CHI²

Center for Healthcare Integration & Innovation

Community Mental Health Association of Michigan

Costs and Benefits of Investing in Mental Health Services in Michigan

April 2011

Anderson Economic Group

The Center for Healthcare Integration and Innovation (CHI²) is the research and analysis office within the Community Mental Health Association of Michigan (CMHAM). The Center, in partnership with the members of the CMH Association, leaders, researchers, consultants and advisors from across Michigan and the country, issues white papers and analyses on a range of healthcare issues with a focus on behavioral health and intellectual/developmental disability services.

The Community Mental Health Association of Michigan (CMHA) is the state association representing the state's public mental health system -- the state's Community Mental Health (CMH) centers, the public Prepaid Inpatient Health Plans ((PIHP) public health plans formed and governed by the CMH centers) and the providers within the CMH and PIHP provider networks. Every year, these members serve over 300,000 Michigan residents with mental health, intellectual/developmental disability, and substance use disorder needs. Information on CMHA can be found at www.cmham.org or by calling (517) 374-6848.

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PURPOSE OF REPORT

Many Michigan residents do not have adequate access to mental health services. An important contributor to this problem is the lack of funding available to pay for services. Given the current budget situation in Michigan, state general funding for community mental health services has declined and providers are having to ration available funds for emergency cases. This is leaving a segment of the population without mental health care when they would benefit from such services.

The Michigan Association of Community Mental Health Boards retained Anderson Economic Group to conduct an independent analysis of the costs and benefits of providing mental health services to all who need them in Michigan. This report focuses on adults and children with mental illnesses while acknowledging that other populations, including persons with developmental disabilities or substance abuse disorders, would also benefit from increased funding for services. Since Medicaid, the state managed health care program for families and individuals with low income or resources, is funded mostly by federal dollars and serves persons with developmental disabilities, this report focuses on mental illness where a majority of the funding comes from state General Fund dollars.

OVERVIEW OF MICHIGAN'S MENTAL HEALTH SYSTEM

In 1974, the Michigan Mental Health Code decentralized a portion of the public health system. The state transferred the funding and responsibility for the treatment of persons with mental illness and/or developmental disabilities to community mental health service programs (CMHSPs). The trend has been to provide mental health services in community settings rather than state-operated hospitals or institutional settings.

Today, there are 46 CMHSPs that serve the residents in Michigan with substance disorders, mental illness or developmental disabilities. Each CMHSP is responsible for the funding and treatment of residents within a specific geographic area. The Medicaid Speciality Services and Supports Mental Health Benefit is managed by the 18 CMHSPs that also serve as the Medicaid Prepaid Inpatient Health Plans (PIHPs). The PIHPs either directly provide or sub-contract with provider networks, including the remaining 28 CMHSPs to provide these services.

In 2009, Michigan's community mental health system served 226,972 consumers and 80% (or 180,852) were mentally ill.[1] That year over 170 types of ser-

1. 2009 is the most recent year data is publicly available. See Michigan Department of Community Health, "Community Health Services Program Report," May 31, 2010.

vices were provided to treat mental disorders in adults and children. Below in Table 1 we display the population served and costs associated with mental illness services for 2009.

TABLE 1. Michigan's Community Mental Health (CMH) System, 2009

Population Receiving Mental Illness Services	Number Served	Total Cost	Average 2009 Cost Per Person
Adults	142,335	$1,107,252,818	$7,779
Children	38,517	$146,952,573	$3,815
Total	**180,852**	**$1,254,205,391**	**$6,935**

Source: Mental Health Services Used Statewide, data provided by the MACMHB

Mental health services are publicly financed through Medicaid and the state's General Fund.[2] Services provided do not differ based on eligibility for public funding; however Medicaid funds are more stable and those who qualify for Medicaid often receive more services. General Fund support for mental health services has declined in recent years. The level of support from the General Fund also varies among CMHSPs due to a funding strategy that weighs factors such as number of people eligible for Medicaid, estimates for number of uninsured, and estimated prevalence of serious mental illnesses.

As general fund budgets have become more restricted, CMHSPs have created a set of eligibility guidelines to prioritize services for those ineligible for Medicaid. Each CMHSP is slightly different but based on the Mental Health Code, the priority of service is:

1. People in emergency or crisis situations
2. People with more severe forms of developmental disability, serious mental illness, serious emotional disturbances, and substance abuse disorders
3. People with less severe or mild/moderate conditions and prevention for the general community

When some of these services are not available due to resource shortages, consumers may be put on waiting lists. Waiting lists include consumers who meet CMH eligibility criteria for priority population or consumers currently receiving services, but are unserved due to resource shortages. See "An Overview of Michigan's Community Mental Health System" on page 8.

OVERVIEW OF APPROACH

Using FY 2009 data provided by the Michigan Department of Community Health, we constructed a baseline of the state's expenditures for mental health services for adults and children. We grouped services into four categories

2. Michigan's General Fund revenue comes from taxes and fees from Michigan residents and some federal dollars.

depending on the severity of the illness of the person requiring the services. We also allocated adults and children receiving services into these same four categories. These categories, from least severe to most severe, are:[3]

1. Moderate/Early Intervention
   Individuals in this category utilize services to decrease their chances of further developing a psychiatric disorder and/or learn to better manage symptoms. Some examples of the services administered include peer support services, therapy and other preventative services.
2. Severe Moderate
   Individuals in this category have a severe or persistent mental illness, but are therapeutically stable with support, which allows them functional abilities to meet basic needs. Some examples of the services administered include medication review, therapy, enhanced rehabilitation, and support services.
3. High Severe
   Individuals in this category display signs and symptoms of a serious psychiatric disorder and demonstrate disabling functional impairments, which prevents him or her from meeting basic needs. Some services used to treat the high severe include assertive community treatment (ACT), community living support, home based services, partial hospitalization, and in rare cases electroconvulsive therapy (ECT).
4. Emergency
   An emergency status individual displays multiple symptoms of a serious psychiatric disorder and manifests a significant level of clinical instability, suggesting a high risk of harm to self or others. The state is required to stabilize through the following methods: hospital based crisis observational care (minimum of 23 hours), impatient admission, intensive crisis stabilization and/or a stay at a state psychiatric hospital.

Once we allocated services and persons to these four categories, we calculated the average cost per person in each category. This is important because it allowed us to model the changes in cost to the state if residents receive services at an earlier stage before the illness becomes more severe.

Using this information as a baseline, we analyzed two policy scenarios that would increase access to and funding for mental health services. Serving more people increases state cost, all else being equal. However, changing the mix of services the state provides changes the cost to the state since services for emergency and severe consumers is more expensive. Additionally, providing care before the situation becomes a crisis results in lower costs for the state in other ways, such as reduced public safety and corrections costs.

3. For further description of the treatments listed under each category, see "Categories of Mental Health Severity" on page 16.

There are two groups of people in need of community mental health services. The first group includes people who have historically received mental health services and/or are on a waiting list, but have slowly lost services over the years due to General Fund cuts. The second group is the long-standing under or unserved population that has demonstrated need. We analyzed the following two scenarios that serve more people in the community mental health care system.

1. *Policy Scenario 1: Funding Services for People on Waiting Lists or Who Were Previously Eligible for Services Before Budget Cuts*
   This policy change includes providing services to the population we estimate will be on the waiting list for mental health services in 2012, and those who were unable to receive care in 2010 and 2011 due to budget cuts. These are people who made contact with a CMHSP and were either unable to receive any services or only received partial treatment. This policy scenario adds the number of people on the 2009 waiting list and people we estimate were not able to receive treatment in 2010 and 2011 due to budget cuts. This scenario adds an additional 41,597 adults and children to the current system.
2. *Policy Scenario 2: Funding Services for All Michigan Residents in Need of Mental Health Services (Long-Standing Unmet Need)*
   This policy scenario greatly increases the number of people being served within Michigan's public mental health system. It includes everyone added in Policy Scenario 1 as well as an additional 122,000 adults and 76,000 children, which we estimated using the state's need for mental health services from national surveys. We anticipate a small number of high severe cases, with the majority of this population being severe moderate and early intervention.

We further describe these policies in "Proposed Policy Change" on page 16. For our methodology, as well as supporting data, see "Appendix A: Methodology and Data" on page A-1.

SUMMARY OF FINDINGS

The main findings of our analysis include:

1. The State Government Currently Spends 20 Times More on Emergency Mentally Ill Adult Cases Than Early/Moderate Cases.

The state government currently spends significantly more per person treating emergency individuals than those with less severe conditions. In 2009, the average annual cost to the state per adult with an emergency status was $13,037 compared to $626 spent on adults with early intervention/moderate conditions.

2. Investing in Early Intervention and Moderate Cases Saves the State Money.

Treating consumers at an early stage of their mental illness before the condition becomes severe reduces state cost. The shifting of the types of services provided by the state towards services for early intervention and moderate conditions, prevents more consumers from reaching high severe or emergency status. By

improving access to less costly services, the state saves money even as it treats more consumers.

Figure 1 below shows the eventual savings to the state by spending money on early intervention and moderate cases. We show the cost of expanding who is served to include the 20,000 residents currently on the CMHSP waiting lists and shifting the types of services these health centers provide. Under Scenario 1, the state spends more money in the first two years as it serves additional people, but by 2016 the state is saving $52 million annually. See "Cost Difference: Scenario 1 - Current Policy" on page 25.

FIGURE 1. State Cost of Current System and Policy Change Scenario 1 (in millions)

Source: Anderson Economic Group, LLC

3. The Current Mental Health System Serves 180,000 consumers, but an Additional 237,000 Would Benefit from Access to Mental Health Services.

Many Michigan residents that need mental health care are not receiving services. There are many reasons for this. One of these reasons is the lack of General Fund dollars that could provide services for adults and children with mental illnesses who do not qualify for Medicaid. Using national survey data on the prevalence of mental illness, we estimate that an additional 85,000 children and 155,000 adults have some form of mental illness and would benefit from access to treatment.[4]

4. These estimates are based on Collaborative Psychiatric Epidemiology Surveys (CPES) used to estimate the need for each state's mental health services, as well as applications by Charles Holtzer. See "Appendix A: Methodology and Data" on page A-1 for additional information.

4. Serving All Michigan Residents Costs the State Money, but State Cost Declines Over Time.

We modeled the cost of providing mental health services for our estimates of the entire population that has some form of mental illness and could reasonably use the service. This accounts for some populations, such as the homeless or those with private insurance, who have a mental illness but would not use the public system.

Adding an additional 237,000 people to the CMH system would increase the state's costs by $419 million in the first year. However, these costs fall sharply once services are shifted to less severe cases. Additionally, health care reform under current law will pay for a greater number of individuals due to the expansion of Medicaid eligibility in 2014. State cost falls to around $222 million by 2016. Increasing the state's budget by approximately 25% would allow over twice as many people to be served. In other words, for each additional dollar of state spending, 9 additional persons with mental illness could be served. See "Cost Difference: Scenario 2 - Current Policy" on page 26.

5. Better Access to Mental Health Services Reduces Other Governmental Costs.

While greatly expanding funding for and access to the mental health system would increase state cost for mental health services, it would lower government costs for other services provided to this population. One important cost is corrections. We included in our cost estimates a reduction in jail and prison costs due to diversion of persons with mental illness because of better access to care. We estimate annual savings of between $5 and $8 million due to fewer numbers of persons with mental illness ending up in jail or prison. There are other social services for consumers whose costs would also decline, but we did not model these. For example, we would expect lower usage of the emergency room by the population with mental illness and less need for specialized services in schools to treat children with mental illness. See "Benefits to State and Individuals due to Policy Changes" on page 27.

LIMITATION OF ANALYSIS

We used 2009 data provided by the Michigan Department of Community Health, which included all services performed throughout Michigan that year. We are aware that not every service unit and cost was included, due to the number of institutions reporting coded services and costs. We did receive data on both Medicaid and general fund expenditures, but could not determine the general fund expenditures on services for children. After conversations with CMHs, we decided most general fund dollars fund services for mentally ill adults. The assessment and treatment of severe mental health conditions varies by PIHPs and CMHSPs across the state. While we attempted to model the state as a whole, individual centers will assess and treat consumers differently. We did not perform a detailed analysis of those with developmental disabilities and substance abuse issues.

ABOUT ANDERSON ECONOMIC GROUP

Anderson Economic Group is a research and consulting firm specializing in economics, finance, business valuation, and industry analysis. The firm has offices in East Lansing, Michigan and Chicago, Illinois. See "Appendix B: About AEG" on page B-1 for additional information on the authors.

II. An Overview of Michigan's Community Mental Health System

Most readers are unfamiliar with Michigan's community mental health system. In this section we describe Michigan's current community mental health system, its funding, and who is eligible to receive services.

CURRENT COMMUNITY MENTAL HEALTH

The Michigan state constitution stipulates "institutions, programs, and services for care, treatment, education, or rehabilitation of those inhabitants who are physically, mentally, or otherwise seriously disabled shall always be fostered and supported."[5] Over the years, Michigan's system of mental health care for these inhabitants has evolved to treat two distinct populations:

- Developmentally disabled—people with a mental or physical incapacity, such as mental retardation, autism, cerebral palsy or epilepsy.
- Mentally ill—adults and children afflicted by a mental or emotional disorder that substantially impairs normal life activity, such as manic-depressive disorder, serious depression and schizophrenia.

Originally, state hospitals and other institutions were used to treat and care for the mentally ill and developmentally disabled. But by the 1960s, a general consensus emerged among the public and mental health professionals that mental health consumers would be best served locally, closer to their families. In 1974, the Michigan Mental Health Code transferred the funding and responsibility for the treatment of persons with mental illness and developmental disabilities from the state to community mental health service programs (CMHSPs).

The Medicaid Speciality Services and Supports Mental Health Benefit is managed by the 18 CMHSPs that also serve as the Medicaid Prepaid Inpatient Health Plans (PIHPs). The PIHPs either directly provide or sub-contract with provider networks, including the remaining 28 CMHSPs to provide these services.

We outline this evolution and decentralization of Michigan's community mental health system below in Table 2. It illustrates how the number of state-ran psy-

5. Article VIII, Section 8 of the Michigan State Constitution, 1963.

chiatric hospitals has declined and CMHSPs have grown to serve the entire state.

TABLE 2. Changes of Michigan's Community Mental Health (CMH) System, 1965-2010

	1965	1991	2010
Number of community mental health service programs (CMHSPs)	12 covering 16 counties	55 covering 83 counties	46 covering 83 counties
State operated psychiatric hospitals and centers for persons with developmental disabilities	41 centers with about 29,000 residents	20 centers with 3,054 residents	5 centers with 818 residents

Source: Michigan Department of Community Health, Senate Budget Presentation, March 2010

As shown above in Table 2, there are currently 46 CMHSPs, which are overseen by the Michigan Department of Community Health (MDCH). CMHSPs can be organized as an agency, organization or authority that delivers mental health services.[6] Most CMHSPs (37) are organized as independent authorities of a single county, seven are agencies of county government and two are organizations. All CMHSPs must have 24 hour emergency service, as well as points of access within 30 minutes or 30 miles (there are rural exceptions).[7] Crisis service and inpatient screening must be available 24 hours a day, 7 days a week. In emergency situations, a person must be served within 3 hours. Under all other situations, a phone screener gets a sense of the caller's severity and makes a referral within 15 days.

When a person comes in for a clinical assessment, they must sign a permission for treatment form and complete a financial determination called Ability to Pay (ATP), which is based on state taxable income and a state mandated process. People are not denied services because of an inability to pay, but may be refused if they fail to submit financial information. Each person may choose their provider, however the CMHSP they reside under is financially responsible for them.

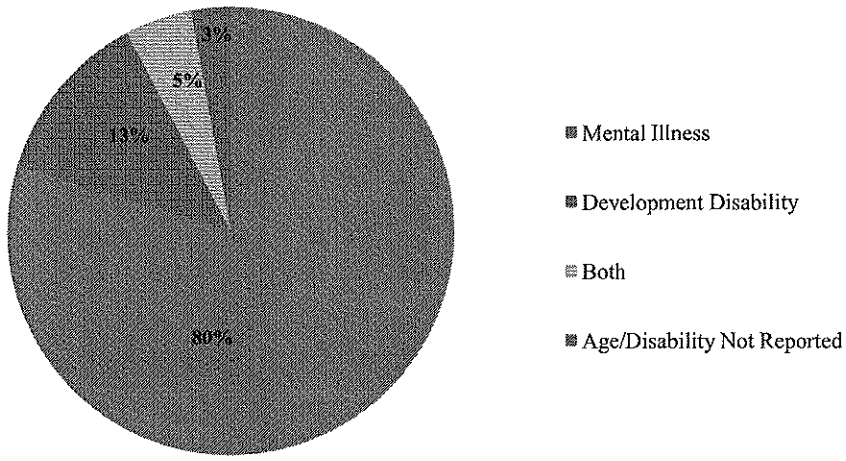
Individual treatment is developed using a person-centered planning process, which is meant to support greater consumer choice and control. In addition to a person-centered process, a family-centered model is used for children. In 2009, Michigan's community mental health system served 226,972 consumers.[8]

6. Under the 1996 revisions to the Mental Health Code, CMHSPs can be organized as an agency, organization or authority. An agency is an operation of its county, where funding is appropriated within the county budget. An organization is a separate public entity created by two or more counties. An authority is also a separate public entity, but is financially independent as its funding does not pass through county government.
7. For rural areas service providers must be within 60 minutes or 60 miles of the beneficiary's home. Source: Michigan Department of Community Health, *Medicaid Provider Manual*, Chapter III, 2.3 Location of Service.
8. Michigan Department of Community Health, *Community Health Services Program Report*, May 31, 2010.

Figure 2 on page 10, shows the distribution of consumer disorders that year. Of the nearly 230,000 consumers served, 80% (or 180,852) were mentally ill. This includes 142,335 adults and 38,517 children.

Approximately 50 to 70 percent of people served by the public mental health and substance use disorder systems have co-occurring disorders.[9] Although mental illness and substance use disorders are closely related, Michigan has had a sequential and/or parallel treatment for individuals with co-occurring disorders.

FIGURE 2. Consumers Served in Michigan, 2009



Source: Michigan Department of Community Health, "Community Mental Health Services Program Report", May 31, 2010.
Analysis: Anderson Economic Group, LLC

The Bureau of Substance Abuse and Addiction Services oversees treatment and prevention efforts related to substance abuse and problem gambling addictions in Michigan. Substance Abuse services are provided through 16 regional coordinating agencies (CAs) that are responsible for assuring services are available to those in need of help.

Approximately eighty staff at the Mental Health and Substance Abuse Administration provide consultation to CMHSPs, including PIHPs and CAs, as well as monitor the quality of care they provide. The administration also establishes policy direction and standards for the statewide system. Their vision is that "all people in Michigan will have access to a public mental health and substance abuse system that supports individuals with mental illnesses, emotional distur-

9. MDCH, Practice Improvement Steering Committee, *Compendium of Michigan's Evidence-Based Best and Promising Practices*, November 2009.

bance, developmental disabilities and substance use disorders."[10] However, current access to public mental health services usually depends on a consumer's funding source.

SOURCES OF FUNDING

In Michigan, mental health services are publicly financed through local, state, and federal sources. Historically, this care was provided by state-run facilities, which is now provided through CMHSPs. Michigan essentially has seven sources of public funding for mental health and substance abuse services. There are two sources of general funds (state and local) and five federal Medicaid waivers.[11] These waivers provide the bulk of mental health, substance abuse and physical health care funding for needy consumers and/or those who qualify for Medicaid.

Available services do not differ based on eligibility for different types of public funding. However, Medicaid entitles people to certain services. Consumers eligible for services through Medicaid are more likely to receive them than those receiving treatments paid for by the state's General Fund. In 2009, 59.6 percent of the mentally ill people served were enrolled in Medicaid.[12]

The Medicaid contract model is called a Prepaid Inpatient Health Plan (PIHP), which is a federal center for Medicare and Medicaid Services. MDCH contracts with 18 PIHPs (which are also CMHSPs) to provide Medicaid Specialty Services that include programs for persons with mental illnesses and developmental disabilities. PIHPs are similar to Medicaid health plans and HMOs, but are not required to provide a full scope of medical services. They are responsible for the management of all speciality services of everyone enrolled in Medicaid, with the exception that limited outpatient mental health services for individuals with less severe conditions are available through Medicaid Health Plans. PIHPs must manage a shared risk capped pool of funds, which are based on the number of Medicaid eligibles in the PIHP area.[13]

By comparison, non-Medicaid funding is more vulnerable to reductions because they are funded by General Fund dollars. CMHSPs receive different levels of general funds, which are state dollars from its residents that can be used to serve anyone in need. Practically, General Fund dollars are rationed to the more severe cases. Communities that had state institutions generally received higher amounts of CMH general fund dollars due to the need those regions have established.

10. See the MDCH website at www.michigan.gov/mdch.

11. Medicaid is a program administered by state governments and funded partially by the federal government to provide access to medical care for low-income Americans, the elderly, and those with special needs.

12. Public Sector Consultants, "Mental Health in Michigan," prepared for the Flinn Foundation, July 2010.

13. Source: Michigan Association of Community Mental Health Boards

In 1997, a funding factor strategy was created that weighed factors such as Medicaid eligibles, estimates for the uninsured and prevalence of serious mental illness. In each region some funding was redirected to the four lowest funded CMHSPs. Redistribution of funds has continued over the past decade to compensate for declines in funding, both from Medicaid and the General Fund. In FY 2010, the MDCH revisited their formula and included four additional factors:

- Pro-rata reductions
- Funding to purchase services from state facilities
  (Medicaid not longer pays for this service, so the general fund must cover this for every consumer including Medicaid enrollees)
- Homeless rates
- Unemployment rates

Every CMHSP receives different amounts of GF that is capped each year. This forces each CMHSP to budget emergency case costs for the entire year. As the year unfolds, access to services decline for people relying on GF. Generally speaking, Medicaid funding provides services to the poor and disabled and General Funds are used for the indigent (poor), those waiting to be enrolled in Medicaid, and those with inadequate insurance.

ELIGIBILITY

All emergency cases are treated regardless of funding or ability to pay. People enrolled in Medicaid are entitled to service. Everyone else is served based on the severity of their illness.

Individuals eligible for Medicaid get a comprehensive health care program. The State's 1915 (b) Freedom of Choice Waiver provides fourteen different state plan mental health and substance abuse services and fourteen alternative services that can be used in place of state plan services. These services are shown below in table and managed though one of the state's 18 Prepaid Inpatient Health Plans.

TABLE 3. 1915 (b) Michigan Waiver Services

State Plan Services	Alternative Services
Less than 16 ICF/MR beds	Prevention and Consultation
Inpatient Psychiatric Services (adult)	Crisis Response (23 hour beds)
Intensive Crisis Residential	Community Living Training and Support
Inpatient Psychiatric Service (under 22 years old)	Skill Building Assistance
Partial Hospitalization Services	Peer Operated Support Services
Intensive Crisis Stabilization	Wraparound Services for Children/Adolescents
Physician Services (Psychiatric)	Family Skills Development
MH Clinic Services	Respite Care

TABLE 3. 1915 (b) Michigan Waiver Services (Continued)

State Plan Services	Alternative Services
Mental Health Rehabilitation Services	Housing Assistance
Psychosocial Rehabilitation (PSR) Services	Assistive Technology*
Case Management	Assessment and Evaluation*
Early Periodic Screening, Diagnostic, and Treatment (EPSDT) Related Services	Supports Coordination*
Substance Abuse Rehab Services	Enhanced Health Care Services*
Personal Care in Specialized Residential	Assistance with Challenging Behaviors*
* Available to DD consumers only	

Source: Washtenaw Community Health Organization

For individuals at 185% below the federal poverty level, that do not qualify for medicaid, a network of county based indigent health plans are funded through a 1115 Waiver known as the Adult Benefit Waiver (ABW).[14] This allows the State to use unspent MIChild dollars to provide "Medicaid like" outpatient services for individuals who do not meet serious and persistent mental illness criteria. MI-Child is similar to ABW and provides mental health and substance abuse benefits for individuals under the age of 18.

If ABW funds are insufficient, the CMH and Substance Abuse Coordinating Systems must use general funds to provide services. The public mental health and substance abuse system is also responsible for children who do not qualify for MI-Child or are severely emotionally disturbed (SED) and must use general funds.

The Michigan Department of Community Health requires every CMHSP to administer two types of evidence-based interventions: assertive community treatment (ACT) and integrated treatment for co-occurring disorders. Beyond those two services, each CMHSPs determines services on local needs.

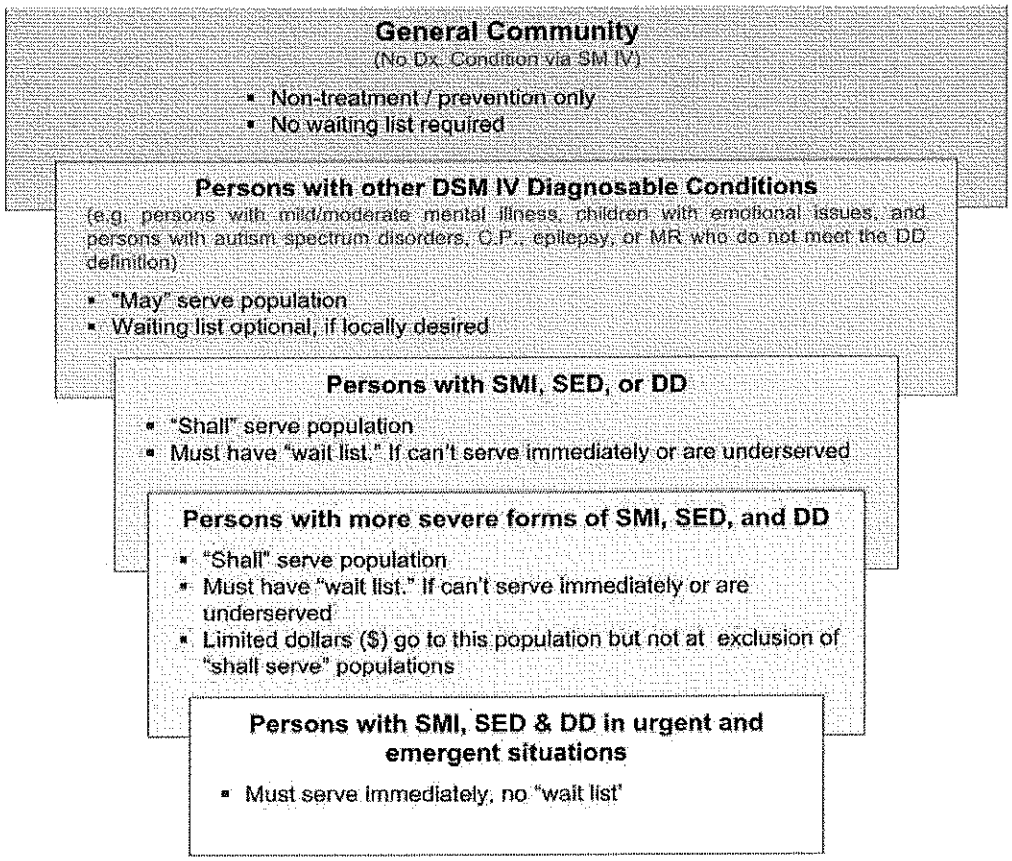
As discussed above, for people ineligible for Medicaid funding, the Mental Health Code establishes broad service priorities for CMHSPs:

- People in emergency or crisis situations
- People with more severe forms of developmental disability, serious mental illness, serious emotional disturbances and substance use disorders
- People with less severe or mild/moderate conditions and prevention for the general community

14. Indigent health plans also have access to local money that can be matched to provide similar services for individuals above 185% of poverty.

Given these broad guidelines and varying levels of general funding, each CMHSP has come to create its own set of eligibility guidelines based on consumer severity and need for available services. Figure 3 shows the general priorities set by service providers, with the smallest rectangle being the highest priority.

FIGURE 3. CMHSB Service Priority Matrix



JRCE: Adapted from MDCH Senate Budget Presentation, March 2010

Source: Adapted from the Michigan Department of Community Health Senate Budget Presentation, March 2010

However, there is not a common operating severity measure used by CMHSPs. There are unique eligibility requirements for each CMHSP that an individual must meet for general funds to pay for the services that he or she requires. An individual's eligibility for funding largely dictates what services are available to them, unless the case has reached an emergency status. This leaves a segment of the Michigan population without access to preventive, early intervention, and even moderate mental health services because they are unable to afford them. These people are put on CMHSP waiting lists.

Waiting lists include consumers who meet CMH eligibility criteria for priority population or consumers currently receiving CMH services, but the service is not available due to resource shortages. We estimate 17,605 adults and 2,426 children were on waiting lists throughout Michigan in 2009 and approximately 10-15% more were added to waiting lists in 2010, due to budget restrictions.

III. Proposed Policy Change

In the previous section, we provided an overview of how Michigan's community mental health system operates. In this section, we describe the severity of current patient needs and the severity levels of populations to be served if there were more state dollars available to fund services.

Currently the CMHSPs and PIHPs have to treat the most serious (emergency) cases while using remaining funds for treatment of less severe patients. Additionally, we noted that practically whether you qualify for Medicaid or not determines if you're going to be able to receive services since General Fund dollars that could be used to treat anyone are scarce.

We worked with the Michigan Association of Community Mental Health Boards to categorize the current recipients of mental health services by the level of severity of their illness. This allows us to estimate the average cost by the level of severity and to do the following analysis:

1. Determine if early intervention treatments reduce costs later on by reducing the need for emergency care and other treatments for highly severe consumers; and
2. Estimate the cost of caring for new people who would benefit from mental health services.

We first discuss those currently receiving services and place them into categories before discussing two proposed policy changes.

CATEGORIES OF MENTAL HEALTH SEVERITY

As severity of an individual's illness often plays a large part in his or her eligibility for funded treatment, we propose to group services by severity categories, which we list below. Before actual treatment, we assume that all individuals with a mental illness would need some form of assessment (health, psychiatric, psychological, emergent, behavioral). Our categories are the following:

1. Emergency Status

An emergency status individual displays multiple symptoms of a serious psychiatric disorder and manifests a significant level of clinical instability, suggesting high risk of harm to self or others.[15]

Types of Services Necessary for this Level of Mental Illness Severity

- Crisis Observational Care- Hospital Based (23 hour observation)
- Crisis- Residential (in lieu of or to shorten an inpatient stay)
- Emergency Transportation

15. By law the state is required to cover crisis intervention, which includes most of the ESI services listed under Emergency.

- Inpatient admission (3-15 days)
- Intensive Crisis Stabilization
- State Hospital (short stay)

2. High Severe

A high severe individual displays signs and symptoms of a serious psychiatric disorder and demonstrates disabling functional impairments, which prevents him or her from meeting basic needs.

Types of Services Necessary for this Level of Mental Illness Severity

- Assertive Community Treatment (ACT)[16]
- Clubhouse Psychosocial Rehabilitation Program[17]
- Community Living Support
- Electroconvulsive Therapy (ECT)
- Employment Assistance
- Home based Services (adolescents and children)
- Medication Administration
- Medication Review
- Partial Hospitalization (1-2 weeks, 5 days a week for 6 or more hours)
- Psychiatric Evaluation (1 time)
- Respite (adolescents and children)
- Skill Building
- Specialized Residential
- State Hospital (30 days +)
- Targeted Case Management
- Therapy
- Wraparound (adolescents and children)[18]

16. Assertive community treatment (ACT) is a community-based approach targeted to a specific group of individuals with serious mental illness. According to the Michigan Department of Community Health, "ACT team members share responsibility for the individuals served by the team, the range of ACT treatment and services is comprehensive, interventions not carried out in clinic or hospital settings, and services are individualized."

17. Clubhouse psychosocial rehabilitation programs build a program of support and opportunities, where participants are called "members" (instead of clients or patients) and restorative activities focus on strengths, rather than their illness.

18. Wraparound is "an established vehicle for delivery of services and supports to children and families with severe and multiple needs and risks being served by multiple agencies," according to the Michigan Department of Community Health.

3. Severe Moderate

A severe moderate individual has a severe or persistent mental illness, but is therapeutically stable with support, which allows them functional abilities to meet basic needs.

Types of Services Necessary for this Level of Mental Illness Severity

- Clubhouse Psychosocial Rehabilitation Program
- Enhanced Rehabilitation and Support Services
- Family Support
- Medication Review
- Medication Administration
- Peer Support Services
- Specialized Residential
- Supported/Integrated Employment Services
- Targeted Case Management/Support Coordination
- Therapy (Adult, Child, Group, Family)

4. Moderate Early Intervention

A moderate early intervention candidate would utilize services to decrease their chances of further developing a psychiatric disorder and/or learn to better manage symptoms.

Types of Services Necessary for this Level of Mental Illness Severity

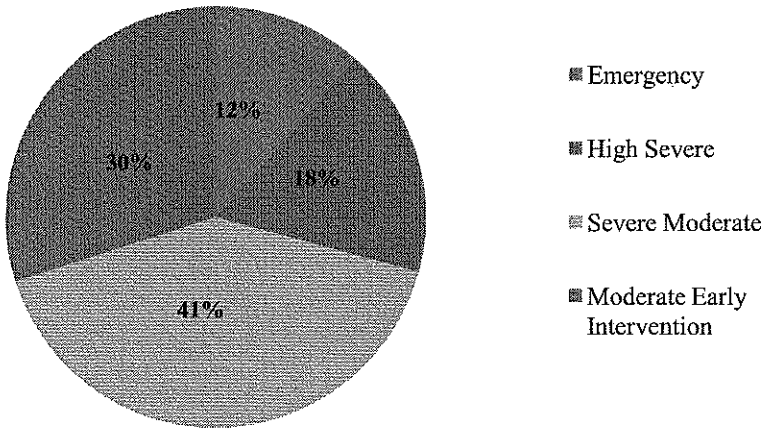
- Medication Review
- Peer Support Services
- Prevention Services- Direct Model (as allowed by DCH)
- Supported/Integrated Employment Services
- Psychiatric Evaluation (1 time)
- Therapy (Adult, Child, Group, Family)

CURRENT ELIGIBILITY

In 2009, the most recent year data is available, the CMH provided mental illness services to 142,335 adults and 38,517 children. Given funding scarcity, resources are primarily dedicated to treating the most severe populations (emergency and high severe) first. However, General Fund dollars and the prevalence of serious mental illnesses among residents within the area each CMHSP serves is vastly different throughout the state. In Figure 4 on page 19 we show the current proportion of severity among people receiving mental health services.[19]

19. AEG estimated severity levels with the assistance of professionals working within CMHSPs and Community Mental Health Boards.

FIGURE 4. Michigan Residents Currently Served Under the Public Mental Health System



Source: Michigan Department of Community Health," Community Mental Health Services Program Report," May 31, 2010.
Analysis: Anderson Economic Group, LLC

To gain a better sense of how adult and child severity levels differ, we show the distribution below in Table 4. While there are more adults served than children, the distribution of severity across adults and children are similar, although less children receive preventative services from the CMH. In both age groups, roughly 30% of the population served were in the two most severe categories.

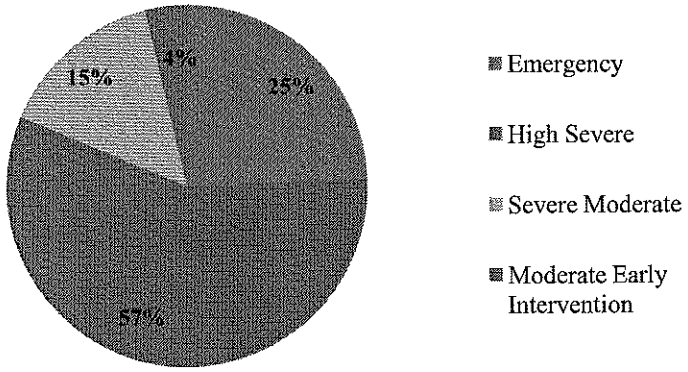
TABLE 4. Number of People Receiving Mental Health Services, FY 2009

Level of Severity	Adults	Share of Population	Children	Share of Population
Emergency	17,111	12%	3,852	10%
High Severe	24,219	17%	7,703	20%
Severe Moderate	54,625	38%	19,259	50%
Moderate Early Intervention	46,379	32%	7,703	20%
Total Number	142,335	100%	38,517	100%

Source: Michigan Department of Community Health, Community Mental Health Services Program Report, May 31, 2010.
Analysis: Anderson Economic Group, LLC

In 2009, the MDCH spent over $1.1 billion on adults and $146 million on children, totalling over $1.25 billion for mental illness services that year. The share of total costs for services at each severity level is shown in Figure 5 on page 20.

FIGURE 5. Costs of Service For Each Severity Category Served Under Michigan's Public Mental Health System



Source: Michigan Department of Community Mental Health," Community Mental Health Services Program Report," May 31,2010.
Analysis: Anderson Economic Group, LLC

PROPOSED POLICY CHANGES

The proposed policy changes would expand the population being served by Michigan's public mental health system. As most Americans warm to the value of preventative care and early detection medical tests, this seems to be an appropriate time to propose this policy change. The first scenario would provide services for the recent population that is no longer receiving mental health services due to budget cuts or is on a waiting list for services. The second scenario would serve all Michigan residents in need of mental health care.

Scenario 1: Treating Consumers on Waiting Lists and Those Who Were Previously Eligible and Receiving Services Before Budget Cuts

In FY 2009, there were over 20,000 people who made contact with one of Michigan's CMHSPs regarding mental health services and did not receive full treatment.[20] A person might not be served for several reasons:

- He or she did not show up for an assessment;
- He or she did not meet non-entitlement eligibility criteria, which would include residents with less severe disorders that do not meet priority requirements for the CMHSP in their geographic region; or
- He or she did receive treatment, but there was insufficient general funds to continue treatment.

This policy scenario adds roughly 17,600 adults and 2,400 children to the community mental health system from the waiting list. It also adds 15,065 adults and 6,500 children who we estimate were not able to receive treatment in 2010 and 2011 due to budget cuts.

20. Waiting lists are not comprehensive as individuals who would like services from a CMHSP are sometimes not put on these lists.

The additional population being served in this scenario, at some point recognized their need for mental health services, but could not afford them. We anticipate that the people in this group would belong in either the severe moderate or moderate early intervention category. They have not yet developed a serious mental illness, which could inhibit a person from holding down a job and pursuing education. Receiving mental health services increases the likelihood of preventing a future crisis.

TABLE 5. Number of Patients Served Under Current System and Treating Those Currently on Waiting Lists (Scenario 1), FY 2012

Level of Severity (Both Adults and Kids)	Current System FY 2012	Scenario 1 FY 2012	Additional Number Served by Scenario 1
Emergency	27,313	26,959	**(353)**
High Severe	54,279	51,714	**(2,565)**
Severe Moderate	62,279	81,465	**19,187**
Moderate/Early Intervention	18,831	40,970	**22,139**
Total	162,702	201,109	**38,407**

Note: AEG worked with members of the Michigan Association of Community Mental Health Boards to determine the current distribution of consumers across severity levels
Source: Anderson Economic Group, LLC

Scenario 2: Treating All Patients in Michigan in Need of Mental Health Services (Long-Standing Unmet Need)

This policy greatly increases the number of people being served within the public mental health system. Using estimates of Michigan's need for mental health services, AEG determined over 237,000 additional people could use these services, as shown below in Table 6.[21] These estimates take into account a population that can be reached, despite the stigma associated with mental illness, and

21. These estimates are based on Collaborative Psychiatric Epidemiology Surveys (CPES) used to estimate the need for each state's mental health services.

who have mental health needs that could be appropriately met by the CMH system.

TABLE 6. Number of Patients Served Under Current System and Treating Those in Need of Services (Scenario 2), FY 2012

Level of Severity (Both Adults and Kids)	Current System FY 2012	Scenario 2 FY 2012	Additional Number Served by Scenario 2
Emergency	27,313	27,567	**254**
High Severe	54,279	57,631	**14,876**
Severe Moderate	62,279	125,168	**57,768**
Moderate/Early Intervention	18,831	189,393	**164,160**
Total	162,702	399,759	**237,057**

Note: AEG worked with members of the Michigan Association of Community Mental Health Boards to Determine the Current Breakdown of Patients by Severity Level
Source: Anderson Economic Group, LLC

This is further described in "Estimating Changes in Population Being Served," on page A-2. We estimate almost 155,000 adults and 85,000 children would be added to the public mental health system under this policy in 2012 (compared to current system). We anticipate the majority of this population will be in severe moderate and early intervention. Although we anticipate no additional emergency cases from this addition, it is likely there will be a small amount of high severe cases added. We further discuss these policies in "Cost Benefit Analysis of Proposed Policy Change" on page 23.

IV. Cost Benefit Analysis of Proposed Policy Change

The current system only serves a small fraction of those in need of mental health services in Michigan. In the previous section we described two scenarios where the mental health system was able to serve more people. In this section, we estimate the costs and benefits of the current system and the two proposed policy changes.

OVERVIEW OF COST-BENEFIT MODEL

We developed a cost-benefit model that allowed us to estimate the cost of the current CMH system and the two policy changes. To construct a baseline for costs at each severity level, we used statewide data that included most mental illness services provided in 2009. Each service had a description, the number of units used, total cost, and number of cases. We performed our analysis for adults and children with mental illnesses separately because services were not necessarily used by both groups and costs to administer services to each group differed. We assigned one or more severity levels to each service depending on use, and estimated the portion of units accordingly.[22] We show our assumptions about costs of services assigned to more than one severity level for adults in "Appendix A: Methodology and Data" on page A-1 and in the Supplemental Data Appendix.

The proposed policy changes of Scenario 1 (treating consumers on waiting lists) and Scenario 2 (treating all consumers in Michigan in need of mental illness services) affects the overall number of people being served by the CMH. However, our cost analysis measured units, not people. To properly compare these policy changes, we created a proxy for units to people using our baseline data, which is shown in Table A-4 on page A-8. Adults and children had different units per person used at each severity level and these same averages were used throughout the analysis for consistency. We also used the same average cost per unit each year when comparing each scenario to the current policy.[23] The only aspect we changed in our analysis of each scenario was the number of people being served and the distribution of people across severity levels. This is explained in detail in "Appendix A: Methodology and Data" on page A-1.

CURRENT COST BY SEVERITY

From our baseline data (2009), we projected changes in population served under current and proposed policy changes. Our estimates at each severity level of population served, units of service used, and total cost in 2009 is shown in

22. We used units to measure service use instead of cases because case count was duplicated across services, as it is common for a person to use more than one service. This is further explained in "Appendix A: Methodology and Data" on page A-1.

23. For all policies, we did increase the average cost per unit at each severity level by 3.6% each year the CAGR of CMH mental health spending from 2001-2008). This was done to simulate the increasing costs of services over time.

Table 7 below.

TABLE 7. Number and Cost of Services by Level of Severity, FY 2009

	Level of Severity	Adults	Children	Total
Number of People Receiving Mental Illness Services	Emergency	17,111	3,852	20,963
	High Severe	24,219	7,703	31,923
	Severe Moderate	54,625	19,259	73,884
	Moderate Early Intervention	46,379	7,703	54,083
	Total Number	**142,335**	**38,517**	**180,852**
Total Number of Units at Each Severity Level	Emergency	1,366,135	135,355	1,501,490
	High Severe	23,982,293	3,348,513	27,330,807
	Severe Moderate	12,561,885	525,727	13,087,612
	Moderate Early Intervention	1,008,130	93,776	1,101,905
	Total Units of Service	**38,918,443**	**4,103,371**	**43,021,814**
Total Cost by Level of Severity	Emergency	$283,453,398	$23,971,406	$307,424,803
	High Severe	$620,484,337	$92,171,613	$712,655,950
	Severe Moderate	$166,427,099	$21,405,655	$187,832,754
	Moderate Early Intervention	$36,887,983	$9,403,900	$46,291,883
	Total Cost	**$1,107,252,818**	**$146,952,573**	**$1,254,205,391**

Source: Michigan Department of Community Health. "Community Mental Health Services Program Report," May 2010. Analysis: Anderson Economic Group, LLC

Overall, the CMH clearly serves more adults than children.[24] However, according to professionals at Community Mental Health Boards, children often receive attention and treatment from other sources, such as family physicians, social workers or school services. We show how we expect both populations to change over the next five years under the current policy in Table A-5 on page A-9.

We show the change in population being served and distribution across severity levels from 2009 through 2016 for our policy scenarios in Table A-6 on page A-10 and Table A-7 on page A-11.

24. The CMH provides mental illness services to 1.9% of adults and 1.6% of children in Michigan. However, nationwide surveys indicate a higher prevalence of mental illness in children (7.2%) than adults (4.5%). Source: C.E. Holtzer and H.T. Nguyen, "2009 CPES Based Estimates of Need for Mental Health Services for States," August 8, 2010.

STATE COST

Medicaid and General Fund dollars pay for most community mental health services.[25] General fund dollars come from tax and fee revenue from Michigan citizens. Medicaid funding includes a combination of state and federal dollars. The state only pays for a *portion* of the cost of services received by people enrolled in Medicaid. The federal government's share of Medicaid costs, called the federal medical assistance percentage (FMAP), is determined by the per capita income of the state.[26] Michigan had a FMAP of 63.2% for fiscal year 2010, meaning that the state government paid 36.8% of the cost of services for Medicaid enrollees. In 2009 and 2010, a provision in the American Reinvestment and Recovery Act temporarily elevated the reimbursement rates to states for Medicaid. The result was that Michigan was reimbursed at a rate about 10% higher than its FMAP, or 73.3% last year.

In our analysis of state cost, we took into account the services paid for by Medicaid and the General Fund. We first estimated the state cost of the CMH system due to current Medicaid enrollees and consumers who services are paid for by General Fund dollars. In 2009, the state's share of total CMH costs was 57% due to its share of Medicaid and General Fund spending. Next, we estimated how the policy scenarios would affect the number of consumers requiring General Fund support and those who would qualify for Medicaid. Finally, due to health care reform, a larger number of Michigan residents will be eligible for Medicaid beginning in 2014. The federal government will cover all cost of services for these newly eligible enrollees in the years 2014 through 2016. After that, the federal government will decrease its share of those costs gradually to 90% by 2020.

We assumed that most of the new consumers served by the CMH system in Scenarios 1 and 2 would require General Fund dollars. Since Medicaid enrollees are entitled to mental health services, we assumed most who are eligible for Medicaid would already be enrolled. Therefore before 2014, we increased the state's share of total CMH costs from 55% to 62%. After 2014, we assumed those eligible for Medicaid would enroll and those costs would be 100% paid for by the federal government. Using these assumptions, we estimated the state's total cost for community mental health would fall to 50% with health care reform under current law in 2014 through 2016.

COST DIFFERENCE: SCENARIO 1 - CURRENT POLICY

Under Scenario 1, the state is able to provide services for an additional 38,407 people compared to the current policy. In the first two years, the state will spend between $50 to $100 million *more* on community mental health services. By 2016, the state will be *saving* over $50 million annually, as shown in Table 8 on page 26. The CMH is able to serve a greater number of people and save money

25. On average, local funds are a small (5%) share of CMHSP funding.

26. When a state has a lower per capita income, the federal government will cover more of that state's Medicaid costs.

by reaching consumers before their disorders develop into more severe cases. The additional people served under this policy change are predominantly severe moderate and moderate early intervention, which is less expensive to treat than severe cases.

We anticipate that over time, the preventative care provided through this policy change will assist a higher proportion of the population from needing emergency and high severe services. People requiring high severe services use more units on average than any other severity level, which is also more expensive.[27] Under the current policy, the high severe population requires the greatest resources from CMHSPs. Although Scenario 1 serves a larger population, the distribution of severity levels shifts over time, towards milder services that are used less frequently and at a lower cost.[28] The cost to the state for adults and children are shown in Table A-8 on page A-12.

TABLE 8. Change in Cost due to Scenario 1 Policy Changes (in millions)

	Baseline 2009	Policy Change 2012	2013	2014[a]	2015	2016
Current System Cost	$1,194.9	$1,600.8	$1,723.4	$2,000.5	$2,027.8	$2,057.0
Scenario 1 Cost	-	$1,685.5	$1,848.6	$1,982.9	$1,959.3	$1,949.2
Total Savings (Cost)	$1,194.9	($84.7)	($125.1)	$17.7	$68.5	$107.8
State Savings (Cost)[b]	-	**($52.8)**	**($99.5)**	**$8.6**	**$33.5**	**$52.7**

Source: Anderson Economic Group, LLC

a. Health care reform adds to number of people qualifying for Medicaid.

b. The direct cost to the state is substantially less than the total cost, due to the FMAP for Medicaid enrollees and other potential benefits to the state from the policy change, which we describe in "Benefits to State and Individuals due to Policy Changes" on page 27. These calculations are shown in greater detail in Table A-8 on page A-12.

COST DIFFERENCE: SCENARIO 2 - CURRENT POLICY

Under Policy Scenario 2, the state does not incur monetary savings between 2012-2016 when compared to current policy. Although the cost of providing services to a much larger population declines over time, as shown in Table 9 on page 27. We estimate that under Policy Scenario 2 more than twice the population could be served at an additional 25% of current state costs. In other words, for each additional dollar the state spends, 9 additional persons with mental illness could be served.

Under current policy, the state serves 1.6% of children and 1.9% of adults throughout Michigan. However, it is estimated 7.2% of children and 4.5% of

27. Cost per unit and average number of units used for each severity level is shown in Table A-2 on page A-6 for adults and Table A-3 on page A-7 for children.

28. These changes are shown in greater detail, as well as in separate analyses for adults and children in the Supplemental Data Appendix.

adults are in need of mental health services in Michigan.[29] We acknowledge that there are portions of the population difficult to reach due to stigma or other circumstances, such a being homeless. Policy Scenario 2 provides access to mental health services for an additional 154,909 adults and 85,339 children in 2012.[30] It is reasonable that the widespread preventative care provided through this policy change will prevent more of Michigan's residents from requiring emergency and high severe services, which are by far the most costly. Furthermore, expanding access to mental health services in Michigan offers additional benefits to the state besides cost savings for the CMH, which we discuss in the next section.

TABLE 9. Change in Cost due to Scenario 2 Policy Changes

	Baseline 2009	Policy Change 2012	2013	2014[a]	2015	2016
Current System Cost	$1,194.9	$1,600.8	$1,723.4	$2,000.5	$2,027.8	$2,057.0
Scenario 2 Cost	-	$2,272.2	$2,394.4	$2,512.3	$2,534.5	$2,563.1
Additional Total Cost	$1,194.9	($671.4)	($670.9)	($511.8)	($458.4)	(455.1)
State Additional Cost[b]	-	**($418.5)**	**($438.3)**	**($250.3)**	**($224.3)**	**($222.6)**

Source: Anderson Economic Group, LLC

a. Health care reform adds to number of people qualifying for Medicaid.

b. The direct cost to the state is substantially less than the total cost, due to the FMAP for Medicaid enrollees and other potential benefits to the state from the policy change, which we describe in "Benefits to State and Individuals due to Policy Changes" on page 27. These calculations are shown in greater detail in Table A-8 on page A-12.

BENEFITS TO STATE AND INDIVIDUALS DUE TO POLICY CHANGES

Preventative treatment and greater access to treatment for mental illness benefits the individuals themselves, as well as the state. In 2009, CMHSPs provided care for 38,707 people in jail and 119 in prison. It is reasonable that some of those people would not be within the corrections system had they received treatment earlier.

We estimated the cost savings to the state if the policy changes 1 and 2 care for more individuals and reduce the number of mentally ill adults incarcerated. We assumed these policies would become more effective at reducing the numbers in jail or prison over time. Using information provided in Department of Corrections reports and MDCH reports, we estimated that if CMHSPs could serve people on the waiting list (Scenario 1), the number of mentally ill in jail could be reduced by 30% and the number in prison 15% by 2016. This generates cost savings to state and local governments of $5 million annually. Policy Scenario 1 would save Michigan over $8.6 million by 2014.

29. Estimated by dividing the current number of adults and children being served by the population for each group in Michigan in 2009. Source: C.E. Holtzer and H.T. Nguyen, "2009 CPES Based Estimates of Need for Mental Health Services for States," August 8, 2010.

30. For a more detailed analysis of costs to the state see Table A-8 on page 12.

Policy Scenario 2 would serve many more people. Overtime, due to the extensive access, we think better CMH services would reduce the number of mentally ill adults in jail by 50% and those in prison by 30% by 2016. This would generate cost savings for governments of almost $9 million annually.

A serious mental illness greatly impacts most aspects of a person's life, including education and employment. Greater access to treatment would enable children to continue their education and adults better opportunity to remain employed. In 2009, only 25% of the population served had completed high school and 21% indicated they were looking for work. Of the adults receiving treatment for a mental illness, only 3.5% were employed full-time and 6.2% were part-time.[31] This leaves 70% who are not functionally able to work in traditional employment settings without supports and services.[32] This suggests that the majority of those being served are unable to earn a living due to the severity of their mental disorder.

Under both proposed policy changes, a greater number of people might be able to find employment or averted from entering the criminal justice system. Scenario 1 provides direct cost savings to the state and reaches an additional 38,000 people. Scenario 2 does not offer direct cost savings to the State through mental health spending, but it allows an additional 240,000 people access to mental health services. Other cost savings could be seen through other state departments. Each scenario provides more Michigan residents with treatment, which could prevent them from costly interactions with other levels of government, such as corrections and welfare. This could also mean more tax revenue for the state if more of these people were able to hold down jobs and did not enter the criminal justice system.

NET STATE COST

We show the net state government cost of each policy below in Table 10, taking into account both the costs and benefits of the policy changes.

TABLE 10. Net State Cost by Year for Current System and Policy Scenario 1 and 2 (in millions)

	Policy Change 2012	2013	2014[a]	2015	2016
Current System State Cost	$997.8	$1,048.1	$978.7	$992.0	$1,006.3
Scenario 1 State Cost	$1,050.6	$1,147.6	$970.0	$958.5	$953.5
Scenario 2 State Cost	$1,416.3	$1,486.5	$1,229.0	$1,216.3	$1,228.9

Source: Anderson Economic Group, LLC

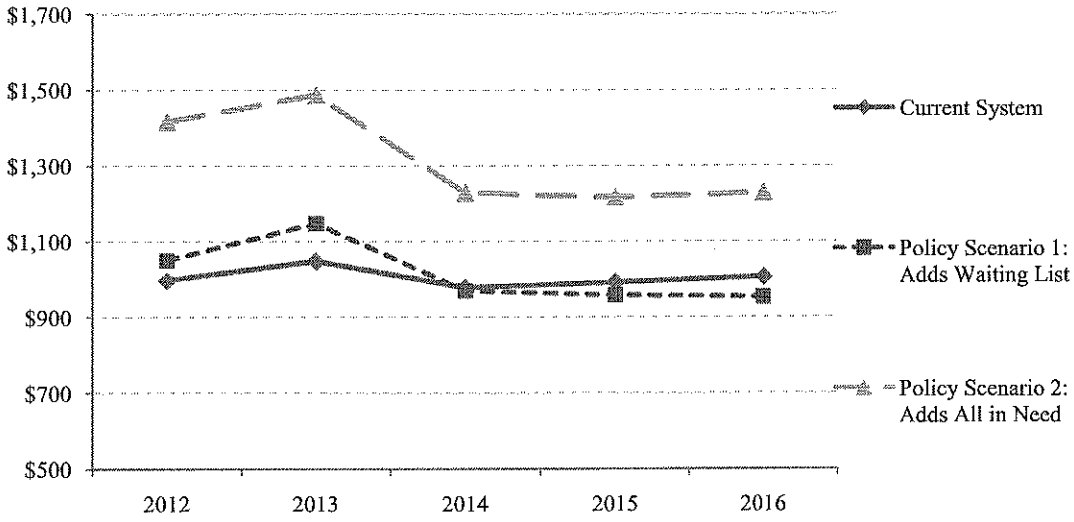
a. Health care reform adds to number of people qualifying for Medicaid

31. Michigan Department of Community Health, "Community Health Services Program Report," May 31, 2010.

32. The CMH does offer employment assistance, but is unable to serve their entire population.

It is clear that Scenario 1 offers cost savings to the state after the first two years. Additionally, the cost of Scenario 2 greatly declines over time, despite the significant larger population being served, which is shown below in Figure 6.

FIGURE 6. Net Cost to State of Scenarios 1 & 2 Compared to Current System (in millions)



Source: Anderson Economic Group, LLC

AEG was unable to quantify all benefits, such as lost employment and foregone educational opportunities because of the difficulty in predicting how a disease will impact each person. However, as we discussed in "Benefits to State and Individuals due to Policy Changes" on page 27, it is clear a mental illness can greatly and negatively impact areas of an individual's life. Both scenarios aim to minimize this impact by providing access to mental health services for more of Michigan's residents.

IV. Evaluation of Potential Funding Options

As discussed in previous sections, funding mental health services for all Michigan residents who need them would require additional state funds. In this section we explain current funding for mental health services and evaluate a few potential options for raising revenue.

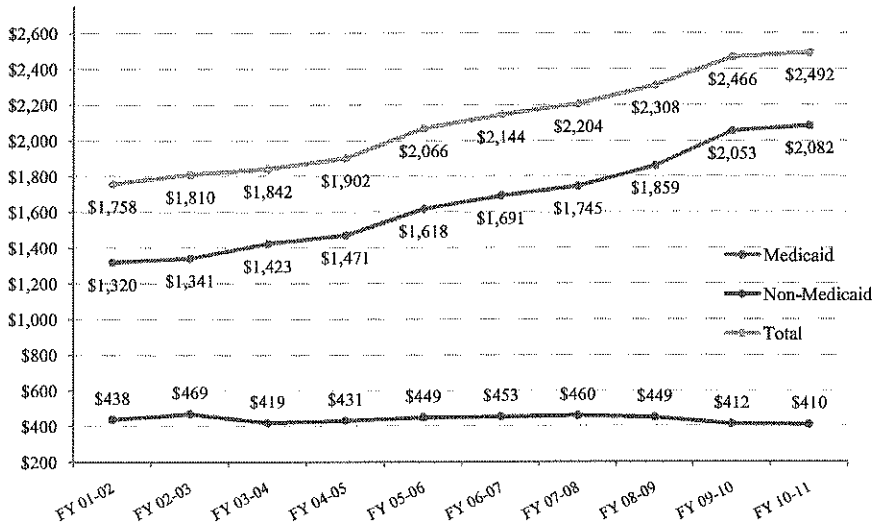
CURRENT FUNDING

As discussed in "An Overview of Michigan's Community Mental Health System" on page 8, there are two sources of funding for community mental health services: state and local general funds and Medicaid. The latter, Medicaid, is available to fund services for individuals with low incomes and disabilities. In 2009, nearly three quarters of those treated by CMHSPs had a household income of less than $20,000 a year and 62% had an annual household income below $10,000.

In FY 2010, the state of Michigan spent almost $2.5 billion total for mental health services. This included both state General Fund dollars and Medicaid dollars, which is a combination of state and federal funds. The state portion only of this $2.5 billion is about $1.5 billion. Overall funding for Medicaid mental health services has increased significantly more than funding for non-medicaid mental health services. Non-Medicaid funding has declined along with falling tax revenue; in the last two years, non-Medicaid funding has declined almost 10%. Since FY 2001-02, spending by Medicaid has increased by 57.8% while non-Medicaid spending has decreased by 6.4% for mental health services.[33] See Figure 7 on page 31.

33. Margaret Alston, Susan Frey, Steve Stauff, *Community Health Background Briefing*, House Fiscal Agency, January 2011.

FIGURE 7. Mental Health Spending by Funding Source, 2002-2011 (in millions)



Source: Michigan House Fiscal Agency
Analysis: Anderson Economic Group, LLC

PROVIDER TAXES

The State of Michigan has used specific taxes on medical providers, called Quality Assurance Assessment Programs (QAAPs), to fund higher reimbursement rates through the Medicaid program and generate General Fund savings. The State imposes a tax (up to 5.5%) on medical providers and collects the revenue. A portion of the revenue is put in the General Fund to be matched with federal dollars. The remaining revenue is used to increase reimbursement rates to providers who serve Medicaid consumers. For example, in FY 2007, the CMH QAAP raised $221 million from providers that the State then used to generate an additional $287 million in federal matching dollars for higher reimbursements rates, creating a net impact of $65 million for these providers. The State used QAAPs to enhance reimbursement rates for Medicaid HMOs, nursing homes, hospitals, and community mental health agencies.

Community mental health providers paid a CMH QAAP and a Medicaid HMO QAAP until April 2009.[34] The State was able to levy a tax on only Medicaid HMO business because the federal government allowed states for a time to define Medicaid HMOs as a group of providers. The federal government closed this loophole in FY 2009. In April 2009, the Medicaid HMO QAAP and CMH QAAP were replaced with a 6% use tax on medical services.

34. These QAAP apply to all Medicaid funds which are routed through PIHPs.

For a provider tax to increase funding to CMHs, it would have to be applied to all HMOs, which is politically difficult to pass. Most HMOs would lose money under such a tax and would oppose it.

GOVERNOR'S PROPOSED CLAIMS ASSESSMENT

In Governor Snyder's budget for FY 2012, he proposes replacing the Medicaid HMO 6% use tax with a 1% tax on all health insurance claims. This plan would lower the rate and broaden the base on who is paying the tax. The Governor estimates that this plan would raise the same amount of revenue as the current 6% HMO use tax, thus providing an additional $800 million in federal matching dollars. The 1% tax would cut the budgets available to CMHs by 1%, but it is likely that the state would increase its capitation (or per person) payment to the CMHs to keep them whole.

One option for funding mental health services is to increase the 1% claims assessment to raise additional revenue. Rather than using all of this revenue to fund services matched with Medicaid dollars, some of the revenue could be allocated to the General Fund and used to fund mental health services for non-Medicaid eligible residents. Using the budget office's estimates as a rough guideline, a quarter increase in the tax rate would raise an additional $100 million of revenue. It would be desirable to dedicate a portion of the revenue to CMH, but difficult to achieve politically.

OTHER TAXES AND FEES

The new administration has proposed tax changes that would lower business taxes and eliminate special tax treatment, such as most incentives. In this political environment, it would be very difficult to levy a new tax or increase an existing tax to pay for community mental health services.

ADDITIONAL FEDERAL DOLLARS DUE TO HEALTH CARE REFORM

Due to the federal Patient Protection and Affordable Care Act (PPACA), also known as "health care reform," there will be some significant changes in the enrollment and funding of Medicaid over the next few years. Starting in 2014, all individuals under age 65 with incomes up to 133% of the federal poverty level will be eligible for Medicaid (until now, almost all childless adults were ineligible). The federal government will cover all extra costs due to these newly eligible enrollees in the years 2014 through 2016. After that, the federal government will decrease its share of those costs gradually to 90% by 2020.

Also, Medicaid reimbursements to primary care doctors for primary care services will be increased to match the reimbursements doctors receive through Medicare (the national health care program for the elderly). Currently, Medicaid reimbursements for all procedures are considerably lower than the rates doctors receive from private insurers. This program should improve access to primary care doctors through Medicaid, including for some procedures related to mental health.

There are several programs and initiatives established in PPACA that are specific to mental health treatment. First, states now have the option, through Medicaid, to establish "health homes" for people with serious and persistent mental illnesses. A health home would be a network of specialists and primary caregivers who tailor coordinated physical and mental health care specific to a consumer's needs. In order to encourage this option, states that adopt it will have 90% of their costs for this program covered by the federal government for two years. In addition, states may now pay for emergency stabilization of people with serious psychological and mental illnesses at designated institutions of mental disease.

Further initiatives are in place to expand the workforce treating mental health consumers. The federal government will supply various grants to schools and mental health organizations to train health workers, nurses, and doctors in mental health, particularly for adolescents and children. In addition, grants will incentivize the development of training programs that integrate mental health into primary care models.

Appendix A: Methodology and Data

CONSTRUCTING SEVERITY LEVELS

Before actual treatment, we assume that all individuals with a mental illness would need some form of assessment (health, psychiatric, psychological, emergent, behavioral). There are few standard definitions of severity in the mental health field. The Michigan Mental Health Code does not describe or outline categories of severity for people with mental illnesses. However, there are guidelines for prioritizing severity when funding is limited, which is shown in Figure 3, "CMHSB Service Priority Matrix," on page 14.

Each of Michigan's CMHSP has its own eligibility criteria, which describes the types of services a person is eligible for given the overall symptoms he or she is exhibiting. Using over a dozen eligibility criteria used across Michigan, we created four categories of severity, which is shown in "Categories of Mental Health Severity" on page 16. We created these categories to better show cost differences among groups of services over time. See the Supplemental Data Appendix for our detailed assignment of services to the four severity categories.

ESTIMATING COST PER CASE

We included every mental illness service used over the course of a year throughout Michigan for both adults and children. The Michigan Department of Community Health provided us with one year of data (2009), which included a description, cost, number of cases, and units used for each service. Several of these services had identical descriptions, which were differentiated only by a HCPCS code (Health care Common Procedure Coding System).[1] We used these codes to differentiate between similar types of services.

Although the most consistent measure across services was number of cases, each case is unique in the number and type of services he or she receives. Adding cases across services is not indicative of the number of people served because often treatment includes more than one type of service per person. Therefore, instead of using cases, we used units as our measure of services, which do vary in terms of time intervals (minutes, days, months) or abstract conceptions (encounters).

Given these difficulties, we determined severity levels for each service with the assistance of professionals working in Michigan's Community Mental Health Boards, who are familiar with HCPCS codes and eligibility criteria for services. We performed our analysis for mentally ill adults and children separately because services were not necessarily used by both groups and costs to administer services to each group differed. We assigned one or more severity level to each service depending on use, and estimated the portion of units accordingly

1. HCPCS Codes are used by Medicare and based on Current Procedural Technology (CPT) codes developed by the American Medical Association.

For each of the 171 line items for adults and 140 for children, we assigned one or more severity levels to each service depending on use. The majority of these services (over 100 for each) went to individuals at multiple levels of mental health severity. This analysis is shown in the Supplemental Data Appendix.

To separate the costs of services received by consumers at different severity levels, we used the following approach:

- We estimated the portion of units at each severity level, which would likely be used for each service. We used professional judgment based on service descriptions, average cost per unit, overall use (total number of units) and knowledge imparted to us by professionals at Michigan's Community Mental Health Boards.
- We estimated the cost of each service for a case relative to each severity level. For example, we estimate the cost to assess a moderately mentally ill person costs half as much as assessing an emergency case. We used professional judgment based on the same factors as estimating the portion of cases at each severity level.

The cost distribution for services received by adults with more than one severity level is shown in Table A-2 on page A-6. and for child services with more than one severity level is shown in Table A-3 on page A-7

UNITS TO PEOPLE PROXY

Calculating costs in terms of units is reasonable, however changes in the number of units from year to year is extremely difficult to estimate. Our policy changes involve adding people served by the CMHSPs, which would increase units. We did not have a measure for how much these units would increase. We estimated the average number of units per people, for both adults and children, by severity for the current system. This is shown in Table A-4 on page A-8. While cost is not shown in this table, it is important to note that we kept the cost per unit identical under both the current system and proposed policy changes, so as not to bias our results.

ESTIMATING CHANGES IN POPULATION BEING SERVED

Using our 2009 baseline data, and we know about the people served in 2010, we do not expect the population being served under the CMH to grow until 2014. That year, we anticipate a great jump in the population being served due to the Patient Protection and Affordable Care Act, which expands Medicaid eligibility.[2] Due to resident's narrowing access to services throughout 2010-2013, we anticipate a shift towards serving a more severe population, which is shown in

2. This expansion raises the proportion a person's income must be below the federal poverty line. Anyone below 133% of the poverty line becomes eligible for Medicaid in 2014. Additionally, the federal government pays for new enrollees between 2014 and 2016, which we will discuss further in "Estimated Change in People Being Served Under Policy Scenario 2," on page A-11, as it impacts our analysis.

Table A-5 on page A-9.

Note that changes in the population being served under each policy scenario from 2009-2011 are identical because policy changes cannot be implemented until 2012.

Under Policy Scenario 1, we include two new populations:

1. People who were not served in 2010 and 2011
   This was estimated by simply adding in the difference in population served between 2009 and 2011. This is the 12% growth we include for 2012.
2. People on the waiting list
   We did not inflate the waiting list over time. Instead we used the reported waiting list numbers for Michigan in 2009.[3] It indicates an additional 17,605 adults and 2,426 children contacted a CMHSP due to need for mental health services.

We assumed this population would be distributed across severe moderate (25%) and moderate early intervention (75%), otherwise they would not be on a waiting list, regardless of the differing eligibility requirements among CMHSPs.

Under Policy Scenario 2, we add a large number of people, which also include those not served in 2010-11. Over 218,000 of this addition is based on estimates of people in need of mental health services in Michigan. These estimates were based on Collaborative Psychiatric Epidemiology Surveys of adults throughout the United States, as well as Michigan specifically. We realize not all of these people would be served by the public mental health system; we took a portion of estimates for adults and children, which we show below in Table A-1. This accounts for people with insurance or income able to use private mental health services, as well as people needing very limited services due to a small phobia, mild depression, or one-time anxiety attack.

3. We did not include people who were listed as seeking other services. Source: Michigan Department of Community Health "Community Health Services Program Report," May 31, 2010.

TABLE A-1. Estimating the Need for Mental Health Services in Michigan

	Adults	Children
Projected Need in Michigan[a]	342,112	169,911
Total Served by Michigan's CMH (in 2009)[b]	142,335	38,517
Difference of Need and Service	199,777	131,394
Portion Subtracted	30%	40%
Inclusion of Population in Scenario 2	139,844	78,836

Analysis: Anderson Economic Group, LLC

a. This is the 2009 estimate of need for adults and children in Michigan. See the CPES Estimates of Need for Mental Health Services, available at www.charles.holzer.com

b. See Michigan Department of Community Health, *Community Mental Health Services Program Report*, May 31, 2010.

In Table A-7 on page A-11, the distribution of population across severity levels is shown. To estimate this, we used input from experienced professionals working in Michigan's CMH, as well as CPES definition of need according to severity, which included the Sheehan scale. [4] Emergency cases would not be included in this new population–by law an emergency must be given access to care. We used the following distribution of severity levels for "un-served" adults and children:

- High Severe: 5%
- Severe moderate: 22%
- Moderate early intervention: 73%

ESTIMATING TOTAL COSTS UNDER EACH POLICY SCENARIO

We did separate analyses for the cost differences of each policy for adults and children. We display the cost difference of Scenario 1 and the current policy for adults in the Supplemental Appendix. It shows that by implementing the program in 2012, there will be cost savings as early as that year. The Supplemental Appendix also displays the cost difference of Scenario 1 and the current policy for children. It shows that by implementing this policy change, there will be cost savings by 2015. One reason for this is that our analysis of children's services showed a much higher average cost per unit.

We display the cost difference of Scenario 2 and the current policy for adults, along with our assumptions in the Supplemental Data Appendix. The assump-

4. When assessing psychiatric impairment in primary care, the Sheehan Disability Scale is often used, which measures to what degree a person's work, social life, and family life are disrupted by their symptoms.

tions and costs for children are also shown. Neither show cost savings. However, this is to be anticipated given the sizable increase in the population being served. For an overall summary of cost savings for both adults and children under both policy changes see the Supplemental Data Appendix.

The final table in this appendix depicts cost savings to the state. Table A-8 on page A-12 shows the cost difference between the current system and the two policy scenarios. This analysis takes into account that the state is responsible for all general funding and only a portion of Medicaid funding. Although we received data on both Medicaid and general fund expenditures, it was difficult to determine the general fund expenditures on services for children. After conversations with CMHs, we decided most general fund dollars are used to provide services for mentally ill adults. Our assumptions are shown in Table A-8.

Table A-2. Estimated Current Costs of Services Received by Adults Per Severity Level

		Services Primarily Used by One Level of Severity	Services Used by More Than One Level of Severity	Grand Total
Total Number of Units	Emergency	354,546	1,011,589	1,366,135
	High Severe	2,950,416	21,031,877	23,982,293
	Severe Moderate	64	12,561,821	12,561,885
	Moderate Early Intervention	2,715	1,005,415	1,008,130
	Total Units of Service	3,307,741	35,610,702	38,918,443
Total Cost	Emergency	$33,566,030	$249,887,368	$283,453,398
	High Severe	$126,423,424	$494,060,913	$620,484,337
	Severe Moderate	$12,120	$166,414,979	$166,427,099
	Moderate Early Intervention	$431,095	$36,456,888	$36,887,983
	Total Cost of Services	$160,432,669	$946,820,149	$1,107,252,818
Average Cost Per Unit	Emergency	$95	$247	$207
	High Severe	$43	$23	$26
	Severe Moderate	$189	$13	$13
	Moderate Early Intervention	$159	$36	$37
	Average Cost Per Unit	$49	$27	$28

Source: Mental Health Services Used by Adults Statewide, provided by MACMHB
Analysis: Anderson Economic Group, LLC

Table A-3. Estimated Current Costs of Services Received by Children Per Severity Level

		Services Primarily Used by One Level of Severity	Services Used by More Than One Level of Severity	Grand Total
Total Number of Units	Emergency	44,785	90,570	135,355
	High Severe	2,487,511	861,002	3,348,513
	Severe Moderate	7	525,720	525,727
	Moderate Early Intervention	18,714	75,062	93,776
	Total Units of Service	2,551,017	1,552,354	4,103,371
Total Cost	Emergency	$3,990,451	$19,980,955	$23,971,406
	High Severe	$49,619,394	$42,552,219	$92,171,613
	Severe Moderate	$1,633	$21,404,022	$21,405,655
	Moderate Early Intervention	$2,694,853	$6,709,047	$9,403,900
	Total Cost of Services	$56,306,331	$90,646,242	$146,952,573
Average Cost Per Unit	Emergency	$89	$221	$177
	High Severe	$20	$49	$28
	Severe Moderate	$233	$41	$41
	Moderate Early Intervention	$144	$89	$100
	Average Cost Per Unit	$22	$58	$36

Source: Mental Health Services Used by Adults Statewide, provided by MACMHB
Analysis: Anderson Economic Group, LLC

Table A-4. Estimated Average Number of Service Units Used Per Person at Each Severity Level

* *These proportions were estimated by looking at 2009's overall service units and use at each severity level.*

		Adults	Children
Proportion of People Receiving Mental Illness Services	Emergency	12.0%	10.0%
	High Severe	17.0%	20.0%
	Severe Moderate	38.4%	50.0%
	Moderate Early Intervention	32.6%	20.0%

In 2009, 142,335 adults and 38,517 were reported to have used mental illness services. We applied each of the above proportions to approximate the number of people served at each severity level.

		Adults	Children
Number of People Receiving Mental Illness Services	Emergency	17,111	3,852
	High Severe	24,219	7,703
	Severe Moderate	54,625	19,259
	Moderate Early Intervention	46,379	7,703
	Total Units of Service	142,335	38,517

This is AEG's analysis of total units at each severity level (from Table A-2 and A-3).

		Adults	Children
Total Number of Units At Each Severity Level	Emergency	1,366,135	135,355
	High Severe	23,982,293	3,348,513
	Severe Moderate	12,561,885	525,727
	Moderate Early Intervention	1,008,130	93,776
	Total Units of Service	38,918,443	4,103,371

We estimated the average number of units used per person by diving the total number of units by the estimated number of people receiving services at each severity level.

		Adults	Children
Average Number of Units Used Per Person	Emergency	80	35
	High Severe	990	435
	Severe Moderate	230	27
	Moderate Early Intervention	22	12

Notes:

*

These proportions were estimated using the data provided by the MACMHB, which included line item mental health services used statewide. We could not rely on case counts for each service, as consumers often use multiple services. However some services are used primarily by one severity level, which would give a more accurate case count. We used the total number of cases of those services at each severity level to create the distribution of consumer use (number of people using services at each severity level). We checked our estimations against the total number of people served in 2009 and asked people working within Michigan's public mental health system.

Table A-5. Estimated Change in People Being Served Under the Current Community Mental Health System

ESTIMATED CHANGE IN THE NUMBER OF PEOPLE BEING SERVED								
	2009	*(a)* **2010**	**2011**	**2012**	**2013**	*(b)* **2014**	**2015**	**2016**
Overall Population Served (Change from Previous Year)	**(Baseline)**	-10%	-2%	2%	2%	18%	2%	2%
Proportion of Population at Each Severity Level:								
Adults – Emergency	12%	15%	16%	17%	17%	15%	14%	13%
Adults – High Severe	17%	25%	26%	25%	26%	25%	24%	23%
Adults – Severe Moderate	38%	40%	40%	41%	40%	40%	40%	40%
Adults – Moderate Early Intervention	33%	20%	18%	17%	17%	20%	22%	24%
Children – Emergency	10%	12%	15%	16%	18%	16%	13%	12%
Children – High Severe	20%	26%	30%	31%	31%	30%	29%	28%
Children – Severe Moderate	50%	46%	42%	43%	42%	44%	45%	46%
Children – Moderate Early Intervention	20%	16%	13%	10%	9%	10%	13%	14%

ESTIMATED NUMBER OF PEOPLE BEING SERVED								
	2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Adults – Total Population	142,335	128,102	125,539	128,050	130,611	154,121	157,204	160,348
Adults – Emergency	16,498	19,215	20,086	21,769	22,204	23,118	22,009	20,845
Adults – High Severe	25,124	32,025	32,640	32,013	33,959	38,530	37,729	36,880
Adults – Severe Moderate	58,148	51,241	50,216	52,501	52,245	61,649	62,881	64,139
Adults – Moderate Early Intervention	42,564	25,620	22,597	21,769	22,204	30,824	34,585	38,483
Children – Total Population	38,517	34,665	33,972	34,651	35,344	41,706	42,541	43,391
Children – Emergency	3,852	4,160	5,096	5,544	6,362	6,673	5,530	5,207
Children – High Severe	7,703	9,013	10,192	10,742	10,957	12,512	12,337	12,150
Children – Severe Moderate	19,259	15,946	14,268	14,900	14,845	18,351	19,143	19,960
Children – Moderate Early Intervention	7,703	5,546	4,416	3,465	3,181	4,171	5,530	6,075

Notes:

(a) At the time of this report, 2010 data was not yet publicly available. AEG used professional judgement based on interviews with CMHSPs throughout Michigan. General funding was drastically cut in 2010 from 2009, which forced most CMHSPs to reduce the number of people they could serve (we estimated it declined approximately 13%). The distribution across severity levels also shifted to more severe cases being served due priorities created by limited funding.

(b) In 2014, under the Patient Protection and Affordable Care Act, anyone below 133% of the poverty line becomes Medicaid eligible. Those that will be Medicaid eligible are entitled to public mental health services. Up until this point, if these people were receiving services they were using General Fund (GF) dollars, which can now be used for another person. Based on mental illness prevalency among poverty levels and estimates of additional Medicaid enrollment, we estimate there will be funding (GF) for some of those people who could not be served in 2010 and 2011 due to budget restrictions. See Appendix A: Methodology for additional explanation.

Table A-6. Estimated Change in People Being Served by the Community Mental Health System, Policy Scenario 1

ESTIMATED CHANGE IN POPULATION SERVED										
		2009	(a) 2010	2011		(b) 2012		2013	(c) 2014	2015	2016
	Overall Population (Change from Previous Year)	**(Baseline)**	-10%	-2%	12%	(plus waiting list)		2%	4%	2%	2%
	Proportion of Population at Each Severity:				With Growth	Waiting List	Total				
Adults	Emergency	12%	15%	16%	15%	-	13%	14%	14%	12%	11%
	High Severe	17%	25%	26%	25%	-	22%	22%	22%	21%	20%
	Severe Moderate	38%	40%	40%	42%	75%	40%	40%	40%	39%	38%
	Moderate Early Intervention	33%	20%	18%	18%	25%	24%	24%	24%	28%	32%
Children	Emergency	10%	12%	15%	15%	-	14%	14%	13%	12%	11%
	High Severe	20%	26%	30%	31%	-	29%	28%	27%	24%	22%
	Severe Moderate	50%	46%	42%	43%	75%	42%	44%	45%	47%	49%
	Moderate Early Intervention	20%	16%	13%	12%	25%	16%	14%	15%	17%	18%

ESTIMATED NUMBER OF PEOPLE BEING SERVED											
		2009	2010	2011	2012 (Policy Change)			2013	2014	2015	2016
					With Growth	Waiting List	Total				
Adults	Total Adult Population	142,335	128,102	125,539	140,604	17,605	158,209	161,373	167,828	171,184	174,608
	Emergency	16,498	19,215	20,086	21,091	-	21,091	22,592	23,496	20,542	18,334
	High Severe	25,124	32,025	32,640	35,151	-	35,151	35,502	36,922	35,949	34,922
	Severe Moderate	58,148	51,241	50,216	59,054	4,401	63,455	64,549	67,131	66,762	66,351
	Moderate Early Intervention	42,564	25,620	22,597	25,309	13,203	38,512	38,730	40,279	47,932	55,002
Children	Total Child Population	38,517	34,665	33,972	40,474	2,426	42,900	43,758	45,508	46,419	47,347
	Emergency	3,852	4,160	5,096	5,869	-	5,869	6,126	5,916	5,570	5,208
	High Severe	7,703	9,013	10,192	12,345	-	12,345	12,252	12,287	11,140	10,416
	Severe Moderate	19,259	15,946	14,268	17,404	606	18,010	19,254	20,479	21,817	23,200
	Moderate Early Intervention	7,703	5,546	4,416	4,857	1,819	6,676	6,126	6,826	7,891	8,522

Notes:

(a) At the time of this report, 2010 data was not yet publicly available. AEG used professional judgement based on interviews with CMHSPs throughout Michigan. General funding was drastically cut in 2010 from 2009, which forced most CMHSPs to reduce the number of people they could serve (we estimated it declined approximately 13%). The distribution across severity levels also shifted, as the most severe cases are served first.

(b) 2012 is the first year the policy could take effect and we estimate it would include all of the people that were not able to be served in 2010 and 2011, as well as 17,605 adults and 2,426 children who were on the waiting list. By law emergency cases must receive services and high severe have first priority, which is why those added would not fall into those categories. These estimates are based on the 2009 total CMHSP MI waiting list numbers.

(c) 2014 is when the Patient Protection and Affordable Care Act would make anyone below 133% the poverty line Medicaid eligible. This would free up additional General Funds. We also anticipate that the proportion of people in higher severity levels will be fewer because of the additional people being seen in 2012.

Table A-7. Estimated Change in People Being Served by the Community Mental Health System, Policy Scenario 2

ESTIMATED CHANGE IN POPULATION SERVED										
		2009	(a) 2010	2011		(b) 2012		2013	(c) 2014	2015	2016
	Overall Population (Change from Previous Year)	**(Baseline)**	-10%	-2%	12%	(plus all unserved)		2%	6%	2%	2%
	Proportion of Population at Each Severity:				With Growth	Unserved	Total				
Adults	Emergency	12%	15%	16%	15%	-	8%	8%	7%	6%	6%
	High Severe	17%	25%	26%	25%	5%	15%	15%	14%	14%	13%
	Severe Moderate	38%	40%	40%	42%	22%	32%	33%	34%	35%	35%
	Moderate Early Intervention	33%	20%	18%	18%	73%	46%	44%	44%	45%	46%
Children	Emergency	10%	12%	15%	16%	-	5%	5%	5%	4%	4%
	High Severe	20%	26%	30%	31%	5%	14%	14%	13%	13%	11%
	Severe Moderate	50%	46%	42%	43%	22%	29%	31%	32%	33%	33%
	Moderate Early Intervention	20%	16%	13%	10%	73%	52%	50%	50%	50%	52%

ESTIMATED NUMBER OF PEOPLE BEING SERVED											
		2009	2010	2011	2012 (Policy Change)			2013	2014	2015	2016
					With Growth	Unserved	Total				
Adults	Total Adult Population	142,335	128,102	125,539	140,604	139,844	280,448	286,057	303,220	309,285	315,471
	Emergency	16,498	19,215	20,086	21,091	-	21,091	21,740	21,225	19,794	20,190
	High Severe	25,124	32,025	32,640	35,151	6,352	41,503	44,053	43,815	42,063	39,749
	Severe Moderate	58,148	51,241	50,216	59,054	31,150	90,204	93,255	104,429	108,250	111,677
	Moderate Early Intervention	42,564	25,620	22,597	25,309	102,342	127,651	127,009	133,751	139,178	143,855
Children	Total Child Population	38,517	34,665	33,972	40,474	78,836	119,311	121,697	128,999	131,579	134,210
	Emergency	3,852	4,160	5,096	6,476	-	6,476	6,085	5,934	5,263	4,832
	High Severe	7,703	9,013	10,192	12,547	3,581	16,128	17,038	17,028	16,579	15,300
	Severe Moderate	19,259	15,946	14,268	17,404	17,561	34,965	37,726	41,280	43,421	44,289
	Moderate Early Intervention	7,703	5,546	4,416	4,047	57,695	61,742	60,848	64,757	66,316	69,789

Notes:

(a) At the time of this report, 2010 data was not yet publicly available. AEG used professional judgement based on interviews with CMHSPs throughout Michigan. General funding was drastically cut in 2010 from 2009, which forced most CMHSPs to reduce the number of people they could serve (we estimated it declined approximately 13%). The distribution across severity levels also shifted, as the most severe cases are served first.

(b) 2012 is the first year the policy could take effect and we estimate it would include all of the people that were not able to be served in 2010 and 2011, as well as any unserved mentally ill adults and children in Michigan. By law, emergency cases must receive services, so there would be no "unserved" in that category. These estimates are based on Collaborative Psychiatric Epidemiology Surveys (CPES) used to estimate the need for each state's mental health services. Source: C.E. Holtzer and H.T. Nguyen, "2009 CPES Based Estimates of Need for Mental Health Services for States," August 8, 2010.

(c) 2014 is when the Patient Protection and Affordable Care Act would make anyone below 133% the poverty line Medicaid eligible. This would free up additional General Funds. We also anticipate that the proportion of people in higher severity levels will be fewer because of the additional people being seen in 2012.

Table A-8. Cost Savings to the State Under Proposed Policy Scenarios

PROPOSED COST UNDER CURRENT POLICY					
	2012	2013	2014	2015	2016
Total Adults	$1,406,906,926	$1,518,350,269	$1,759,559,782	$1,785,848,704	$1,809,459,058
Total Children	$193,884,872	$205,081,060	$240,983,377	$241,978,169	$247,491,957
Total Cost	$1,600,791,799	$1,723,431,330	$2,000,543,159	$2,027,826,873	$2,056,951,016
(a) Portion of Medicaid	$954,071,912	$1,068,527,425	$1,300,353,053	$1,318,087,467	$1,337,018,160
(b) Medicaid Cost to State	$351,098,464	$393,218,092	$478,529,924	$485,056,188	$492,022,683
GF Cost to State	$646,719,887	$654,903,905	$500,135,790	$506,956,718	$514,237,754
Total Cost to State	$997,818,350	$1,048,121,998	$978,665,713	$992,012,906	$1,006,260,437
PROPOSED COST UNDER POLICY SCENARIO I					
Scenario I	2012 *(c)*	2013	2014 *(d)*	2015	2016
Total Adults	$1,467,119,852	$1,622,029,518	$1,747,639,483	$1,731,176,529	$1,723,654,694
Total Children	$220,044,551	$229,260,778	$238,991,003	$232,518,792	$230,614,634
Total Cost	$1,685,470,664	$1,848,570,078	$1,982,883,791	$1,959,281,364	$1,949,188,112
Portion of Medicaid	$1,004,540,516	$1,109,142,047	$1,288,874,464	$1,273,532,887	$1,266,972,273
Medicaid Cost to State	$369,670,910	$408,164,273	$474,305,803	$468,660,102	$466,245,796
GF Cost to State	$680,930,148	$739,428,031	$495,720,948	$489,820,341	$487,297,028
Total Cost to State	$1,050,601,058	$1,147,592,304	$970,026,750	$958,480,443	$953,542,824
PROPOSED COST UNDER POLICY SCENARIO II					
Scenario II	2012 *(c)*	2013	2014 *(d)*	2015	2016
Total Adults	$1,903,890,927	$2,013,997,584	$2,111,207,219	$2,078,302,746	$2,106,113,211
Total Children	$371,049,206	$384,173,441	$406,527,635	$415,099,118	$414,787,123
Total Cost	$2,272,219,916	$2,394,424,329	$2,512,294,419	$2,486,267,690	$2,512,072,422
Portion of Medicaid	$1,354,243,070	$1,436,654,598	$1,632,991,372	$1,616,073,999	$1,632,847,074
Medicaid Cost to State	$498,361,450	$528,688,892	$600,940,825	$594,715,232	$600,887,723
GF Cost to State	$917,976,846	$957,769,732	$628,073,605	$621,566,923	$628,018,105
Total Cost to State	$1,416,338,296	$1,486,458,624	$1,229,014,430	$1,216,282,154	$1,228,905,829
COST SAVINGS OF PROPOSED POLICIES TO THE STAT					
Scenario I	-$52,782,708	-$99,470,307	$8,638,963	$33,532,463	$52,717,612
Scenario II	-$418,519,945	-$438,336,626	-$250,348,716	-$224,269,248	-$222,645,392

Notes:

(a) Using our baseyear analysis, we estimate that 59.6% of all costs are medicaid funded for years 2012-2013. For 2014-2016, due to the increased enrollment in Medicaid we estimate an additional 10% of Medicaid enrollees under each policy. Those additional costs will covered 100% by the federal government, at no cost to the state. Therefore, we anticipate costs in 2014-2016 will be distributed as follows: 65% Medicaid (using regular FMAP), 25% general fund, 10% federal government.

(b) Under each policy (current, scenario I, scenario II) we use the same federal matching percentage of 63.2%. This means Michigan is responsible for 36.8% of the total costs incurred by Medicaid enrollees.

(c) We estimate the majority of new people in 2012 will be using general fund dollars, otherwise they already would have been receiving services as a Medicaid enrollee. Those that are eligible but not yet enrolled, are counted in 2013, as it takes Medicaid applications a minimum of nine months to be processed. We estimate 55% of costs will be Medicaid funded, instead of 59.6% in 2012 and 60% will be Medicaid funded in 2013.

(d) In 2014-2016, we anticipate the majority of the additional population will be Medicaid enrollees. As described above, the federal government pays for new Medicaid enrollees between 2014 and 2016. For both proposed policies, we estimate costs will be distributed as follows: 65% Medicaid (using the 63.2% FMAP), 25% general fund, 10% federal government.

Appendix B: About AEG

Anderson Economic Group, LLC was founded in 1996 and today has offices in East Lansing, Michigan and Chicago, Illinois. AEG is a research and consulting firm that specializes in economics, public policy, financial valuation, and market research. AEG's past clients include:

- *Governments* such as the states of Michigan, North Carolina, and Wisconsin; the cities of Detroit, Cincinnati, Norfolk, and Fort Wayne; counties such as Oakland County, Michigan, and Collier County, Florida; and authorities such as the Detroit-Wayne County Port Authority.
- *Corporations* such as GM, Ford, Delphi, Honda, Taubman Centers, The Detroit Lions, PG&E Generating; SBC, Gambrinus, Labatt USA, and InBev USA; Spartan Stores, Nestle, automobile dealers and dealership groups representing Toyota, Honda, Chrysler, Mercedes-Benz, and other brands.
- *Nonprofit organizations* such as Michigan State University, Wayne State University, University of Michigan, Van Andel Institute, the Michigan Manufacturers Association, United Ways of Michigan, Service Employees International Union, Automation Alley, the Michigan Chamber of Commerce, and Detroit Renaissance.

Please visit www.AndersonEconomicGroup.com for more information.

AUTHORS

This project was completed under the direction of Caroline M. Sallee, a Senior Consultant and the firm's public policy, fiscal, and economic analysis practice area manager. Ms. Sallee co-authored the report with Erin M. Agemy, an Analyst. Brief biographical information of the project team follows.

Caroline M. Sallee

Ms. Sallee is a Senior Consultant and Director of the Public Policy, Fiscal, and Economic Analysis practice area. Ms. Sallee's background is in applied economics and public finance.

Ms. Sallee's recent work includes an economic impact assessment for Michigan's University Research Corridor (Michigan State University, University of Michigan, and Wayne State University), economic and fiscal impact studies for Michigan State University, and the benchmarking of Michigan's business taxes with other states in a project for the Michigan House of Representatives. She has also completed several technology industry reviews, estimating the wages and employment of technology workers in Southeast Michigan and West Virginia.

Prior to joining Anderson Economic Group, Ms. Sallee worked for the U.S. Government Accountability Office (GAO) as a member of the Education, Workforce and Income Security team. She has also worked as a market analyst for

Hábitus, a market research firm in Quito, Ecuador and as a legislative assistant for two U.S. Representatives.

Ms. Sallee holds a Masters degree in Public Policy from the Gerald R. Ford School of Public Policy at the University of Michigan and a Bachelor of Arts degree in economics and history from Augustana College in Illinois.

Erin Agemy

Ms. Agemy is an Analyst at Anderson Economic Group, working in the Public Policy, Fiscal and Economic Analysis; and Business Valuation practice areas.

While with AEG, Ms. Agemy has worked on economic impact and fiscal analysis for counties in Michigan and Florida. She has done market and industry analyses while participating in projects utilizing expertise in franchises and the beer industry. She is also currently contributing to the book, Economics of Business Valuation, a forthcoming publication of Stanford Press.

Prior to joining AEG, Ms. Agemy worked as a contract consultant providing research and detailed data analysis to economic and financial consulting firms in Michigan and Ohio. She was also one of four students selected to be graduate fellows at the Mercatus Center in Arlington, Virginia. While there she contributed to their Gulf Coast Recovery Project, which received the Templeton Freedom Award for Special Achievement. Ms. Agemy has also conducted original fieldwork on the political economy of charter schools in New Orleans, which she presented at an international conference for the Association of Private Enterprise Education.

Ms. Agemy holds a masters degree in economics from George Mason University and a Bachelors of Science degree in Political Economy from Hillsdale College.