MINNESOTA COUNCIL of HEALTH PLANS

FEBRUARY 2008

A report from the Minnesota Council of Health Plans

Minnesota's Mental Health

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Table of contents

Overview.....Page 1

Summary of key findings.....Page 3

Facts about mental illness and recovery .....Page 9

Medication findings on youth and seniors.....Page 10

Educate before you medicate.....Page 14

Who has received a mental health diagnosis?.....Page 15

Diagnosis .....Page 16

Medications .....page 24

Use of services .....Page 28

Cost of services .....Page 30

Resources.....Page 32

Data sources and activities .....Page 33

Special thanks.....Page 35

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Minnesota's Mental Health

Overview

In an effort to create a more comprehensive view of mental health care in Minnesota's managed care environment and report information that can spur improvements in care, the Minnesota Council of Health Plans collected and analyzed data from our member health plans to answer the questions:

- How many people have received a mental health diagnosis? Is there a difference between people who are enrolled in a plan all year and those who have gaps in coverage?
- What are the most frequent diagnoses? What do the data tell us about age and gender differences?
- What medications are most frequently used in the treatment of mental health diagnoses?
- What health services do people with mental health diagnoses use and what are the costs?
- In general, what do the data tell us and what can we learn about caring for Minnesotans who have mental health diagnoses?

First, we'll share with you important facts about mental illness.

Next, we'll outline our findings that have an impact on youth and seniors. While people of all ages have mental health diagnoses, the young and the old are especially at risk for mental illness.

To wrap up the report, we step back and take a broad look at our questions above about mental health diagnoses and use of services among members of our health plans. Here, you'll see age and gender differences that are consistent with national research, yet provide specific information about enrollees in Minnesota's health plans.

While much of the data lead to questions that require further discussions, this report is a step toward raising awareness and improving care for people with mental illness. The information is being shared with mental health practitioners, other health care providers, organizations working to improve the mental health care system and the community at large.

Work is already underway by health plans and others to improve care for people with mental illness. A few examples of these efforts include:

- Health plans together provided $3.5 million in grants to community-based organizations through the establishment of the Community Mental Health Fund administered by the Minnesota Community Foundation.
- DIAMOND (Depression Improvement Across Minnesota – Offering a New Direction) initiative is working to identify a best practice model for depression care and then propose options for implementing the model throughout the state.
- MMHAG (The Minnesota Mental Health Action Group) is a coalition of consumers, advocacy groups, mental health professionals, mental health clinics, hospitals, health plans, state and local government leaders and others who are working together to solve problems and make improvements in mental health services. The initial work of MMHAG was to review dozens of past reports and studies, and the task force found much agreement on the major problems with the mental health system. The group then set out to create solutions to the problems.
- Depression prevention programs designed to identify members who are at risk and to offer support to members with mild, moderate, severe and complex cases of depression. This systematic approach to deliver evidence-based care for behavioral health conditions mirrors the approaches to preventing and treating other chronic conditions.
- Education and support through personalized depression management programs and personalized assistance lines that give members information, resources and referrals so they receive the support that will be most helpful to their personal needs.
- The MACSSA, Minnesota Association of County Social Service Administrators, work together with the county at the point where county and health plan work intersects. The group tackles many issues and concerns in order to create a system that is focused on individual patients, not the organizations that do the work.
- Access has been expanded to mental health practitioners, through increased payment rates to mental health specialists, foundation grants to create telemedicine communication systems and projects related to behavioral health care service interventions, accessibility and sustainability.

Members of MCHP involved in this work include:

- Blue Cross Blue Shield of Minnesota/Blue Plus
- FirstPlan of Minnesota
- HealthPartners
- Medica
- Metropolitan Health Plan
- PreferredOne
- UCare

Thanks to MCHP members, the claims data (no medical charts were reviewed) on 2.5 million members anonymously aggregated and analyzed for this report provide a broad overview of mental health treatment and diagnoses in the state. All medication use rates are based on members who had drug coverage as part of their benefit. It is important to note, that the report does not include data on any of the more than 112,600 people who receive their mental health care directly from the state or county. Of course, the report does not include data on other individuals who do not have health care coverage through MCHP members.

All data used in this report are from services provided in 2005 and rates are calculated on members who were enrolled for the entire year, unless noted. For more details on the source for the data and how it was collected, see pages 33 and 34.

Julie Brunner,
Executive Director
Minnesota Council of Health Plans

Minnesota Council of Health Plans

Summary of key findings

This report on mental health by the Minnesota Council of Health Plans is one of the most comprehensive assessments in Minnesota of the diagnosis and treatment of mental health conditions in the state. The study anonymously aggregated and analyzed claims data (no medical charts were reviewed) for 2.5 million members of Blue Cross Blue Shield of Minnesota, FirstPlan of Minnesota, HealthPartners, Medica, Metropolitan Health Plan, PreferredOne and UCare.

The Council study sought to determine how many people have received a mental health diagnosis, the most frequent diagnoses, age or gender differences, medication use and cost of care. The report is intended to provide greater understanding of mental health in our state and to further our collaborative work with others to improve mental health care.

Key findings

1. Nearly one in 10 children and adolescents age 20 and younger in Minnesota has a mental health diagnois. The most common diagnosis is attention-deficit/hyperactivity disorder, followed by depression and anxiety.
2. Ninety-seven percent of children receiving antidepressants do not receive follow up care recommended by the FDA.
3. One of 15 people with a mental health diagnosis received emergency or hospital services, which are more costly than other services.
4. Seniors who are diagnosed with a mental illness are taking three or more drugs that are potentially dangerous for elderly patients because of their adverse effects in older people, according to the Archives of Internal Medicine.

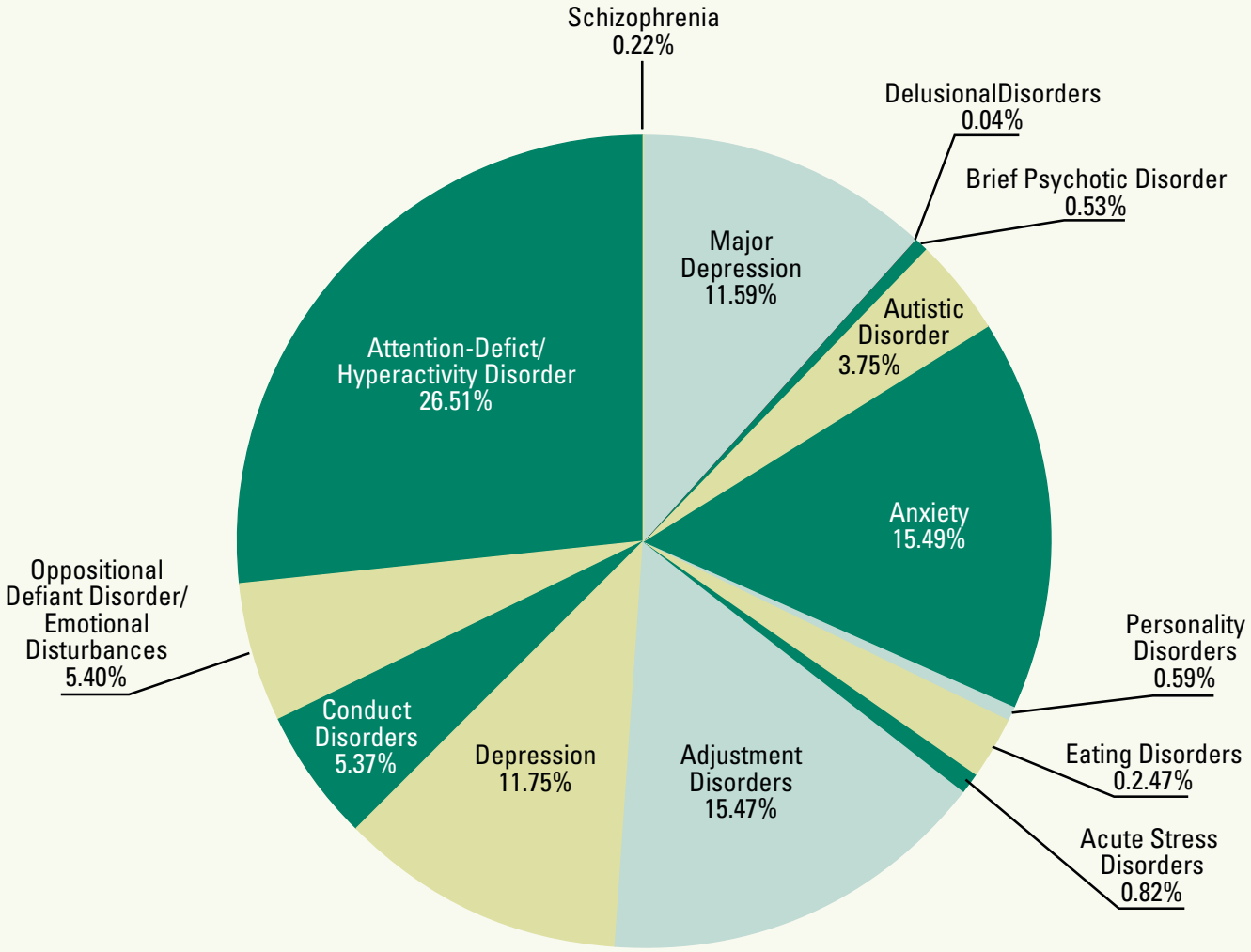
Key finding 1

Nearly one in 10 children in Minnesota has a mental health diagnosis.

Nearly one in 10 children and adolescents in the state has been diagnosed with a mental health condition. The most common diagnoses are attention-deficit/hyperactivity disorder and depression. This is similar to national rates.[1]

Mental Health Diagnosis Among 0 to 20 Year Olds

2005



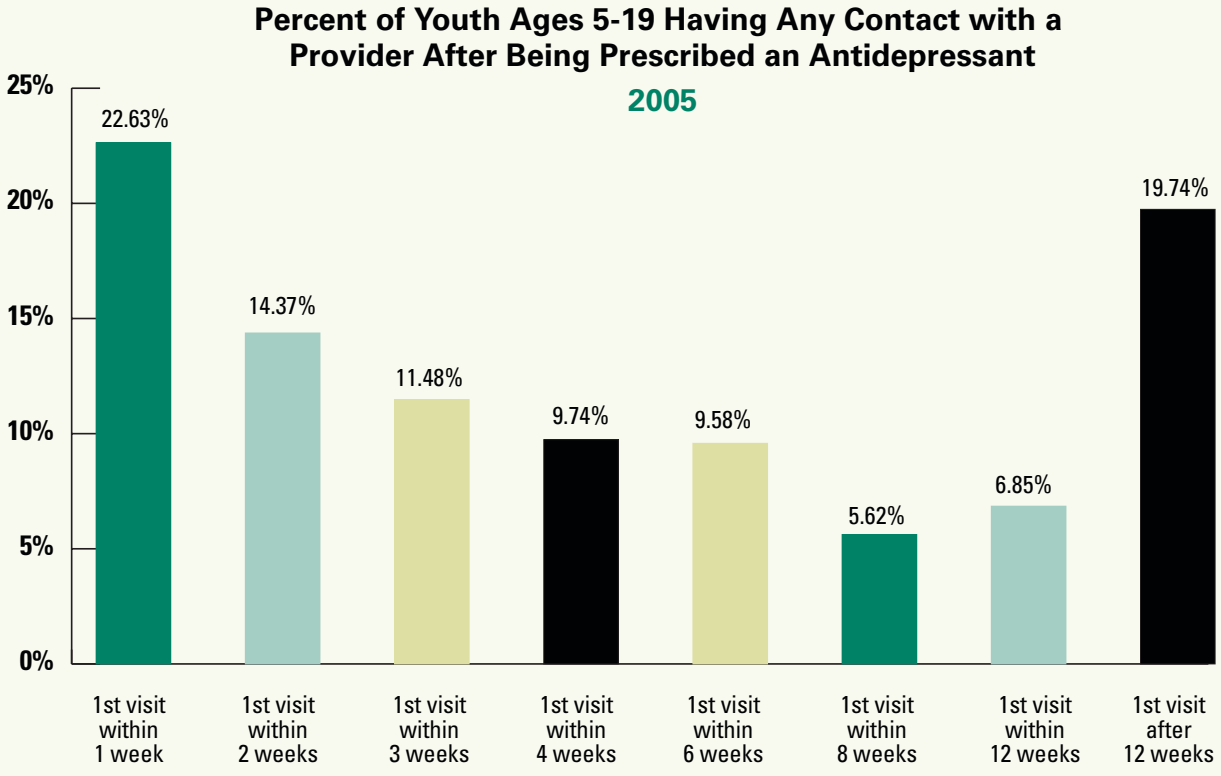
Key finding 2

97 percent of children receiving antidepressants do not receive follow-up care recommended by the FDA.

In 2004, the Food and Drug Administration issued a warning that use of antidepressants by children and adolescents increased the risk of suicidal thoughts and attempts. The FDA warning included recommendations that youth who are prescribed antidepressants should be observed for clinical worsening, thoughts of suicide or attempts, and unusual changes in behavior. The FDA took the additional step in the warning to recommend that observations include face-to-face contacts at regular intervals following diagnosis and use of antidepressant medications. A subset of the data in the MCHP study showed that fewer than 3 percent of youth who had filled prescriptions for antidepressants received the recommended follow-up care and 32 percent did not have a face-to-face visit with a health care provider until after six or more weeks after being prescribed an antidepressant.

Pecent of youth receiving FDA recommended care.

- 2.96 percent received at least <u>one visit weekly during the first four weeks of treatment</u>
- 2.25 percent received at least <u>one office visit every other week the next four weeks</u>
- 2.6 percent received at least <u>one visit at 12 weeks</u>



Key finding 3

One of 15 people with a mental health diagnosis visited an emergency room or was hospitalized at least once during the year. This care is the most expensive.

In 2005, health plans spent nearly $611 million for mental health care on individuals who were enrolled with the health plan throughout the year. These costs included medications, emergency room visits, hospitalizations and outpatient services. Most of the cost went to medications ($251.2 million); however, hospital care ($143.1 million) and emergency room services ($11.4 million) each accounted for 7 percent of member care – the two most expensive treatment options.

Summary of hospital and emergency room useby individuals with a mental health diagnosis [2005]

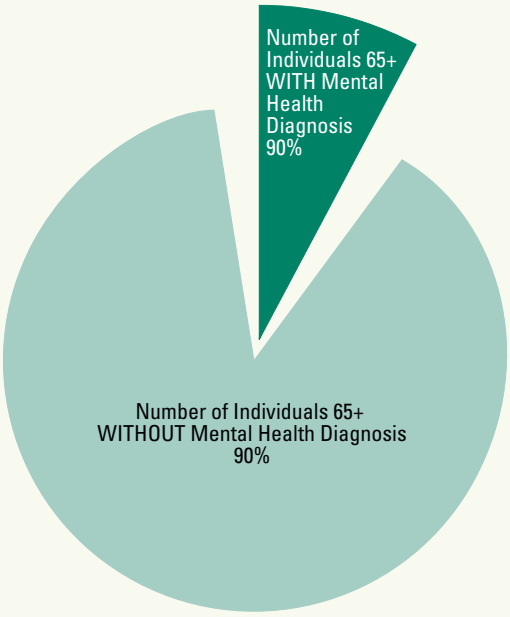
Service	# of individuals using service	% of individuals using service	$ spent on service for members enrolled throughout the year
Emergency room	17,851	6.51%	$11.5 million
Hospitalization	18,104	6.60%	$143.1 million

Key finding 4

Seniors who are diagnosed with a mental illness are taking three or more drugs that are potentially dangerous for elderly patients, according to the Archives of Internal Medicine.

Ten percent of people age 65 and older have mental health diagnoses. Those seniors are taking an average of 3.5 psychotropic medications including antipsychotic, sedatives, antidepressants and antianxiety. These drugs are included on the Beers List Set Criteria for the Safe Use of Medication from the Archives of Internal Medicine.[2] The Beers List identifies 48 individual medications to avoid in older adults. Although the list can be somewhat controversial, it is nonetheless important to understand the drugs being prescribed to older adults. In addition, the FDA issued a public health advisory in 2005 regarding the use of anti-psychotic medications used to treat elderly patients with dementia.

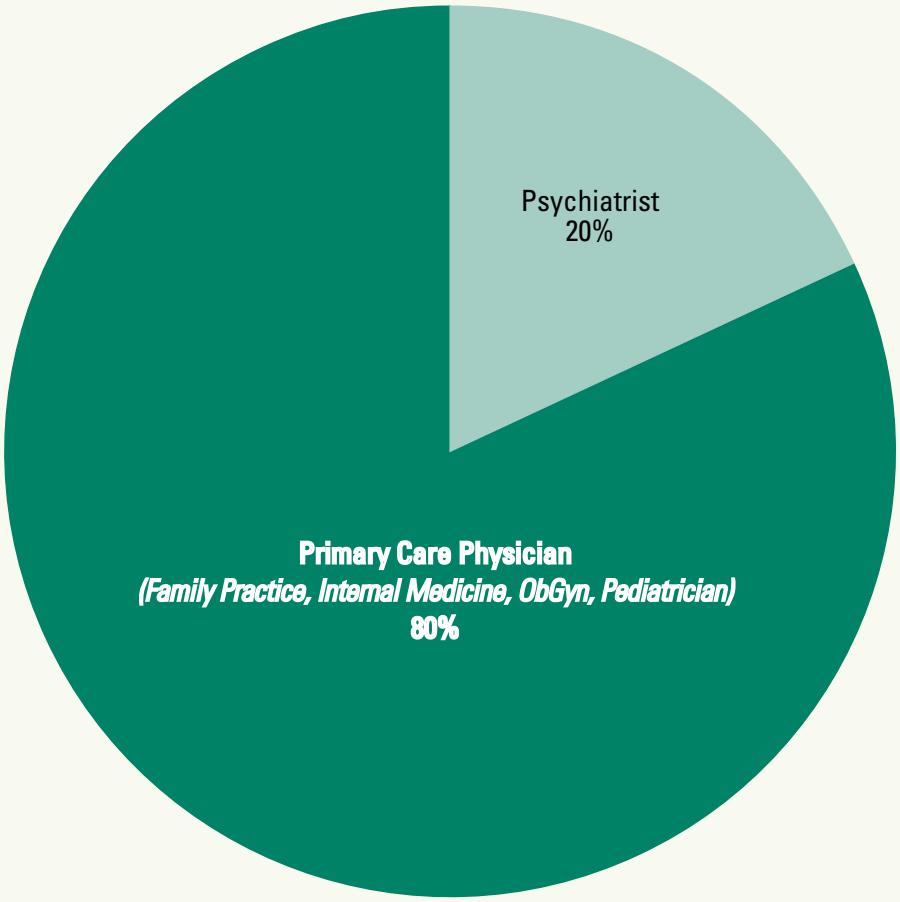
Percent of Seniors 65+ with a Mental Health Diagnosis



Other findings

- A subset of the data showed that more than 80 percent of the drugs used to treat mental illness in Minnesota are prescribed by primary care physicians in family practice, internal medicine and ob/gyn; 20 percent are prescribed by psychiatrists.

Licensure of Physicians Who Prescribe Mental Health Medications



- Of people with employer-based or individual coverage 12 percent have a mental health diagnosis, of the people covered through Medicare, 10 percent have a mental health diagnosis, of people enrolled in state public programs, 21 percent have a mental health diagnosis.

Discussion

The findings in this report provide baseline details on mental health diagnoses in Minnesota. The report also points to the need for continued efforts to coordinate the systems of care better in order to ensure the best, most consistent care possible. DIAMOND, an initiative underway by doctors, health plans, employers and others is being established to identify and share the best treatment models for depression. Once this system is established, it can be expanded to improve the care and outcomes for patients with diagnoses other than depression.

The report also points to the need for families to be involved in the care of their loved ones. Parents must continue to ask questions and gain further understanding of the medications their children may take. Family members or friends of older Minnesotans can help ensure safer care for their loved ones by asking questions when drugs are prescribed. More details are on page 16 of this report. Some of the questions include:

- Does the doctor prescribing the medication know all the drugs and supplements you take?
- What is required while I am taking this medicine (tests or monitoring)?
- Is this the lowest dose possible?

Finally, it is important to remember that medications often are part of an overall treatment plan. A prescription without close follow-up is not a good treatment plan.

About the study

The study reviewed the 12-month claims experience (no medical charts were reviewed) for 2.5 million members/patients of all ages who were continuously enrolled in calendar year 2005 and received coverage through Blue Cross Blue Shield of Minnesota, FirstPlan of Minnesota, HealthPartners, Medica, Metropolitan Health Plan, PreferredOne and UCare. Together, these seven health plans provide coverage for more than four million people in Minnesota.

The report does not include data on any of the more than 112,600 people who receive their mental health care directly from the state or county. Of course, the report does not include data on other individuals who do not have health care coverage through MCHP members.

All data used in this report are from services provided in 2005 and rates are calculated on members who were enrolled for the entire year, unless noted. Medication rates are based on people enrolled who have drug coverage included in their benefits. In addition to facts highlighted in this summary, information on additional mental health diagnoses, medication use, and utilization as well as resources are part of the report.

Footnotes

1. Centers for Disease Control and Prevention, The Role of Public Health in Mental Health Promotion, September 2005

2. Updating the Beers Criteria for Potentially Inappropriate Medication Use in Older Adults, Results of a US Consensus Panel of Experts, Donna M. Fick, PhD, RN; James W. Cooper, PhD, RPh; William E. Wade, PharmD, FASHP, FCCP; Jennifer L. Waller, PhD; J. Ross Maclean, MD; Mark H. Beers, MD, *Archives of Internal Medicine,* 2003; 163:2716-2724.

Facts about mental illness and recovery

Mental disorders are common in the United States and internationally, according to the National Institute of Mental Health (NIMH.) Mental disorders are the leading cause of disability in the U.S. and Canada for people ages 15 to 44. Many people suffer from more than one mental disorder at a given time – nearly half (45 percent) of those with any mental disorder meet criteria for others as well.

NIMH states that the burden of mental illness on health and productivity in the United States and throughout the world has long been underestimated. Work by the World Health Organization, the World Bank and Harvard University reveal that mental illness accounts for more than 15 percent of the burden of disease in established market economies such as the United States. The report states that this is more than the disease burden caused by all cancers.

Mental illness is as varied and complex as any other illness. Like other illness, it can strike the young, old, rich, poor and everyone in between. While some mental illness is less severe and can be treated through psychotherapy and/or medications for a limited period, other illnesses are chronic conditions that require lifelong care and treatment.

The National Alliance on Mental Illness reminds us that:

- Even though mental disorders are widespread in the population, the main burden of illness is concentrated in a smaller proportion — about 6 percent, or 1 in 17 Americans — who suffer from a serious mental illness.
- Without treatment, the consequences of mental illness for the individual and society are staggering: unnecessary disability, unemployment, substance abuse, homelessness, inappropriate incarceration, suicide and wasted lives. The economic cost of untreated mental illness is more than $100 billion each year in the United States.
- The best treatments for serious mental illnesses today are highly effective; between 70 and 90 percent of individuals have significant reduction of symptoms and improved quality of life with a combination of prescription drugs, therapy and support.
- With appropriate, effective medication and a wide range of services tailored to their needs, most people who live with serious mental illnesses can significantly reduce the impact of their illnesses and find satisfying measures of achievement and independence.

Medication findings for youth and seniors

Children & adolescents

Children and adolescents age 20 and under represent 29 percent of enrollees in Minnesota's health plans. Of the 29 percent of 0-to-20-year-olds enrolled, 9 percent (66,854 individuals) have mental health diagnoses. One of the most common diagnoses for children and adolescents is depression. In addition, a subset of our data show that most of the children and adolescents who are prescribed antidepressants do not receive follow-up care as recommended by the Food and Drug Administration (FDA.) Antidepressants are used to treat anxiety as well as depression.

Depression and major depressive disorder

Of the 66,854 children and adolescents with a mental health diagnosis, 25 percent (more than 16,800) had a diagnosis of depression in 2005. The diagnosis of major depression was found in 16,575 individuals, or 25 percent of the enrollees ages 0 to 20.

Age	Rate of depression diagnosis per 1,000 enrollees	Rate of major depressive disorder diagnosis per 1,000 enrollees
0 to 5	0.23	0.51
6 to 12	8.52	8.81
13 to 20	49.18	47.99
All ages, 0 to 80+	45.22	39.68

Anxiety

Anxiety and other neurotic disorders are also found in children and adolescents.
More than 52 of every 1,000 enrollees between 13 and 20 have an anxiety-related diagnosis.

Age	Rate of anxiety/neurotic disorder diagnosis per 1,000 enrollees
0-5	2.16
6-12	24.92
13-20	52.09
All ages, 0 to 80+	51.24

Age	Rate of antidepressant use per 1,000 enrollees with drug coverage
0 to 5	1.06
6 to 12	19.91
13 to 20	77.04
All ages, 0 to 80+	141.17

Both depression and anxiety are often treated with antidepressants. The data show that more than 22,200 individuals between the ages of 0 and 20 had prescriptions filled for antidepressant medications. Above is the rate of antidepressant use for enrollees with prescription drug coverage. It is important to note that not everyone who takes an antidepressant has a diagnosis of depression or anxiety. The medications in this category often are used to treat symptoms associated with premenstrual syndrome, for example.

With antidepressants being taken by people of all ages, it is important that individuals and their family members understand the medications and guidelines for appropriate follow-up care. This is especially important since according to an analysis of a subset of one health plan's data, 80 percent of the psychotropic prescriptions filled are prescribed by primary care practitioners, not psychiatrists who are more likely to have follow-up care guidelines as part of their daily practice routines.

Data compiled for this report show that children and adolescents are not receiving recommended follow-up care after being prescribed an antidepressant.

FDA warning

On Oct. 15, 2004, the Food and Drug Administration (FDA) issued what it calls a "Black Box Warning" on the use of antidepressants by children and adolescents. After finding an increased risk of suicidal thoughts and attempts associated with the use of antidepressants in children and adolescents, the FDA issued a warning that youth who are prescribed antidepressants should be observed for:

- Clinical worsening
- Thoughts of suicide or attempts (the FDA uses the term suicidality)
- Unusual changes in behavior, especially during the first few months of taking the medication, or when doses change

The FDA took the additional step in the Black Box Warning stating that the observations should include:

- Face-to-face contact at least weekly during first four weeks of treatment
- Every other week visits for the next four weeks
- One visit at 12 weeks
- As clinically indicated after 12 weeks

Treatment of Minnesota youth falls short of recommendations

An analysis of a subset of one health plan's data showed most youth who filled prescriptions for antidepressants did not receive the follow-up care recommended by the FDA. The data show youth between ages 5 and 19 who were prescribed antidepressants and received follow-up treatment **as recommended** by the FDA's Black Box Warning:

- 2.96 percent received at least **one visit weekly during the first four weeks of treatment**
- 2.25 percent received at least **one office visit every other week the next four weeks**
- 2.6 percent received at least **one visit at 12 weeks**

While the follow-up visit schedule recommended by the FDA wasn't followed nearly 97 percent of the time, 23 percent of youth (between ages 5 and 19) did see a physician or other provider in the first week after being prescribed antidepressants. The data below show when the youth (ages 5 to 19) had contact with a health care provider after being prescribed antidepressants:

- 22.63 percent, first visit within one week
- 14.37 percent, first visit within two weeks
- 11.48 percent, first visit within three weeks
- 9.74 percent, first visit within four weeks
- 9.58 percent, first visit within six weeks
- 5.62 percent, first visit within eight weeks
- 6.85 percent, first visit within 12 weeks
- 19.74 percent, first visit *after* 12 weeks

Important note: No individual should abruptly stop taking antidepressants.
Parents contemplating changing or terminating their child's antidepressant medication should always consult with their child's treating physician before taking such action.

Seniors

Medication-related issues can be dangerous, especially for older adults. Problems include falls, immobility, confusion and more. Because many of these medications can cause amplified side effects in the geriatric population, effects such as drowsiness, lethargy, and fatigue may mask changes in the underlying disease state and may cause providers to misdiagnosis or misinterpret response of therapies prescribed.

One study published by the American Geriatric Society showed that 30 percent of hospital admissions in elderly patients might be linked to medication-related problems or a drug's adverse effect.

The Beers List, a national guideline and reference guide for pharmacists and physicians, is designed to improve the use of medication in elderly patients. The list, developed by gerontologist Mark H. Beers, M.D., and colleagues, was based on the risk-benefit definition of appropriateness — that the use of a medication is appropriate if its use has potential benefits that outweigh potential risks. The Beers List was most recently updated in 2003 and includes several medications in the categories highlighted in this report.

Psychotropic medications on the Beers list include:

- Fluoxetine (Prozac)
- Temazepam (Restoril)
- Amphetamine salts (Adderall XR)
- Nortriptyline (Pamelor)
- Lorazepam (Ativan)
- Diazepam (Valium)
- Amitriptyline (Elavil)
- Doxepin (Sinequan)

FDA advisory

In 2005, the FDA issued a public health advisory regarding the use of antipsychotic medications used to treat elderly patients with dementia. While antipsychotic medications are approved for the treatment of schizophrenia and mania, FDA clinical studies show the drugs are being used to treat behavioral diagnoses in elderly patients. The FDA asked manufacturers of these medications to add a boxed warning label to the medications, noting they are not approved for treating behavioral symptoms in elderly patients with dementia. Brand name examples of these drugs are Zyprexa, Risperdal, Seroquel, Abilify and Geodan.

Data in this report show enrollees age 65 and over are the highest users of medications in nearly all categories, except medications used to treat AD/HD, and Lithium for people 80 and older.

Medication category	# of individuals age 65+ taking the medication	Ages 0 to 64 rate per 1,000 enrollees	Ages 65 to 79 rate per 1,000 enrollees	Ages 80+ rate per 1,000
Sedative/hypnotics	12,712	28.79	68.94	79.94
Anti-psychotics	6,565	10.04	23.29	78.11
Anti-anxiety/ Benzodiazepines	18,348	34.66	94.16	131.10
Antidepressants	42,689	130.96	212.62	324.40
Lithium	328	1.20	2.05	1.24*

**Represents fourth highest utilization. All other categories are first or second highest.*

Know the answers to these questions:

- Does the doctor prescribing the medication know all the drugs and supplements your loved one takes?
- What is required while your loved one is taking this medicine (tests or monitoring)?
- Is this the lowest dose possible?
- Is this drug safe for seniors?
- Many new drugs are safer than drugs previously available. Is this the safest?

Although the list can be somewhat controversial, it is nonetheless important to understand the drugs being prescribed to older adults.

Individuals age 80 and older have the highest rate of mental health diagnoses, with nearly 14 percent of enrollees having at least one diagnosis. About 8 percent of people ages 65 to 79 have a diagnosis. People age 80 and older have the highest rate of diagnosis for schizophrenia, delusional disorder, brief psychotic disorder and depression.

Medication	Ages 0 to 64 rate per 1,000 enrolles	Ages 65 to 79 rate per 1,000	Age 80+ rate per 1,000
Schizophrenia	1.59	4.69	5.03
Delusional disorders	0.26	0.91	3.44
Brief psychotic disorder	1.79	9.80	39.07
Depression	44.47	38.11	80.43
Major depressive episode/ disorder	41.98	25.05	25.18

Educate before you medicate

Two of every three visits to the doctor ends with a prescription being written. More than 3 billion prescriptions are dispensed yearly. While taking prescription medications is very common, it's not always easy to take them correctly. Whether the prescriptions are for you, your children, parents or grandparents, the National Council on Prescription Information and Education (NCPIE) recommends you know these answers before taking any new medication.

Before you leave the doctor's office, when you receive a new prescription, ask:

- What is the name of the medicine and what is it supposed to do? Is this the brand or generic name? Is a generic version available?
- How and when do I take the medicine and for how long?
- What foods, drinks, other medicines, dietary supplements, or activities should I avoid while taking this medicine?
- What are the possible side effects, and what do I do if they occur?
- When should I expect the medicine to begin to work, and how will I know if it is working?
- Will this new prescription work safely with the other prescription and non-prescription medicines I am taking?
- What is required while I am taking this medicine (tests or monitoring)?

At the pharmacy, or wherever you obtain your medicines, ask:

- Do you have a patient profile form for me to fill out? (If not, then create your own, see page 32.) Include non-prescription drugs and any dietary supplements.
- Is there written information about my medicine? Ask the pharmacist to review the most important information with you. Ask if it's available in large print or, if necessary, in a language other than English.
- What is the most important thing I should know about this medicine? Ask the pharmacist any questions that may not have been answered by your doctor.
- Can I get a refill? If so, when?
- How should I store this medicine?

NCPIE has a website with additional information. You may find it at www.talkaboutrx.org.

Who has received a mental health diagnosis?

In 2005, 11 percent or 274,000 people enrolled in Minnesota health plans for the entire year had a mental-health related diagnosis, that is 110 out of every 1,000 people continually enrolled. The rate was higher on average for females, 13 percent (131 per 1,000) than males, 9 percent (87 per 1,000). The numbers also varied by product in which the person was enrolled. For employer-based or individual coverage, 12 percent (115 of every 1,000 people) had a mental health diagnosis. For the 10 percent of Medicare and 21 percent Minnesota Health Care Program enrollees with a mental health diagnosis, the numbers were 100 and 205 per 1,000, respectively.

Enrollees with a mental health diagnosis	% of people enrolled	Number of people per 1, 000 enrollees
Overall enrollment	11.01	110.11
Males	8.70	86.98
Females	13.13	131.30
Commercial enrollees	11.54	115.35
Medicare enrollees	10.04	100.42
State Public Programs enrollees	20.56	205.62

Enrollment in health plans is fluid. The table below shows the rate of diagnosis by age group between individuals who maintain their coverage for the entire year compared against those who drop coverage or change health plans. In all, 274,089 individuals who were continuously enrolled had a mental health diagnosis, while 412,564 individuals with a mental health diagnosis were enrolled at one point during the year. Examples of the mental health diagnoses included in the table below are:

- Depression
- Anxiety
- Autistic disorders
- Bipolar disorders
- Conduct disorders
- Attention-deficit/ hyperactivity disorder
- Acute stress disorder
- Personality disorders
- Brief psychotic disorder
- Schizophrenia
- Delusional disorders
- Eating disorders, including infant feeding difficulties

Comparison enrollment status of people with mental health diagnoses

Age	Continuously enrolled* per 1,000	Total enrolled per 1,000
0-5	21.78	16.33
6-12	92.46	142.18
13-20	133.42	188.86
21-49	129.11	212.87
50-64	110.75	152.55
65-79	80.25	98.91
80+	136.04	179.93

**Continuously enrolled members are defined as those members who have a gap in coverage of 30 days or less with the same health plan. Total enrolled members are individuals who are enrolled in the health plan at any time during the year. These numbers include people who move from one plan to another during the year, so double counting can occur.*

Diagnosis

This section provides data on the rate of diagnosis for 14 categories of mental illness. The categories are depression, major depressive disorder, anxiety, attention-deficit/hyperactivity disorder, autistic disorders, conduct disorders, adjustment disorders, acute stress disorders, eating disorders, personality disorders, brief psychotic disorder, schizophrenia and delusional disorders.

The rates for each diagnostic category are displayed by age group, gender and overall prevalence within the data. The categories are defined by using the International Classification of Diseases Ninth Revision (ICD-9) codes, along with descriptions from the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition.

Depression and anxiety are the most common diagnoses overall. This is consistent with facts found in national literature as well.

Depression, Major Depressive Disorder
Definition: ICD9 Code 311, depressive disorders category.

Nearly 112,575 enrollees in Minnesota health plans have a diagnosis of depression. That equals 45 out of every 1,000 enrollees. The diagnosis is more than twice as common among females as males – 28 per every 1,000 males and 61 per every 1,000 females. The rate of depression is highest among women age 80 and older, where nearly 10 percent of enrollees have the diagnosis.

Diagnosis	Age of Enrollee	Males per 1,000	Females per 1,000	Combined per 1,000
DEPRESSION	0-5	0.34	0.11	0.23
	6-12	10.24	6.70	8.52
	13-20	33.35	65.16	49.18
	21-49	32.50	78.46	56.88
	50-64	35.40	68.44	52.59
	65-79	27.07	47.70	38.11
	80+	51.94	96.59	80.43
	Overall rate	28.34	60.69	45.22

Major depressive disorder

Definition: ICD9 Code 296, affective psychosis category. Includes psychoses, manic disorder, major depressive episodes or disorder, bipolar disorders and manic-depressive psychosis. More than 90 percent of the diagnoses in this category are for major depression.

Major depression and other diagnoses in this category are found in 40 out of every 1,000 enrollees. The diagnosis is most common among women ages 21 to 49, with 71 of every 1,000 with the diagnosis and ages 13 to 20 where it is found in 64 of every 1,000 women. In all, more than 67,800 women and 30,800 men in Minnesota health plans were diagnosed with major depressive disorders in 2005.

Diagnosis	Age of Enrollee	Males per 1,000	Females per 1,000	Combined per 1,000
MAJOR DEPRESSION, ETC.	0-5	0.68	0.33	0.51
	6-12	10.72	6.80	8.81
	13-20	31.82	64.30	47.99
	21-49	32.07	70.97	52.71
	50-64	33.94	65.05	50.12
	65-79	18.27	30.93	25.05
	80+	17.94	29.30	25.18
	Overall rate	25.95	52.25	39.68

Anxiety

Definition: ICD9 Code 300, neurotic disorders category. Includes generalized anxiety disorder, panic disorders, somatoform disorders, dissociative disorders, obsessive-compulsive disorder, phobias and overanxious disorder of childhood. More than 70 percent of the diagnoses in this category are anxiety.

Anxiety and other conditions termed neurotic disorders are most common in females between ages 21 and 49, reaching 87 out of every 1,000 women. Overall, the diagnosis is found in 51 of every 1,000 enrollees.

Diagnosis	Age of Enrollee	Males per 1,000	Females per 1,000	Combined per 1,000
ANXIETY, ETC.	0-5	2.62	1.68	2.16
	6-12	28.03	21.66	24.92
	13-20	39.78	64.50	52.09
	21-49	47.67	87.22	68.66
	50-64	36.94	70.18	55.72
	65-79	23.01	47.50	36.12
	80+	28.04	69.97	54.79
	Overall	36.69	64.56	51.24

Oppositional defiant disorder, reactive attachment disorder

Definition: ICD9 Code 313, emotional disturbances of childhood and adolescence category. Includes misery, unhappiness disorder, social withdrawal, extreme introversion, selective mutism, oppositional disorder, identity disorder and overanxious disorder. Excludes adjustment disorders, which are captured under ICD9 Code 309 on page 20.

Nearly 8,000 children enrolled in Minnesota health plans have been diagnosed with what are called emotional disturbances of childhood and adolescence. The diagnoses are most common in males, ages 13 to 20 (16 out of every 1,000) and ages 6 to 12 (17 out of every 1,000) and in females ages 13 to 20 (11 out of every 1,000.)

Diagnosis	Age of Enrollee	Males per 1,000	Females per 1,000	Combined per 1,000
OPPOSITIONAL DEFIANT DISORDER, AND OTHER EMOTIONAL DISTURBANCES OF CHILDHOOD & ADOLESCENCE	0-5	4.0	2.34	3.19
	6-12	16.53	8.83	12.77
	13-20	15.95	10.45	13.21
	Overall rate 0 to 20	13.20	7.91	10.6

Attention deficit disorder

Definition: ICD9 Code 314, hyperkinetic syndrome of childhood category. Includes attention deficit disorder with or without hyperactivity.

Nearly 27,000 youth enrolled in Minnesota health plans have been diagnosed with attention- deficit/hyperactivity disorder. The diagnosis is most common among males ages 6 to 12 where more than 101 out of every 1,000 enrollees have the diagnosis. The diagnosis is 2.5 times more common in males in that age group than females. Overall, 27 out of every 1,000 males have the diagnosis, compared with 13 out of every 1,000 females.

Diagnosis	Age of Enrollee	Males per 1,000	Females per 1,000	Combined per 1,000
ATTENTION DEFICIT DISORDER, ETC.	0-5	8.02	2.89	5.51
	6-12	101.54	41.78	72.40
	13-20	86.31	39.19	62.86
	0-20 summary	72.29	31.21	52.07
	21-49	10.10	7.96	8.97
	50-64	4.76	4.44	4.59
	65-79	0.54	0.52	0.53
	80+	0.09	0.18	0.15
	Overall rate	27.18	12.58	19.56

Autistic disorders

Definition: ICD9 Code 299, psychoses with origin in childhood category. Includes autistic disorder, Heller's syndrome, Rett's disorder, Asperger's disorder and other pervasive development disorders.

Autistic disorders are most commonly diagnosed in males ages 6 to 12, where more than 18 of every 1,000 male enrollees in this age group have the diagnosis. Males ages 0 to 5 and ages 13 to 20 have the second and third highest rates, nine of every 1,000 enrollees in each age grouping.

Diagnosis	Age of Enrollee	Males per 1,000	Females per 1,000	Combined per 1,000
AUTISTIC DISORDERS, ETC.	0-5	9.25	2.28	5.84
	6-12	17.58	3.69	10.81
	13-20	8.64	2.08	5.38
	0 to 20 Overall	11.92	2.68	7.37

Conduct disorder

Definition: ICD9 Code 312, disturbance of conduct category. Includes aggressive and nonaggressive conduct disorders such as intermittent explosive disorder, and impulse control disorders such as pyromania, pathological gambling, trichotillomania and kleptomania.

Males under the age of 21 are twice as likely as their female counterparts to be diagnosed with a conduct disorder. The diagnosis is most common in the 6-to-12–year-old age group, with 17 males and eight females per 1,000 enrollees having the diagnosis. In the 0 to 5 age group it's five females and nine males per 1,000 and in ages 13 to 29 it's eight females and 14 males per 1,000 enrollees. Overall, nearly 10,000 people enrolled in Minnesota's health plans have a conduct disorder diagnosis.

Diagnosis	Age of Enrollee	Males per 1,000	Females per 1,000	Combined per 1,000
CONDUCT DISORDERS, ETC.	0-5	9.30	4.55	6.97
	6-12	17.35	7.97	12.77
	13-20	13.96	7.67	10.83
	21-49	2.05	0.97	1.48
	50-64	0.86	0.76	0.81
	65-79	1.14	0.79	0.95
	80+	2.40	2.78	2.64
	Overall rate	5.45	2.66	3.99

Adjustment disorders

Definition: ICD9 Code 309, adjustment reaction category. Includes adjustment disorders, reaction to chronic stress, prolonged depressive reaction and other emotions such as separation anxiety disorder, specific academic or work inhibition, posttraumatic stress disorder and more.

More than 73,000 enrollees have an adjustment disorder diagnosis. It is most common in females between the ages of 13 and 20, where 50 of every 1,000 enrollees in that age group have the diagnosis. For males, the same age group (13 to 20) is also where the diagnosis is most common, with more than 33 of every 1,000 enrollees having the diagnosis.

Diagnosis	Age of Enrollee	Males per 1,000	Females per 1,000	Combined per 1,000
ADJUSTMENT DISORDERS, ETC.	0-5	7.50	6.48	7.00
	6-12	35.3	32.33	33.85
	13-20	32.81	50.33	41.53
	21-49	25.67	48.37	37.71
	50-64	18.40	32.11	25.53
	65-79	8.09	11.44	9.88
	80+	9.69	12.87	11.72
	Overall rate	22.66	35.73	29.48

Acute stress disorder

Definition: ICD9 Code 308, acute reaction to stress category. Includes catastrophic stress, combat fatigue, transient disorders in response to exceptional physical or mental stress, predominant disturbance of emotions or psychomotor disturbances.

More than 7,000 enrollees have been diagnosed with an acute stress disorder. It is most common in women ages 21 to 49 (5.1 of every 1,000 enrollees) and ages 50 to 64 (4.6 per 1,000 enrollees.)

Diagnosis	Age of Enrollee	Males per 1,000	Females per 1,000	Combined per 1,000
ACUTE STRESS DISORDERS, ETC.	0-5	2.22	1.99	2.11
	6-12	0.98	0.78	0.88
	13-20	1.19	2.68	1.93
	21-49	2.23	5.14	3.78
	50-64	2.72	4.62	3.71
	65-79	1.24	3.39	2.39
	80+	2.08	3.09	2.72
	Overall rate	1.96	3.86	2.95

Eating disorders

Definition: ICD9 Codes 307.1 and 307.5, eating disorders category. Includes anorexia nervosa, bulimia nervosa and other conditions, including feeding and eating disorders in infancy or early childhood.

More than 7,000 female enrollees have an eating disorder diagnosis. It is most common in females ages 13 to 20, where nearly 21 of every 1,000 have the diagnosis. Overall, eating disorders are 13 times more common among females than males.

Diagnosis	Age of Enrollee	Males per 1,000	Females per 1,000	Combined per 1,000
ANOREXIA, BULIMIA AND FEEDING AND EATING DISORDERS IN INFANCY OR EARLY CHILDHOOD	0-5	0.95	1.55	1.25
	6-12	0.96	0.43	0.70
	13-20	0.58	20.59	10.54
	21-49	0.24	6.64	3.64
	50-64	0.26	2.31	1.33
	65-79	0.13	0.21	0.17
	80+	0.17	0.25	0.22
	Overall rate	0.41	5.51	3.07

Personality disorders

Definition: ICD9 Code 301, personality disorders category. Includes paranoid, affective, schizoid, schizotypal, antisocial, borderline, histrionic, narcissistic, avoidant and other personality disorders. Also includes cyclothymic disorder.

While more than 5,300 enrollees (2.1 per 1,000 enrollees) have a personality disorder diagnosis, it is most common among females ages 21 to 49. In all, more than 2,000 females (4.2 per 1,000) in that age group have the diagnosis.

Diagnosis	Age of Enrollee	Males per 1,000	Females per 1,000	Combined per 1,000
PERSONALITY DISORDERS, ETC.	0-5	0.27	0.03	0.16
	6-12	0.63	0.38	0.51
	13-20	1.49	3.14	2.31
	21-49	1.97	4.21	3.16
	50-64	1.84	2.53	2.20
	65-79	0.97	1.25	1.12
	80+	2.00	2.13	2.08
	Overall rate	1.51	2.72	2.14

Brief psychotic disorder

Definition: ICD9 Code 298, non-organic psychosis category. Includes brief psychotic disorders and psychotic conditions due to emotional stress, environment factors; depressive type psychosis, psychogenic confusion, acute paranoid reaction and psychogenic paranoid psychosis.

More than 3,700 enrollees age 80 and over have this diagnosis. Nearly 45 of every 1,000 females and 30 of every 1,000 males have been diagnosed.

Diagnosis	Age of Enrollee	Males per 1,000	Females per 1,000	Combined per 1,000
BRIEF PSYCHOTIC DISORDER, ETC.	0-5	0.15	0.06	0.11
	6-12	0.59	0.27	0.43
	13-20	2.10	2.10	2.10
	21-49	2.10	1.74	1.91
	50-64	2.55	2.85	2.71
	65-79	9.26	10.26	9.80
	80+	29.51	44.49	39.07
	Overall rate	3.35	4.60	4.00

Schizophrenia

Definition: ICD9 Code 295, schizophrenic disorders category. Includes simple, disorganized, catatonic, paranoid, residual and other types.

Schizophrenia is diagnosed most commonly among women ages 65 to 79 and over age 80 where more than six women per every 1,000 enrollees have the diagnosis. Overall, two people out of every 1,000 are diagnosed with schizophrenia.

Diagnosis	Age of Enrollee	Males per 1,000	Females per 1,000	Combined per 1,000
SCHIZOPHRENIA	0-5	0.00	0.00	0.00
	6-12	0.16	0.05	0.11
	13-20	1.15	0.83	0.99
	21-49	2.37	2.06	2.20
	50-64	1.84	2.43	2.15
	65-79	3.19	6.00	4.69
	80+	2.72	6.34	5.03
	Overall rate	1.78	2.26	2.03

Delusional disorders

Definition: ICD9 Code 297, paranoid states/delusional disorders. Includes paranoia, paraphrenia, shared paranoid disorders and other paranoid states.

This diagnosis is the least common in the overall data, being diagnosed in 0.45 people per every 1,000 enrollees. It is most common in females age 80 and over, impacting more than four of every 1,000 females. The diagnosis appears in men in the same age group (80-plus) in nearly two out of every 1,000 enrollees.

Diagnosis	Age of Enrollee	Males per 1,000	Females per 1,000	Combined per 1,000
DELUSIONAL DISORDERS, ETC.	0-5	0.01	0.00	0.01
	6-12	0.02	0.00	0.01
	13-20	0.19	0.20	0.19
	21-49	0.40	0.26	0.33
	50-64	0.34	0.46	0.40
	65-79	0.66	1.12	0.91
	80+	1.77	4.38	3.44
	Overall rate	0.36	0.53	0.45

Medications

As noted earlier, the best treatments for mental illnesses today are highly effective. Between 70 and 90 percent of individuals with serious mental illnesses have significant reduction of symptoms and improved quality of life with a combination of drugs, therapy and support.

Consistent with the diagnoses, medications for treating depression and anxiety are the most commonly prescribed categories of drugs. You'll recognize the names of some of the most common drugs – Prozac, Paxil, Lexapro and Zoloft among others.

A subset of data shows that more than 80 percent of the drugs used to treat mental illness in Minnesota are prescribed by primary care physicians – family practice physicians, internists, ob/gyns – not by psychiatrists.

Whoever prescribes the medications, it's important that patients know how the drug is supposed to work, what side effects to expect, and more. See the questions on page 14 and be sure to understand the answers. It's just as critical that any person prescribing medications understands the medications – both prescription and over the counter – that patients already take. Patients should keep the form noted in the "Resources" section at the end of this report up-to-date and with them for any medical appointment.

Rates in this section were calculated based on more than 1.9 million individuals who had prescription drug coverage as part of their health care benefit with MCHP members.

Antidepressants

Definition: Antidepressants are a class of medications that are used to treat depression, anxiety and other illnesses. The medications restore mood and behavior. The major types of medications in this class are the monoamine oxidase inhibitors, tricyclic antidepressants, selective serotonin reuptake inhibitors and atypical antidepressants. Although Zyban is classified as an antidepressant, it was excluded from these data because it is most commonly prescribed to help people quit smoking.

Nearly 270,000 people enrolled in Minnesota's health plans have filled prescriptions for antidepressants. Overall, the rate is 141 people per every 1,000 enrolled. There are significant differences among age groups and gender. By far, females in the 80 and older group are prescribed the medication most frequently, reaching nearly 371 enrollees for every 1,000 females enrolled in that age group. Overall, more than two times as many females than males are taking antidepressants, (85 compared with 193 per 1,000.) This is not true in males ages 0 to 5 and ages 6 to 12 where more males than females have prescriptions for antidepressants.

Medication	Age of Enrollee	Males per 1,000	Females per 1,000	Combined per 1,000
ANTIDEPRESSANTS	0-5	1.28	0.82	1.06
	6-12	24.15	15.46	19.91
	13-20	54.97	99.33	77.04
	21-49	93.34	230.54	165.84
	50-64	124.70	277.41	203.99
	65-79	146.94	263.49	212.62
	80+	228.22	370.58	324.40
	Overall rate	84.69	193.04	141.17

Note: The medications in this category are often used to treat symptoms associated with menopause, premenstrual syndrome, anxiety and more. Zyban, a drug classified as an antidepressant used to help people quit smoking, was excluded from this data.

Anti-anxiety/benzodiazepines

Definition: The benzodiazepine classification of medications is used to treat anxiety, panic disorders, insomnia, muscle spasms and seizures.

While overall these medications are used by nearly 37 of every 1,000 enrollees, there is great variation between gender and age categories. Overall, twice as many females as males use this medication (24 males to 48 females per 1,000 enrollees), a rate that is consistent throughout the age groupings. Again, women age 80 and older have the highest rate of use, 150 for every 1,000 enrollees, or nearly 4,500 females.

Medication	Age of Enrollee	Males per 1,000	Females per 1,000	Combined per 1,000
ANTI-ANXIETY BENZODIAZEPINE	0-5	1.93	2.21	2.07
	6-12	2.72	3.99	3.34
	13-20	5.77	11.97	8.85
	21-49	24.22	47.52	36.53
	50-64	39.61	69.40	55.07
	65-79	68.14	114.32	94.16
	80+	91.77	149.98	131.10
	Overall rate	24.50	48.21	36.86

Note: benzodiazepines are often prescribed as sedative hypnotics for aiding sleep patterns.

Sedative-hypnotics

Definition: Sedative-hypnotics depress or slow down the body's functions. Their effects range from calming down anxious people to promoting sleep.

More than 63,000 enrollees age 80 and older have prescriptions for these medications – more than 85 females and 68 males out of every 1,000 enrollees. The medications are second most common in women in the ages 65 to 79 category where 80 of every 1,000 take the medications.

Medication	Age of Enrollee	Males per 1,000	Females per 1,000	Combined per 1,000
SEDATIVE-HYPNOTICS	0-5	7.45	6.70	7.08
	6-12	4.41	4.53	4.47
	13-20	9.05	13.88	11.45
	21-49	21.55	44.35	33.60
	50-64	37.04	64.31	51.20
	65-79	54.63	80.02	68.94
	80+	68.29	85.23	79.74
	Overall rate	22.78	41.98	32.79

Attention deficit disorder

Definitions: Methylphenidate, amphetamines and Strattera are medications used to treat attention-deficit disorder and attention-deficit hyperactive disorders.

Males ages 6 to 12 have the highest rate of use of these medications, reaching nearly 88 of every 1,000 enrollees. More than 26,300 males between the ages of 6 and 20 have filled prescriptions for these medications. Females in the same age groups (6 to 12 and 13 to 20) post the highest rate among females, yet it is just a third as much.

Medication	Age of Enrollee	Males per 1,000	Females per 1,000	Combined per 1,000
METHYLPHENIDATE/ AMPHETAMINES/ STRATTERA	0-5	5.23	1.81	3.56
	6-12	87.52	34.23	61.51
	13-20	82.90	36.58	59.86
	21-49	11.64	17.63	14.81
	50-64	9.09	17.14	13.27
	65-79	5.70	6.75	6.29
	80+	5.70	5.97	5.88
	Overall rate	27.83	19.04	23.25

Note: Drugs used to treat ADD/ADHD also may be used to treat narcolepsy, sleep apnea, traumatic brain injury, fatigue and malaise.

Antipsychotics

Definition: These medications affect neurotransmitters to create normal communication patterns between nerve cells. Anti-psychotic medications are used to treat certain symptoms of schizophrenia, particularly hallucinations and delusions.

Nearly 24,000 enrollees in Minnesota's health plans have prescriptions for antipsychotic medications. The overall rate is nearly 13 people per 1,000 enrollees; with the highest rate found in female enrollees age 80 and older where the rate is nearly seven times higher at 88 per 1,000. Males age 80 and older have the second highest rate at 57 per 1,000 enrollees.

Medication	Age of Enrollee	Males per 1,000	Females per 1,000	Combined per 1,000
ANTI-PSYCHOTICS	0-5	0.74	0.26	0.50
	6-12	6.94	3.16	5.10
	13-20	10.11	10.18	10.15
	21-49	6.44	16.38	11.69
	50-64	6.58	19.00	13.03
	65-79	19.63	26.12	23.29
	80+	57.04	88.23	78.11
	Overall rate	8.16	16.59	12.55

Note: Anti-psychotic medications are also prescribed for dementia disorders related to Alzheimer's disease and bipolar disorder. In 2005, the FDA issued a public health advisory regarding the use of antipsychotic medications used to treat elderly patients with dementia.

Lithium

Definition: Lithium is used most often to treat bipolar disorder. Lithium evens out mood swings in both directions – from mania to depression, and depression to mania – so it is used not just for manic attacks or flare-ups of the illness but also as an ongoing treatment for bipolar disorder.

Just more than 2,500 enrollees in Minnesota's health plans have filled prescriptions for Lithium. It is the least prescribed class of drugs used to treat mental health diagnoses. While the rate of use is fairly consistent over the ages – between one to two per 1,000 enrollees – the highest rate is 2.2 per 1,000 female enrollees between ages 65 and 79. Overall, the rate is 1.3 per 1,000 enrollees.

Medication	Age of Enrollee	Males per 1,000	Females per 1,000	Combined per 1,000
LITHIUM	0-5	0.03	0.01	0.02
	6-12	0.47	0.37	0.42
	13-20	1.18	1.24	1.21
	21-49	1.21	1.81	1.53
	50-64	1.59	2.06	1.83
	65-79	1.89	2.17	2.05
	80+	1.04	1.33	1.24
	Overall rate	1.14	1.53	1.34

Use of services

Health plan members are using mental health services.

- Outpatient care including office visits, therapy sessions, day treatment programs and home-based services are the most commonly used where overall use hit more than 6,000 visits for every 1,000 enrollees. Younger people use outpatient services most often.
- Emergency room services are used most often by people age 80 and older where the rate of use is 133 per 1,000 enrollees. People ages 65 to 79 and those ages 13 to 20 also use emergency room services, reaching 119 and nearly 107 per 1,000 enrollees respectively.
- Hospitalizations follow the same pattern as emergency room use, where enrollees in the age 80-plus category have the highest rate of hospitalization at 915 per 1,000 enrollees. The next highest use was by individuals 65 to 79, followed by enrollees ages 13 to 20.

The table below shows overall use of services. Keep in mind that one enrollee with a mental health diagnosis may use services more than once. The numbers in the table below are not a unique count.

Overall use of services by age
rate per 1,000 enrollees with mental health diagnoses*
Numbers represent overall use, not use by unique individuals

Service	Age	Per 1,000 enrollees
EMERGENCY ROOM	0-5	35.27
	6-12	31.37
	13-20	106.90
	21-49	94.02
	50-64	73.84
	65-79	119.15
	80+	133.83
	Overall	89.97
HOSPITALIZATION	0-5	28.40
	6-12	97.70
	13-20	368.52
	21-49	156.49
	50-64	180.23
	65-79	630.19
	80+	915.54
	Overall	259.21
OUTPATIENT SERVICES: office visits, day treatment programs, home based services, etc.	0-5	11,369.54
	6-12	7,514.39
	13-20	7,388.50
	21-49	6,009.33
	50-64	5,584.32
	65-79	4,577.04
	80+	3,335.16
	Overall	6,071.86

**Note: Information in this table only is based on the experience of three health plans.*

Emergency room use and hospitalization of individuals

Of the 274,000 people enrolled in Minnesota health plans with mental health diagnoses, 18,104 individuals were hospitalized with mental health related diagnoses. Just more than 17,800 individuals had an emergency room visit. The table below gives us a look at the number of unique individuals using the most expensive services: hospital care and emergency room services.

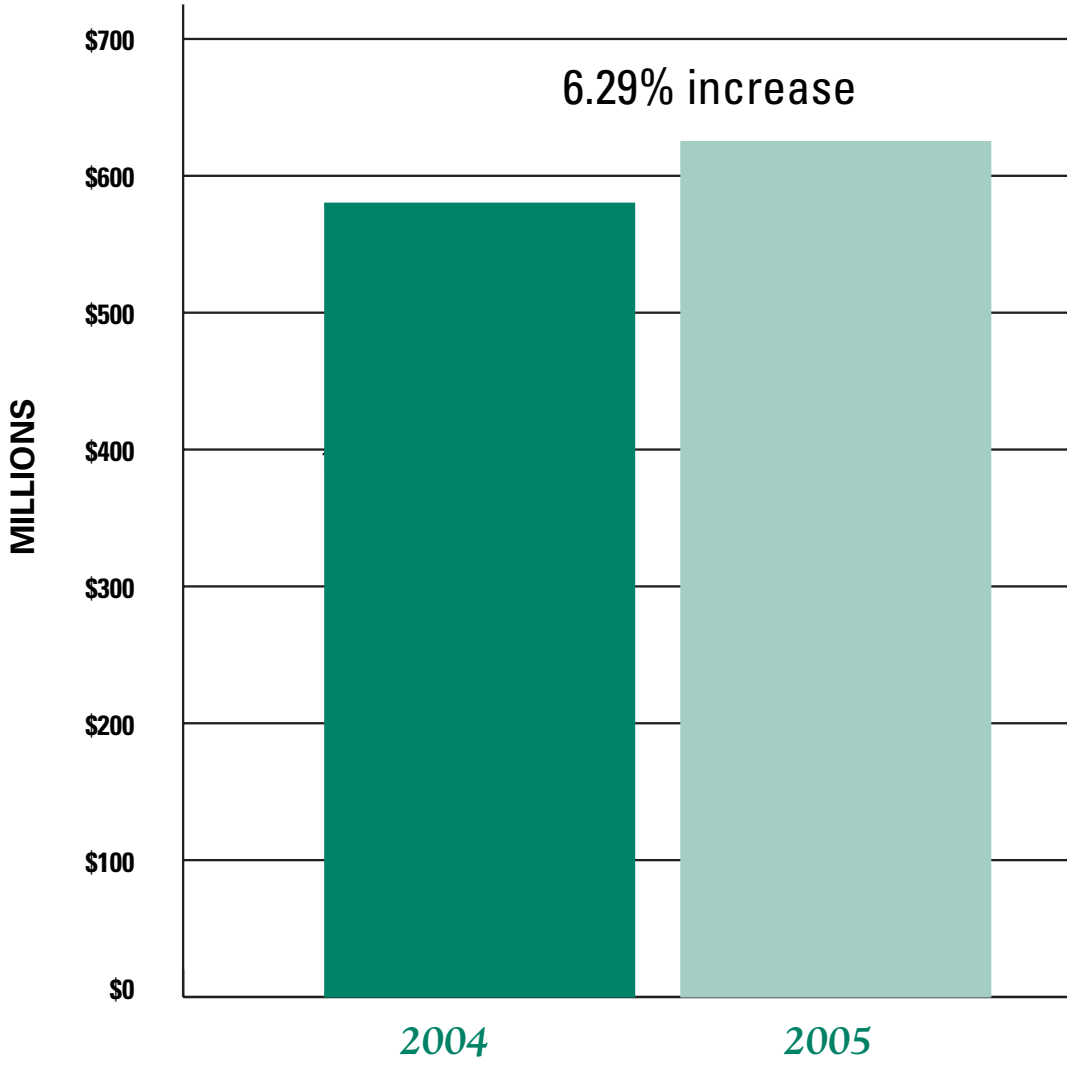
Service	# of unique individuals with a mental health diagnosis	Rate per 1,000 enrollees with a mental health diagnosis
EMERGENCY ROOM	17,851	65.12
HOSPITALIZATION	18,104	66.05

Cost of services

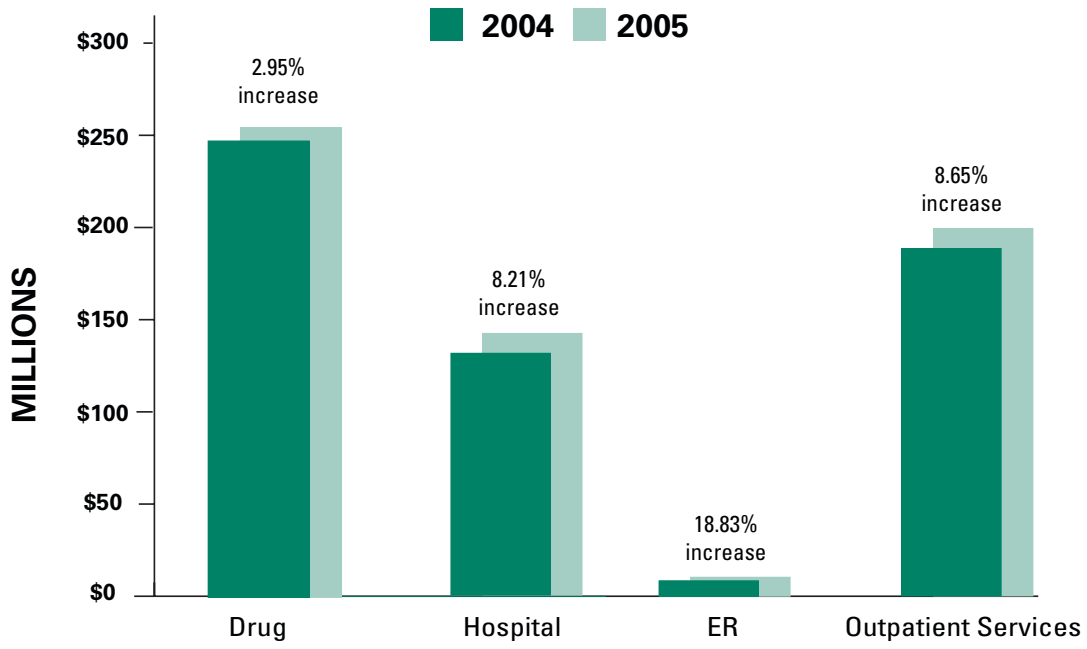
In 2005, health plans spent nearly $611 million for care on individuals with a mental-health related diagnosis enrolled with the plan throughout the year. These costs included medications, emergency room visits, hospitalizations, and outpatient services such as office visits, home-based care, day-treatment programs, therapy groups and more. The chart below shows the overall cost increase between 2004 and 2005, while the second chart shows the increase in each component of care.

The data reflect the hospital and emergency room costs where mental health was a contributing factor in the ER visit or hospital stay. The outpatient visit cost reflects only the cost of the mental health component of care. All costs are based on allowed charges, which is the cost paid by the health plan and the individual.

Total Mental Health Related Costs for Continuously Enrolled Members
(includes drugs, hospitals, ER and outpatient services)



Mental Health Related Costs for Continuously Enrolled Members



As a final note, it is important to remember that most of the data in this report are based on the experience of individuals who maintain their health care coverage with the same plan for the entire year. The decision to limit the data in this report to continually enrolled individuals is designed to avoid duplication and allows the aggregation of data across health plans in order to provide a broad view.

However, costs can be aggregated without concern for duplication. The costs highlighted in the table below reflect emergency room and hospital visits for anyone enrolled in the health plan any time during the year where the reason for the visit or stay was mental-health related.

Service	2004 costs	2005 costs	% increase
HOSPITALIZATIONS, ENROLLED ANY TIME DURING THE YEAR	$120.3 million	$132.3 million	10%
EMERGENCY ROOM, ENROLLED ANY TIME DURING THE YEAR	$12.4 million	$14.9 million	20%
ER AND HOSPITAL COSTS COMBINED, ENROLLED ANY TIME DURING THE YEAR	$132.7 million	$147.2 million	11%

Resources

The National Institute of Mental Health (NIMH) is the largest scientific organization in the world dedicated to research focused on the understanding, treatment, and prevention of mental disorders and the promotion of mental health **http://www.nimh.nih.gov/index.shtml**

National Alliance on Mental Illness (www.nami.org) is the nation's largest grassroots mental health organization dedicated to improving the lives of persons living with serious mental illness and their families. NAMI publishes: *A Family Guide: What Families Should Know about Adolescent Depression and Treatment Options,* a booklet that includes information on talk therapy, antidepressant use in children, treatment plans and more. at www.nami.org/Content/ContentGroups/CAAC/Family_Guide_final.pdf

The Substance Abuse and Mental Health Services Administration's (SAMHSA) National Mental Health Information Center provides information about mental health. The National Mental Health Information Center was developed for users of mental health services and their families, the general public, policy makers, providers, and the media. Contact them at 800-789-2647 or mentalhealth.samhsa.gov/

Beers List sets criteria for safe medication use in people over age 65. First issued in 1991, these criteria have been repeatedly revised and updated. In addition to the benzodiazepines, the Beers criteria (or list) has included amiodarone, amitriptyline, cimetidine, clonidine, disopyramide, indomethacin, ketorolac, meperidine, methyldopa, and many antihistamines, antispasmodics, and muscle relaxants. Named for Dr. M.H. Beers, principal author of the original published in 1991. The list and research behind it can be found at the Archives of Internal Medicine at: www.archinte.ama-assn.org/cgi/content/full/163/22/2716

Medication Profile Form provides a guide to write down the name of each medicine you take, the reason you take it, and how you take it, in the spaces on this form. Add new medicines when you get them. Show the list to your health professionals. This form was developed by the Minnesota Alliance for Patient Safety. It is available at: www.mnpatientsafety.org/files/pdfs/medication-tracking-form.pdf

Data sources and activities

Data were collected in aggregate. No data that could identify an individual were ever reported.

Administrative data from one member health plan were used to help determine how to answer questions listed on page 1 of the report. These answers helped create a draft template for other plans to use in submitting data. Associates of Data Intelligence Consultants, LLC (Data IQ) executed a study protocol using data provided to the company by the health plan. Software programs needed for the execution of this project are owned by or licensed to Data Intelligence Consultants, LLC and maintained on computer equipment owned by Data Intelligence Consultants, LLC.

All data presented are based on 2005 dates of service for continuously enrolled health plan members, unless noted otherwise.

Health plans contributing data to this report:
- Blue Cross Blue Shield of Minnesota
- FirstPlan of Minnesota
- HealthPartners
- Metropolitan Health Plan
- Medica
- PreferredOne
- UCare

Data were collected on:
- Individual and employer-sponsored commercial products
- Prepaid Medical Assistance Program
- MinnesotaCare
- General Assistance Medical Care
- Medicare, including Minnesota Senior Health Options

The following International Classification of Diseases Ninth Revision (IC-D9) Codes were used to identify mental health diagnoses in the claims data:
- 295.xx to 301.9x
- 307.1x
- 307.5x
- 308.xx- to 309.9x
- 311.xx to 314.9x

To be included in the utilization data, the enrollee must have been continuously enrolled, defined as those members who have a gap in coverage of 30 days or less with the same health plan. A medical benefit was required, as well as drug benefits for data provided for the prescription drug section. Drug codes were identified using the National Drug Code directory.

Utilization and cost data

Hospital parameters

Place of Service (POS) codes inpatient hospital (21), inpatient psychiatric facility (51); of at least 1 day and DRG codes acute adjustment reaction & psychosocial dysfunction (425), depressive neuroses (426), neuroses except depressive (427), disorders of personality & impulse control (428), psychoses (430), childhood mental disorders (431), other mental disorders diagnoses (432); OR diagnostic positions 1 and 2 and 3; continuous enrollment, as defined above, was required. To calculate costs, once the stay was determined to be mental health-related, the cost of the entire stay was taken. For the facility portion of the costs, the DRG was used. For the professional portion of the cost, the POS codes were used to get the total dollars allowed. If an enrollee appeared on either list, they were counted as one.

Emergency room parameters

Healthcare Effectiveness Data and Information Set (HEDIS) specifications, Table AMB-B, defined emergency room visits. Only mental health diagnoses listed above were included. The facility component was counted only if the visit did not result in hospitalization. To identify professional costs, POS code emergency room (23) was used. Enrollees had to be continuously enrolled as defined above.

Outpatient parameters

POS codes office (11), home (12), federally qualified health center (50), public health clinic (71) or rural health clinic (72), outpatient hospital (22), skilled nursing facility (31), nursing facility (32), psychiatric facility-partial hospitalization (52), community mental health center (53) OR inpatient hospital (21), inpatient psychiatric facility (51) when admission and discharge dates are the same. Mental health diagnoses listed above in any position in the claim. Continuous enrollment, as described above, was required. To calculate costs, the mental-health related charges for the office visit were used.

Cost parameters

Defined as total dollars allowed.

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Notes

The Minnesota Department of Human Services (DHS) directly provides coverage for more than 112,600 Minnesotans with mental health diagnoses. People enrolled directly with DHS are not included in prevalence, utilization or cost details of this report, nor are other individuals who do not have health care coverage through MCHP members.

HEDIS is owned by the National Committee for Quality Assurance, a private, 501(c)(3) not-for-profit organization dedicated to improving health care quality.

The fact on page 12 stating that 30 percent of hospital admissions in elderly patients might be linked to medication-related problems or a drug's adverse effect comes from this report: Hanlon JT, Schmader KE, Kornkowski MJ, et al. Adverse drug events in high risk older outpatients. Journal of the American Geriatric Society, 1997;45:945-948.

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