboration and coordination across agencies
- Use purchasing practices that provide incentives for the use of electronic health records and other IT
- Enact parity for coverage of M/SU treatment

- Reorient state procurement processes toward quality and reduce the emphasis on grant-based financing mechanisms

Agencies of the Federal government (DHHS and SMHSA) should:
- Identify evidence-based practices
- Develop procedure codes for administrative data sets
- Use evidence-based approaches to dissemination and promote uptake of evidence-based practices
- Assure use of general health care opinion leaders (e.g. CDC, AHRQ) in dissemination
- Fulfill essential quality measurement and reporting functions
- Provide leadership in quality improvement activities
- Improve coordination among federal agencies
- Revise laws, rules, other policies that obstruct sharing of information across providers
- Fund demonstrations to transition to evidence-based care coordination
- Ensure the emerging NHII addresses M/SU health care
- Authorize and fund an ongoing Council on the Mental and Substance-Use Health Care Workforce similar to the Council on Graduate Medical Education (Congress)
- Support M/SU faculty leaders in health profession schools
- Provide leadership, development support and funding for R&D on QI in M/SU health care

Accrediting organizations for M/SU providers should adopt and apply standards requiring:
- Patient-centered decision-making throughout care
- Involvement of consumers in design, administration, and delivery of services
- Effective formal linkages with community resources
- Use of evidence-based approaches to coordinating mental, substance-use and general health care

Institutions of higher education and those involved in ongoing education and training the existing workforce should:
- Increase interdisciplinary teaching and learning to facilitate core competencies across disciplines
- Facilitate the work of the Council on the Mental and Substance-Use Health Care Workforce

Funders of research should support:
- Development and refinement of screening, diagnostic, and monitoring instruments to assess response to treatment
- A set of M/SU "vital signs": a brief set of indicators – for patient screening, early identification of problems and illnesses, and for repeated use to monitor symptoms and functional status
- Research approaches that address treatment effectiveness and quality improvement in usual settings of care
- Research designs, in addition to randomized controlled trials that involve partnerships between researchers and stakeholders, and create a "critical mass" of interdisciplinary research partnerships involving the usual settings of care

Daniels, Allen. Adams, Neal. From Study to Action: A Strategic Plan for Transformation of Mental Health Care. February 2006

G. Relationship Centered Interviewing

Engagement
- Clinicians may believe that there is not enough time to let a patient tell his or her story, but research has shown that most patients will continue to speak without interruption for only two to three minutes.
- To "engage" a patient, a clinician must establish rapport by joining the patient during the opening minutes of the encounter. The first minutes form strong initial impressions. Communicate warmth by the introduction; be curious about the patient as a person rather than a medical problem. Listen to the language of the patient and adapt to that language. Invite the patient to tell the story of the illness. Find out all the complaints and the patient's goals for the visit and agree on an agenda.

Empathy
- Empathy begins when the clinician expresses understanding of the feelings, values, and experiences of the patient. Fortunately, empathy is not necessarily intrinsic to personality: Empathetic responses can be learned.
- It is important to create a warm setting. Consider using nonverbal language. Do not write and listen at the same time. When listening, look at the patient. Don't permit physical barriers -- typically the chart or desk -- to come between you and the patient.
- Invite the patient to tell you what he is feeling or thinking. Be curious about the experience of the patient as a person. Say, "That must be scary," or "How do you feel about that?"

Education
- Preventive medicine and health promotion are critical to delivery of high quality care.
- Education is not simply giving information, but requires understanding the patient's cognitive, emotional, and value perspectives. The clinician must discover what the patient knows and how the patient is thinking and feeling about whatever knowledge he or she possesses.
- Clinicians should assess the patient's understanding by asking questions and imagining their questions: What has happened to me? Why has it happened to me? What is going to happen to me? Supplement oral patient education with written notes and patient information handouts.

Enlistment
- Enlistment occurs when patients become partners in their own health care. Empowering and motivating them increases the likelihood that they will adhere to treatment and thus the likelihood of greater patient satisfaction. This is good for the health plan too, because office visits are actually reduced, quality and efficiency of care are improved, and ultimately the patient's loyalty to the plan and doctor is increased.
- There are two important steps in enlistment: agreeing on diagnosis, and agreeing on a treatment plan.
- Because most patients make a self-diagnosis, it is extremely helpful to elicit and acknowledge it early in the interview. Discuss any discrepancies between your conclusions and those of the patient.

H. Metabolic Screening and Monitoring Form

METABOLIC SCREENING AND MONITORING FORM

NAME: _____

There is a growing awareness that some psychiatric illnesses and atypical antipsychotics can increase metabolic risks. Frequency of monitoring for modifiable risk factors depends on level of risk present at baseline screening.

OBESITY SCREENING [1,2]

Consider BMI (weight/height in kg/m²) at each visit.
Normal (18.5–24.9); Overweight (25–29.9); Obese (≥30)

	BASELINE	Dates/Values From Subsequent Visits				
Height _____	Date ___/___/___ BMI _____ Wt _____	___/___/___	___/___/___	___/___/___	___/___/___	___/___/___

LIPID SCREENING — CHOLESTEROL, TRIGLYCERIDES (TG) [3]

	Optimal/ Desirable (mg/dL)	Near/Above Optimal (mg/dL)	Borderline High (mg/dL)	High/ Undesirable (mg/dL)	Very High (mg/dL)	BASELINE	Dates/Values From Subsequent Visits				
Total	<200		200–239	≥240		___/___/___	___/___/___	___/___/___	___/___/___	___/___/___	___/___/___
LDL	<100	100–129	130–159	160–189	≥190						
HDL	≥60			<40		Enter values as indicated in the Metabolic Syndrome (MS)					
TG	<150		150–199	200–499	≥500*	Screening section of the form below.					

*≥500 for TG requires immediate pharmacotherapeutic intervention without waiting for therapeutic lifestyle changes.

METABOLIC SYNDROME (MS) SCREENING [3]

Risk Criteria:

	BASELINE	Dates/Values From Subsequent Visits				
	___/___/___	___/___/___	___/___/___	___/___/___	___/___/___	___/___/___
Abdominal Obesity measured in waist circumference (men >40 inches, women >35 inches)						
Triglycerides (mg/dL) (≥150; or drug treatment)						
HDL Cholesterol (mg/dL) (men <40, women <50; or drug treatment)						
Blood Pressure (mmHg) (≥130/≥85; or drug treatment)						
Fasting Plasma Glucose (≥100 mg/dL; or drug treatment) [4]						
Total Criteria for each visit (≥3 = MS Diagnosis*)						

*Risk for cardiovascular disease increases with each criterion present, motivating intervention for any single criterion. [5]

TYPE 2 DIABETES MELLITUS (T2DM) SCREENING [1]

Risk Factors:
- ☐ Age (≥45)
- ☐ Habitual physical inactivity
- ☐ Race/ethnicity*
- ☐ Polycystic ovary syndrome
- ☐ Overweight (BMI ≥25 kg/m²)†
- ☐ History of GDM or delivery of baby >9 lbs.
- ☐ Hypertension (>140/90 mmHg in adults)
- ☐ History of vascular disease
- ☐ Family history
- ☐ Previously identified IFG or IGT
- ☐ HDL ≤35 mg/dL and/or triglyceride ≥250 mg/dL

Diagnostic Criteria for Prediabetes and T2DM ‡ [1]	BASELINE	Dates/Values From Subsequent Visits				
	___/___/___	___/___/___	___/___/___	___/___/___	___/___/___	___/___/___
Fasting Plasma Glucose (FPG)§ Normal: <100 mg/dL; Prediabetes: 100-125 mg/dL; T2DM: ≥126 mg/dL						
Two-hour Postload Glucose (OGTT)§ Normal: <140 mg/dL; Prediabetes: 140-199 mg/dL; T2DM: ≥200 mg/dL						
Symptoms of T2DM [Yes + casual (random) PG ≥200 mg/dL] ||						
Random Plasma Glucose (≥100 mg/dL requires formal screening with FPG or OGTT) [6]						

* Includes African Americans, Hispanic Americans, Native Americans, Asian Americans, Pacific Islanders
† May not be correct for all ethnic groups
‡ Screen at 3-year intervals beginning at age 45, particularly for those with BMI of ≥25; test at <45 or more frequently when overweight and have 1+ other risk factors. [1]
§ FPG and OGTT are the **only** measures currently approved by the ADA for diabetes screening/diagnosis; ADA recommends preferential use of FPG due to ease of use/acceptance. [1]
|| Diagnosis must be confirmed on a subsequent day with FPG, 2-h PG, or casual (random) PG if symptoms (e.g., polyuria, polydipsia) are present, unless unequivocal hyperglycemia with acute metabolic decompensation is present. [1]

ATP-III recommends therapeutic lifestyle changes (TLC) for those with prediabetes,[7] hypertension,[8] 0-1 CHD risk factor and LDL ≥160 mg/dL,[3] 2+ CHD risk factors and LDL ≥130,[3] MS,[3] and perhaps subsyndromal MS.[5] Follow-up monitoring of 6- to 12-week intervals to monitor TLC response[3] is recommended and pharmacotherapy intervention if TLC fails after 3 months — unless lipid, blood pressure, or glucose values demand immediate drug treatment.[3]
ADA/APA Consensus Statement recommends considering antipsychotic medication switch for those who gain ≥5% of baseline body weight.[9]

Authored by John W. Newcomer, MD and Dan W. Haupt, MD. Compiled primarily from ADA and ATP-III guidelines.
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I. Measuring Quality of Care for Co-Occurring Conditions

TABLE 1. Quality Measures for Patients with Co-Occurring Medical & Psychiatric Conditions Treated in Primary Care Settings

STRUCTURE	PROCESS	OUTCOME
Clinicians • competencies: % of PCPs (or staff) demonstrating competencies in recognition and treatment of mental disorders / SUD • specialist availability: MHS (adult & child psychiatrists, therapists) availability per # beneficiaries in health plan **Services** • **Level of care availability for SUD treatment** o # beds available per # beneficiaries: detoxification, inpatient rehabilitation, clinically managed residential o # programs per # beneficiaries: partial hospital, intensive outpatient, outpatient • **Evidence-based treatment models for depression in PC** o registry: % of PC practices using depression registry o measurement: % of PC practices using structured severity assessment for depression o care mgmt: % of PC practices providing care mgmt for depression o self-management: % of PC practices providing self-management education/tools o training—meds: % PCP's who complete depression medication management training o training—CBT: % of eligible clinicians receiving training on CBT based techniques • **Buprenorphine treatment for opioid addiction in PC** o training: # PCP's who have received training in buprenorphine treatment per capita or per # beneficiaries in health plan o registry: % of PCP's who prescribe buprenorphine that utilize a registry to track patients treated with buprenorphine **Clinical Information Systems** • % of PC practices which provide PCPs with immediate access to MHS / SUD records • % of MHS/SU specialists in plan who have immediate access to PC records	**Detection** • % of PC patients screened annually for depression • % of PC patients with high risk conditions (p-MI, p-CVA, CHF, DM) screened annually for depression • % of PC patients screened for substance use disorder **Assessment** • % of PC patient dx'd with mental disorder with qualifying DSM sx documented on assessment • % of PC patient dx'd with MDD with presence or absence documented on assessment: psychosis; suicidality; h/o mania; substance use • % PC pts w/ MDD meeting severity/complexity criteria for MHS referred for/receive MHS care **Access to specialty care** • % of patients referred to MH/SU specialty care who attend initial visit • Average time to initial visit after referral to MH/SU specialty care • % of patients with SUD who are referred to the appropriate (ASAM) level of care **Treatment fidelity to evidence based treatment models** • **Evidence-based treatment of depression in PC** o % of PC patients with depression w/ # acute-phase contacts with care manager o % of PC patients with depression w/ structured severity assessment o on initial evaluation; ~ 4-6 weeks; ~ 12 weeks; ~ 6 months o % of PC patients with depression w/o response at ~6 weeks w/ change in treatment • **Brief intervention for SUD in PC** **Coordination between PCP and MHS Following Referral** • patient report of coordination o "my clinicians kept each other informed about my treatment and progress" o "my clinicians worked well together to coordinate my care for depression" o "I knew which clinician to turn to when I had a problem	**Symptom change** • mean sx change (e.g., PHQ-9) at 12-weeks, 6-months • % patients meeting remission criteria at 12-weeks, 6 months **Functional change** **Behavioral change** • abstinence • reduced SU • change in ASI score

STRUCTURE	PROCESS	OUTCOME

• % of practices with procedures guiding consent to access MHS / SUD records
Financing
• <u>Care mgmt. reimbursement</u>: % of beneficiaries in plan whose PC is eligible for reimbursement for care management for depression
• <u>PCP reimbursement</u>: % of beneficiaries in plan whose PC is eligible for reimbursement for visit with primary diagnosis of mental disorder or SUD
	related to depression"
	• % of referrals resulting in appropriate MHS/SU feedback to PCP w/in # days
	Safety
	
	• **Avoidance of prescribing drugs of abuse for patients with SUD**
	   o % of patients with h/o alcohol abuse or dependence prescribed benzodiazepines
	   o % of patients with h/o opiate abuse or dependence prescribed opiates	

Key: PC= primary care; MH=mental health, MHSC=MH specialty care; SUD=substance use disorder, pt=patient, IP=IP, OP=outpatient, dx=diagnosis, tx=treatment
© Center for Quality Assessment & Improvement in Mental Health, 2006. Hermann RC, Fullerton C, Dausey DJ, Kilbourne AM. Measuring Quality of Care for Co-Occurring Conditions. RWJF Depression in Primary Care Program. February, 2006. www.cqaimh.org/research.html

TABLE 2. Quality Measures for Patients with Co-Occurring Medical & Psychiatric Conditions Treated in the Mental Health Specialty Settings

STRUCTURE	PROCESS	OUTCOME
Clinician Characteristics • % of prescribing MH practitioners with competence in detecting and monitoring diseases with high prevalence in the SMI (CV conditions, smoking, obesity, pulmonary disease, thyroid disease and infectious disease • % of MH practitioners trained to detect diseases with high prevalence in the SMI • # of PCP physicians available for pts with severe mental illness • nurse and physician assistant to MD staff ratio **Clinical Information Systems** • % of pts for whom medical records and laboratory data are available • % of charts with permission to communicate with PCP is obtained • % of practices w/ disorder specific registries **Service Linkages** • Modified Continuity of Care Index: a ratio assessing the degree to which general medical IP and OP services are provided at the same VA facility: {1-[#facilities/(#visits+0.01)]/[1-(1/(#visits+0.01)] **Financing** • % of MH practitioners are reimbursed for monitoring medical conditions • % of plans or organizations that provide financial incentives for quality improvement and monitoring	**Detection** • % pts with annual fasting glucose • % pts with fasting lipid profile and glucose 12 wks after initiating atypical antipsychotics • % of pts with fasting lipid profile every 5 years • % pts screened for HIV/hepatitis who engage in high risk behaviors • % pts screened with TSH, B12, FA, RPR, Calcium **Assessment** • % pts with complete medical history, smoking history, family medical history, risk factors for CV, TB, and ID transmission, and ROS in chart • % pts with height, weight, blood pressure, pulse, waist circum. recorded every 6 mos in chart • % pts with all current meds (including non-psychiatric) listed in chart • Access:% of pts with significant medical/lab findings referred to medical care • Availability: % of pts who are referred to primary care who attend initial visit • Time: Average length of time to initial visit • % of pts who saw a primary care physician within 12 months of their last MH visit **Treatment:** Preventive medicine and maintenance • % of eligible women who had a pap test in a two year period • % of pts on psychotropic medications for 6 months who receive appropriate monitoring every 6 mos.* • VPA with levels, LFT's, CBC q6months • TCA and EKG prior to initiation • Lithium with BUN/creat + TSH • % of pts asked and advised about level of physical activity • % of pts between 50-80 who had appropriate screening for colorectal cancer. CV disease and risk factors • % of pts with dx of hypertension whose BP < 140/90 • % of eligible pts placed on beta blocker therapy post AMI • % of eligible pts who received beta blocker tx 6 mo post AMI • % of pts post MI or with CAD who have LDL-C <130 or <100 • % of pts who smoke who received advice to quit smoking, who were recommended smoking cessation medications, or who discussed smoking cessation strategies • % of pt who smoke who were prescribed smoking cessation medications Diabetes: % of pts with DM type 1 or 2 with the following • HbA1c testing; HbA1c poorly controlled (>9); Eye exam performed; LDL-C screening performed; LDL-C <130 mg/dL; LDL-C <100 mg/dL; Kidney disease monitored Pulmonary • % of pts with asthma who were appropriately prescribed medication • % of pts with new dx or newly active COPD who received appropriate spirometry testing • % of pts given influenza and pneumococcal vaccines	**Behavior change** • % of pts who are abstinent from smoking for 6 months • % of pts with > 1 point improvement in BMI over year • % of pts involved in increased level of physical activity **Medical outcomes** • Mortality Rate • LDL-C <130 mg/dL • LDL-C <100 mg/dL • Eye exam performed **Quality of life** • change in health status over defined interval (e.g., SF-12, etc.) **Patient Satisfaction** • % of pts with SMI who are satisfied with their physical healthcare

STRUCTURE	PROCESS	OUTCOME

	Coordination
	• Pt report: Perception of coordination
	    ○ "my clinicians kept each other informed about my tx and progress"
	    ○ "my psychiatrist knows my medical conditions"
	• Need for standards: Communication of physical health care
	• % of MH practitioners who communicate with PCP every 6 months, during IP MH hospitalization
	• % of MH practitioners who receive communication from PCP within 2 weeks after specific referral regarding detection of medical disease
	• % of MH visits that review non-psychotropic medications and adherence
	• % of IP medical hospital stays with discharge summaries sent to the pt's primary MH specialist	

TABLE 3. Quality Measures for Patients with Co-Occurring Substance Use & Psychiatric Conditions Treated in the Mental Health Specialty Settings

STRUCTURE	PROCESS	OUTCOME

Clinician Characteristics
• % of MH providers that are trained to treat SA disorders and have a certificate, license or some other documentation to prove training.
• Evidence of documented formal referral policies for SUD in MHSC settings.
Clinical Information Systems
• % of MH providers who reported being able to access any patient tx information, laboratory information, or medical records from a SUD specialty settings
Service Linkages
• % of programs that have: Integrated services (MH and SA services in the same treatment program)
  o Co-location (MH and SA services in the same location)
  o Formal relationships (referral agreements or contractual relationships among providers)
  o Informal or ad hoc (absence of formal relationships)
	Detection
	• % of pts screened for SA upon IP or residential admission in a MHSC setting.
	• % of pts in MHSC with a newly identified SA disorder over a period of 12 months (after a 6 month washout period).
	Assessment
	• % of pts with a SUD with qualifying DSM documentation on assessment at a MHSC setting.
	• % of pts who are admitted to a MHSC IP or residential facility whose medical record includes an assessment of both their MH and SUD history
	• % of pts admitted to a hospital for a mental disorder who are also assessed for a SA disorder upon admission
	• % of pts who receive a psychiatric evaluation that includes a drug and alcohol use assessment
	• % of surveyed behavioral health plan members with a MH diagnosis who report being asked about alcohol or drug use by a plan clinician in the prior year
	• % of pts discharged from a hospital with a MH disorder as their primary diagnosis whose IP admission or discharge assessment note includes an assessment of SA or dependence
	Treatment
	• Average fidelity score across participating programs:
	  o New Hampshire/Dartmouth Integrated Dual Disorder Treatment (IDDT) model
	  o 26 Item fidelity scale
	  o Each item represents an org. or tx component of model
	  o Scores from individual programs can be compared to the mean score or a recognized benchmark
	• % of pts discharged from IP or residential care with COD who had at least one MH and one SUD clinic visit within 6 months of discharge
	• % of pts identified with both a SUD and MH condition who report receiving 3 or more minutes of counseling from their physician about both disorders
	Coordination
	• % of dually diagnosed pts receiving case management who report that their MH manager assisted them in obtaining SUD tx
	• % of dually diagnosed pts who are participating in a case management program and have a documented plan of care to address both conditions
	• % of dually diagnosed pts who report that their case manager or managed behavioral healthcare organization assisted them in obtaining all necessary MH and SUD services
	• % of dually diagnosed pts in a MHSC IP setting whose medical record documents
		Behavior change
		• % of pts with any SUD dx discharged from a IP or residential MHSC setting who report abstinence from drugs and/or alcohol over 6 months.
		Medical outcomes
		• % of dually diagnosed pts with a reduction in psychiatric symptoms 6 mos.
		• % of dually diagnosed pts in MHSC settings with a significant reduction in ASI alcohol or drug scores 6 months after index tx episode.
		Function Improvement
		• % of pts with any SA diagnosis treated in a MH specialty setting that are employed.
		• % change in absentee rates of employees with both MH and SUD conditions treated in a MHSC setting 6 months after index tx episode.
		Quality of life
		• % of pts receiving both MH and SA specialty services who report a high quality of life.
		Patient Satisfaction
		• % of pts receiving both MH and SUD specialty services who report a high satisfaction with their care.

STRUCTURE	PROCESS	OUTCOME
Financing • % of MH providers reporting the inability to bill for SA services provided to pts • % of MH providers that report coding SA services as MH services in order to be reimbursed.	contact between the pts MH and SUD providers • % of dually diagnosed pts admitted for a SUD that had an OP mental health visit 30 days prior to admission	

Key: PC= primary care; MH=mental health, MHSC=MH specialty care; SUD=substance use disorder, pt=patient, IP=IP, OP=outpatient, dx=diagnosis, tx=treatment
© Center for Quality Assessment & Improvement in Mental Health, 2006. Hermann RC, Fullerton C, Dausey DJ, Kilbourne AM. Measuring Quality of Care for Co-Occurring Conditions. RWJF Depression in Primary Care Program. February, 2006. www.cqaimh.org/research.html

J. Seven Steps To Building The Comprehensive Healthcare Evaluation Standard

By Steven Eisenstein MD

Step 1: Defining the Decline

For Targeting Functional and Behavioral Concerns Especially Those of High-Risk

☐ Are the targeted declines divided into functional and behavioral components?

☐ Have potentially dangerous declines (functional and/or behavioral) been identified and described as being high-risk warranting a timely comprehensive evaluation and routine immediate follow-ups until stablilized?

☐ Is each behavioral and/or functional targeted decline well defined using observable and measurable descriptors?

☐ Does each behaviorally targeted decline have an approximate frequency of occurrence from which to base improvement or worsening during the treatment phase?

☐ Have precipitating circumstances involving patterns of people, place/situation, and time related to each targeted decline been ruled out and if pertinent, been identified?

☐ Does each targeted decline have an identified optimal baseline?

☐ Does each targeted decline have a date of onset?

☐ Are routine potentially high-risk functional and/or behavioral concerns, such as Falls, Fall Risk, and Elopement Risk, automatically ruled-out every time there is a significant decline in function and/or behavior?

Step 2: Search The S.I.G.N.S.

For comprehensive identification of all potential clinical healthcare concerns defined as the SIGNS assessment

Sickness Concerns

☐ Has there been a documented comprehensive medical rule out of all the chronic and acute temporary medical problems currently active?

☐ Is there a complete list of all the patient's chronic medical problems? ICD-9 Codes included? Dates of Onset? Date Last Active if recurrent?

☐ Is there a list of chronic medical problems that routinely present with typical behavioral/functional decline?

☐ Is there a comprehensive rule out of important ROS and common physical findings?

☐ Is there a structured rule out process for acute delirium findings?

☐ Is there a structured rule out process for all types of EPS findings, with each EPS syndrome being specifically defined and easily understood?

☐ Have the appropriate laboratory and diagnostic studies been ordered to comprehensively rule out medical causes of decline and any important normal and abnormal results identified?

☐ Is there a list of standing non-medication medical orders for monitoring and treating significant medical conditions and/or iatrogenic concerns?

☐ Are the positive reported symptoms, laboratory, diagnostic, and physical findings identified during the medical work up appropriately matched to acute medical conditions, and if not, are they properly identified as unmatched- an indicator for further medical work-up?

☐ Do the significant acute medical conditions have an approximate date of acute onset?

☐ Does every significant medical/surgical/traumatic condition identified, have the appropriate status of acute, active, or inactive at the time of acute decline?

☐ Does every significant medical condition have an ongoing historical and chronological list of medications and other treatments? Does each medication used for a specific medical condition have its own dosage history as well?

Iatrogenic Concerns

☐ Is there a list of previous Allergies and/or Side Effects that is easily accessible and easy to update?

☐ If an Allergy is noted, is the medication appropriately named as an allergy and its allergic reaction specifically described?

☐ If any other adverse drug reaction is noted, is/are the medications appropriately named, their daily dosages noted and their side effects specifically described?

☐ Are cumulative side effects distinguished from single medication side effects and appropriately described?

☐ Are common potential multiple medication side effects adequately ruled out including orthostasis/hypotension, over-sedation and anticholinergic toxicity?

☐ Is there a complete list of medical medications, psychotropic medications, and over the counter substances?

☐ Are all medications/OTCs associated to known specific medical or psychiatric conditions and if not, properly identified as such?

☐ Are all medication changes over the last 2 months ruled out and identified as such?

☐ Are all medication refusals over the last seven days noted?

☐ Are all of the patient's medications assessed for drug-drug interactions, drug-disease, drug-food and drug-lab concerns?

☐ Are all of the patient's medications with associated serum level monitoring assessed for their blood serum levels since the date of onset of the acute decline and if not, identified as a need to do so?

☐ Are the reported symptoms, physical findings, and associated medical conditions determined under medical rule-out, automatically evaluated and ruled out as potential medication adverse effects?

☐ Are common interactive substances such as tobacco, caffeine, alcohol, and grapefruit juice ruled out, and if present checked for any potential drug-drug interactions with the patient's medications and for any association to the patient's clinical symptoms and findings?

☐ Is there a specific list of illegal and potentially-abused substances to be ruled out, and if taken, are they adequately assessed for route, frequency, and amount used?

Global Functional Concerns:

☐ Is there an optimal baseline functioning level established for important IADLs and ADLs?

☐ In addition to targeted functional declines identified in Step 1, are all other less emergent but significant functional declines identified and objectively measured for monitoring and potential treatment purposes?

Nuance Stressors:
For comprehensive rule out and identification of environmental and treatment stressors

☐ Is there a comprehensive psychosocial assessment that travels with the patient from point of care to point of care that only needs to be updated and not redone so that important psychosocial and environmental strengths and stressors can be easily identified?

☐ Is there an important list of negative life experiences that can prompt the assessor for significant stressors?

☐ Is there an important list of factors that effect physical comfort, that are often overlooked if not prompted, such as for concerns related to posture, sleeping, lighting, temperature, proper clothes fitting, assistive devices, etc.?

☐ Is there a way for all treatment team members to identify the current status of routine preventative and treatment interventions to determine if they are negatively or positively effecting behavioral and functional declines during the time of acute decline?

Symptoms of Cognition, Mood, and Psychosis

☐ Is there a comprehensive listing of serial mental status exams so that differences between them would trigger clinical diagnostic discussions?

☐ Has delirium been ruled out at least twice by separate clinicians?

☐ Is there a complete list of easily understood descriptors for each psychiatric symptom group, to help those with less training with psychiatric concerns, still do an adequate psychiatric assessment?

☐ Is there a list of prior psychiatric diagnoses with their associated symptoms and any related prior hospitalizations or positive/negative treatment responses?

Step 3: Connecting the SIGNS to the Decline

Formulation Step

☐ Is there an organized presentation of all the targeted functional and behavioral declines including their dates of onset, juxtaposed to all the other acute clinical concerns identified during the comprehensive assessment process including their dates of onset, to facilitate an accurate and comprehensive determination of all contributory factors and aide in diagnostic formulation?

Step 4: Psychiatric Diagnoses in 3-D

☐ Was there an easily accessible DSM-IV TR manual available during the psychiatric diagnosis process?

☐ Is there a fool-proof structure to the psychiatric diagnosis process to ensure medical and substance-related psychiatric disorders first and foremost (dimension 1) and only if determined to be non-existent, can the assessor go on and determine a 'strictly' psychiatric disorder either previously diagnosed (dimension 2) or entirely new (dimension 3)?

☐ Is there a detailed listing of psychiatric symptoms already linked with potentially associated acute substances/medications and medical conditions, done during the comprehensive assessment, to help with the proper diagnosis of medical or substance-related psychiatric disorders (dimension 1)?

Step 5: The Triple Care Plan

Comprehensive care planning and treatment structure and processing for all identified clinical concerns i.e. Targeted Functional Declines, Targeted Behavioral Declines, and identified acute SIGNS concerns

☐ Is there a comprehensive list of the patient's strengths, weaknesses, likes and dislikes, etc. available to help with the care planning process?

☐ Are important person, place, situation or time triggers of targeted behavioral declines highlighted for specific intervention?

☐ Is there a structured set up for comprehensive care planning that includes goals, objectives, all staff interventions, specific staff interventions, educational interventions, care plan orders, medication orders, lab/dx orders, etc.

☐ Is there a list of potential intervention templates for specific behavioral, psychiatric, functional, and medical conditions for treatment members to peruse for inclusion into the care plan?

☐ Is there a way for <u>all</u> treatment team members including patient and their authorized legal representatives to have access to the care plan to review or to make intervention recommendations?

☐ Is there a way to formally monitor important high-risk targeted behavioral or functional declines in a simple and valid manner?

☐ Was there a comprehensive review meeting during the initial comprehensive evaluation and during required follow-ups to ensure proper updating of all the care plans until stabilization of all the high-risk conditions involved?

Step 6: Level of Care

☐ Is there a structured process to look at all the identified healthcare concerns and prioritize them in order to determine the best and most appropriate level of care for the current clinical presentation?

Step 7: Psychotropic Management

☐ Are there safety processes built-in to the comprehensive evaluation process that helps to ensure safe, appropriate use of psychotropic medications when warranted? For example, have all the medical, iatrogenic, and environmental factors been adequately addressed before considering standing psychotropic changes? Are all, some or none of the acute psychiatric symptoms linked to targeted behavioral concerns, and if more that one type of psychiatric symptom group is linked, which one or ones are the most contributory to the behavioral concern?

☐ Is there a psychotropic medication history readily available that can give the reason for starting, changes and rationale in dosaging, and the stopping of each medication?

☐ Are evidenced-based psychotropic algorithms and guidelines available to the prescriber of psychotropics at the time of medication selection and decision making?

Overall Considerations

Do you have quick and easy access to important, historical comprehensive clinical information both within and outside your facility that is pertinent to the acute clinical presentation of the patient?

Does your facility have a high-risk decline protocol in place to comprehensively address high-risk functional and/or behavioral concerns until stabilized?

K. Web Sites

American Diabetes Association ---- there are a wealth of resources here for individuals with diabetes, families, and those working with them, including a section on "Your Health Care Team" and a visit planning tool. http://www.diabetes.org

American Psychiatric Association — They have diagnosis specific practice guidelines that are applicable in a wide variety of settings. http://www.psych.org/

Depression in Primary Care: Linking Clinical and System Strategies —A five-year, national program with the goal of increasing the use of effective models for treating depression in primary care settings. www.wpic.pitt.edu/dppc

Health Disparities Collaboratives — The Care Model has been implemented in efforts to improve diabetes, asthma, depression, and cardiovascular disease care. www.healthdisparities.net

Improving Chronic Care —This project promotes effective change in provider groups to support evidence-based clinical and quality improvement across a wide variety of healthcare settings. www.improvingchroniccare.org/change/index.html

Institute for Healthcare Improvement — A not-for-profit organization driving the improvement of health by advancing the quality and value of healthcare and providing leadership through a variety of initiatives, including the Health Disparities Collaboratives. The Depression manual can be downloaded from: www.ihi.org/collaboratives/Depression_Apr2002.pdf

National Council for Community Behavioral Healthcare — They have a primary care resource center with the Four Quadrant Background Paper and Crosswalk to EBPs, State Assessment Tool for assessing the policy and financing environment for integration, and presentations and tools from conference presenters. www.nccbh.org

National Diabetes Education Program — NDEP is a partnership of the National Institutes of Health, the Centers for Disease Control and Prevention, and more than 200 public and private organizations. http://ndep.nih.gov/

National Guideline Clearinghouse — A public resource for evidence-based clinical practice guidelines. NGC is sponsored by the Agency for Healthcare Research and Quality (AHRQ), U.S. Department of Health and Human Services, in partnership with the American Medical Association and the American Association of Health Plans. There are over 1000 disease/condition guidelines that can be accessed. www.guideline.gov

U.S. Preventive Services Task Force (USPSTF) — The group was convened by the U.S. Public Health Service to rigorously evaluate clinical research in order to assess the merits of preventive measures, including screening tests, counseling, immunizations, and chemoprevention. http://www.ahcpr.gov/clinic/uspstfix.htm