Mental Health and Substance Abuse Services in Medicaid, 2003

Charts and State Tables

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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Introduction

Since its inception in 1965, Medicaid has grown to become an essential source of health insurance for millions of low-income and vulnerable Americans, including children and their parents, pregnant women, the elderly, and people with physical or mental disabilities (Kaiser Family Foundation, 2009; Kronick et al., 2007). In 2003, Medicaid provided health care coverage for 55 million people, nearly 20 percent of the U.S. population (Kaiser Family Foundation, 2007).

The Medicaid program is also a major source of funding for mental health and substance abuse services in the United States. In 2003, Medicaid covered 25 percent of all expenditures and 45 percent of public expenditures for these services (Mark, Levit, Coffey, McKusick, Harwood, King, et al., 2007). Between 2006 and 2014, Medicaid expenditures are projected to increase annually by 8.3 percent for mental health services and by 6.2 percent for substance abuse services; by 2014, Medicaid is projected to pay for 27 percent of the costs for all mental health services and 20 percent of the costs for all substance abuse treatment (Levit, Kassed, Coffey, Mark, Stranges, Buck, et al., 2008).

Within Federal guidelines, states can take numerous pathways toward covering different types of mental health and substance abuse services. These policy choices can have significant effects on the delivery and financing of mental health care (Verdier, Barrett, & Davis, 2007). For example, many states have adopted coverage policies and strategies that shift the provision of mental health services from institutional to community-based providers. Because of their complex needs and high expenditure levels, Medicaid beneficiaries who use these services continue to be the subject of much discussion among policymakers and program administrators at the state and Federal levels.

This report, sometimes referred to here as the "chart book" can help to inform these policy discussions because it is designed especially for representatives of consumer groups, Medicaid directors, state mental health directors, and others who are concerned with mental health and substance abuse services for low-income and vulnerable citizens. It provides the best and most comprehensive information currently available on Medicaid beneficiaries who use mental health or substance abuse services. Specifically, the exhibits in this chart book (1) provide an overview of these beneficiaries and (2) compare them with all Medicaid beneficiaries on key dimensions, such as demographic characteristics, use of health services, and Medicaid expenditures. In addition to presenting key facts through charts and figures, we describe how they fit into the overall context of Medicaid policy.

The chart book's appendices include numerous tables with additional quantitative information about the use of mental health and substance abuse services in every state and in the nation as a whole. We also present much of this information for three different age groups of Medicaid beneficiaries (beneficiaries aged 0 through 21, 22 through 64, and over 64).

The information in the chart book can be used for numerous purposes. For example, representatives of consumer organizations can use the charts and figures to help paint a general picture of Medicaid beneficiaries who use mental health services. State policymakers or program administrators can use the state-specific tables to compare data for their state with neighboring states, with states that have demographically similar populations, or with the national average. Within each state, the tabular information can provide a baseline index, as of 2003, that can be used to assess the impact of subsequent program or policy changes (such as, for example, coverage of a new type of psychotropic medication or the adoption of a Medicaid buy-in program).

To provide background for using the chart book, this introduction addresses the following questions:

- What mental health and substance abuse services does Medicaid cover?
- How did we identify Medicaid beneficiaries using mental health or substance abuse services?
- Where does the information in the chart book come from and how accurate is it?
- How do features of state Medicaid programs and their data influence the information in the chart book?

The final section of the introduction provides an overview or "roadmap" to the chart book's exhibits and appendices.

What mental health and substance abuse services does Medicaid cover?

The Federal law governing the Medicaid program is known as Title XIX of the Social Security Act. This law specifies minimum requirements for Medicaid eligibility and a core set of mandatory services that states must provide (see Table A). Eligibility groups are defined by both financial (for example, income and assets) and nonfinancial (for example, age and disability) criteria. States administer Medicaid with oversight from the Centers for Medicare & Medicaid Services (CMS).

Each state also has the flexibility to establish program eligibility criteria and cover services beyond the basic requirements, within guidelines specified by Federal law. These are designated as "optional" eligibility groups and services. The full list of optional services that states provide is available elsewhere (Kaiser Family Foundation, 2009).

Although the statute that created Medicaid (Title XIX of the Social Security Act) does not specifically define the mental health and substance abuse services that are eligible for reimbursement under Medicaid, states have used the mandatory and optional benefit categories to provide these services (see Table B). All states have chosen to cover some types of mental health services and 49 states provide some coverage for substance abuse treatments for adults (Robinson, Kaye, Bergman, Moreaux, & Baxter, 2005). For example, visits to psychiatrists are covered under the category of physician services, while prescribed drugs are covered under the category of medications (Shirk, 2008).

Table A. Key Mandatory Eligibility Groups and Benefits Covered Under Medicaid

Eligibility Groups	Description
Children	States are required to cover all children under age 6 with family income at or below 133 percent of the Federal poverty level (FPL) who meet state asset requirements and children aged 6 to 19 in families at or below 100 percent of the FPL who meet state asset requirements. In addition, states can elect to cover higher-income children through other optional coverage provisions. The enactment of the State Child Health Insurance Program (SCHIP) in 1997 provided enhanced finding for states to expand Medicaid coverage for children (M-SCHIP) with family income up to 250 percent FPL. States may also use SCHIP funding to expand coverage for children outside the Medicaid program. These are referred to as separate SCHIP (S-SCHIP) programs.
Pregnant women	States are required to cover pregnant women with family income at or below 133 percent of the FPL who meet asset requirements (eligible from the time they become pregnant until 60 days postpartum). Most states opt to cover pregnant women to even higher income levels.
Families with dependent children/adults	States are required to cover children and their caretaker relatives/parents who meet the state's Aid to Families with Dependent Children (AFDC) requirements that were in effect as of July 16, 1996. AFDC has been replaced by Temporary Assistance for Needy Families (TANF). Generally, this provision covers families with children up to age 18 who have been deprived of support of one or both parents, if family income falls below the AFDC threshold set by each state. However, states can use less restrictive income and resource methodologies than those used in 1996. This provision can also cover two-parent families where the principal wage earner is unemployed. States may elect to cover higher-income caretaker relatives/parents (and even childless adults) through other optional coverage provisions or Section 1115 Demonstration Waivers.
Supplemental Security Income (SSI) recipients	States are generally required to cover people who are aged and have disabilities receiving SSI, except some individuals living in states that use more restrictive eligibility criteria (known as "Section 209(b) states" after the provision in the Social Security Act on which it is based).[1]
Medicare beneficiaries or dual eligibles	States are required under Medicaid to cover full Medicare cost-sharing expenses for aged and disabled Medicare beneficiaries with income below 100 percent FPL. These expenses include Part B premiums, Part A premiums (if needed), copays, and deductibles. In addition, states are required under Medicaid to cover Medicare Part B premiums for Medicare beneficiaries with income from 100 to 135 percent FPL. States have opted to extend full Medicaid benefits to most, but not all, dual eligibles with income <100 percent FPL, in addition to the coverage of Medicare cost-sharing expenses. And, some states extend full Medicaid benefits to higher-income dual eligibles.
Foster care children and children receiving adoption assistance	States are required to extend Medicaid coverage to foster care children and children receiving adoption assistance under the provisions of Title IV-E of the Social Security Act. These are generally children whose family income meets the 1996 AFDC requirements. States can elect to cover higher-income foster care children and adoptive children, and states can elect to extend Medicaid to children aging out of foster care.
Benefits Covered Under Medicaid	

Sources: Ellwood & Kell, 2003; Wenzlow et al., 2007

[1]These states include Connecticut, Hawaii, Illinois, Indiana, Minnesota, Missouri, New Hampshire, North Dakota, Ohio, Oklahoma, and Virginia.

Table B. Selected Mental Health and Substance Abuse Treatments Coverable by Medicaid Through Mandatory or Optional Services or Waiver Program Authority

Treatment	Description
Psychotropic drugs	Prescription medications provided for the treatment of mental or substance use disorders
Residential treatment	Any type of long-term care that is provided in a residential treatment center
Targeted case management	Services to assist individuals eligible under the State plan in gaining access to needed medical, social, educational, and other services
Extensive outpatient services	Services provided during business hours to individuals with mental or substance use disorders to encourage positive social interactions (such as therapeutic day programs, occupational therapy, and activity therapy)
Outpatient hospital services*	Individual, group, or family counseling and/or psychotherapy, and diagnosis, treatment, assessment, and medication management occurring on an outpatient basis
Physician services*	Care services provided by primary care physicians and psychiatrists for the treatment of mental or substance use disorders
Services of other licensed professionals	Services provided by other licensed behavioral health professionals, including psychiatric social workers and clinical psychologists
Rehabilitative services	Services provided to reduce mental disability and promote restoration of functioning
Collateral services	Services offered to family or coworkers of people with mental or substance use disorders and may include family therapy, respite care, and vocational support
Crisis services	Emergency services provided to counteract or reverse an episodic deterioration in the patient's condition
School-based services	Any services targeted to school-aged children in a school-based setting, including counseling and therapy
Home- and community-based services	Services provided under home- and community-based (§1915(c)) waivers
Inpatient hospitalization*	Any short-term inpatient stay in a general hospital setting or long-term stay in a psychiatric hospital
Opioid treatment	A substance abuse treatment provided most commonly to persons with heroin addiction

Source: Verdier et al., 2007; Robinson et al., 2005

Note: Waiver Program Authority includes services covered under 1915(c), 1915(b), or 1115 waivers

*Mandatory services

To pay for services provided through Medicaid, the Federal government provides funds that match the amount of money states spend on Medicaid services. The percentage of state funds matched by the Federal Government is based on each state's per capita income. The Federal share of Medicaid spending in 2003 ranged from 50 percent in higher-income states to 77 percent in the lowest-income state, with a national average of 57 percent (see http://aspe.hhs.gov/health/fmap.htm).[1]

How did we identify Medicaid beneficiaries using mental health or substance abuse services?

When doctors, hospitals, and other health care practitioners provide services to Medicaid beneficiaries, they request payments for these services by filing claims with the state Medicaid agency. Except for claims related to prescription drugs, each claim includes the beneficiary's primary diagnosis (as defined by codes in the International Classification of Diseases, Ninth Revision, Clinical Modification, also known as ICD-9-CM), the amount of the combined state and Federal Medicaid reimbursement, and the type of service that generated the claim. Claims data provide a relatively complete picture of the services provided to beneficiaries in fee-for-service (FFS) systems because providers are likely to submit claims for their services in order to be paid for them. As a result, claims data are an accurate source of information about service use, the characteristics of the individuals who use these services, and service expenditures.

We used two approaches to identify Medicaid beneficiaries with mental or substance use disorders. First, we identified beneficiaries who were treated in a psychiatric hospital, an institution for mental disease, or a psychiatric residential treatment facility. Second, we identified individuals who had any Medicaid claim with a primary ICD-9-CM diagnosis code for a mental or substance use disorder including schizophrenia, major depression and affective disorders, psychoses, neurotic and other depressive disorders, personality disorders, other mental disorders, special symptoms and syndromes, stress and adjustment reactions, conduct disorders, emotional disturbances, attention deficit hyperactivity disorder, mental disorders or substance abuse associated with childbirth, alcoholic or drug psychoses, alcohol dependence or nondependent abuse, and drug dependence or nondependent abuse.[2]

Although claims data are useful for identifying patterns of services and expenditures for Medicaid beneficiaries in FFS systems, including their use of mental health and substance abuse services, they do not enable us to identify all beneficiaries with mental health or substance use disorders. For example, some beneficiaries with these disorders may not have received Medicaid-covered services during 2003, and therefore would have generated no claims. Some beneficiaries may have used only prescription drugs for their treatment. Because these claims do not include diagnostic codes, we were not able to identify individuals with qualifying

[1] The Jobs and Growth Tax Relief Reconciliation Act of 2003 provided a temporary increase in the Federal share for three-quarters of calendar year 2003 that brought the Federal share to 53 percent in the highest-income states and 80 percent in the lowest-income state.

[2] The specific ICD-9-CM codes used to identify beneficiaries with these disorders are listed in Appendix B.

diagnoses. Other beneficiaries with mental or substance use disorders may have used certain services, such as emergency room treatment, but the mental or substance use disorder was not included in the claim as the primary diagnosis. To interpret the chart book information accurately, it is important to distinguish between beneficiaries who use mental health or substance abuse services and beneficiaries who have mental or substance abuse disorders.

Some Medicaid beneficiaries have both mental and substance use disorders. However, we developed mutually exclusive categories of beneficiaries with mental or substance use disorders based on each individual's most frequently reported condition. Although these disorders often occur together, we developed separate categories to avoid double-counting of service use by individuals with both conditions.

Where does the information in the chart book come from and how accurate is it?

The information in this chart book comes from data that state Medicaid agencies submit to CMS. Under Federal law, states are obligated to provide CMS with standard information about services provided by their Medicaid programs. CMS stores this information in administrative and claims files, known as the Medicaid Statistical Information System (MSIS). Because MSIS files are challenging to use, CMS routinely transforms these files into a more research-friendly format, the Medicaid Analytic eXtract (MAX). Data entered into the MAX files undergo extensive quality reviews.[3] We used MAX files for 2003 to prepare the exhibits for this chart book because they were the most recent files available at the start of the project.

The exhibits in this chart book present information about Medicaid beneficiaries who received services through FFS systems. In FFS systems, physicians and other providers submit invoices (also known as claims) to Medicaid agencies for specific services rendered to Medicaid beneficiaries. The Medicaid agency then pays these providers their predetermined fees. We do not include information about Medicaid beneficiaries who are enrolled in capitated managed care plans.[4] These plans are operated by managed care organizations (MCOs) under contract to state Medicaid agencies, which pay MCOs a certain amount of money each month for each enrolled beneficiary (the amount is referred to as a capitated payment).

We used data for beneficiaries in FFS systems rather than managed care plans because MCOs typically do not report detailed service-specific data to state Medicaid agencies. As a result, information on beneficiaries in capitated managed care plans is less complete compared with information for beneficiaries in FFS systems. By using FFS data, we were able to accurately identify beneficiaries who used

[3] For additional information on the MAX files, see Wenzlow, Finkelstein, Le Cook, Shepperson, Yip, and Baugh (2007) and the CMS website (2009).

[4] We excluded from the analyses all beneficiaries in these states who were enrolled in any capitated comprehensive or behavioral managed care plan for the entire year. Some programs were not counted as "managed care" for the purposes of excluding beneficiaries from the data used to create the chart book. These programs include primary care case management (PCCM) or those that capitated a very limited set of services, such as dental or transportation benefits. For beneficiaries enrolled in an MCO for one part of the year and in a FFS system for the other, we excluded data for the months of managed care enrollment.

mental health or substance abuse services and describe these services and associated expenditures comprehensively and in detail.

To select the data for this chart book, we examined both the completeness and quality of each state's data specifically in relation to suitability for identifying beneficiaries who used mental health and substance abuse services as well as patterns in their service use. The term "data completeness" refers specifically to the extent to which FFS data were available; states that have a greater proportion of beneficiaries in FFS are considered to have more complete data than states with a greater proportion of beneficiaries in managed care plans. The term "data quality" refers to the extent to which states reported technical problems in developing their data files that can affect the reliability or representativeness of their data on mental health or substance abuse services provided through the Medicaid program. These problems include missing diagnosis codes, uneven reporting of enrollment, missing eligibility data, duplicate records, and missing claims. Using procedures described in detail in Appendix B, we assigned each state's data a score from 1 to 4, with higher numbers indicating more complete and higher quality data. These scores were developed specifically for this chart book to assist readers in understanding how to interpret the information presented in the charts, figures, and tables; they do not reflect the quality of the states' overall MAX data.

Based on our assessment procedures, 13 states were assigned the highest score of 4, meaning that (1) beneficiaries received services through FFS systems in more than two-thirds of the months they were eligible for Medicaid; and (2) we found at most one potential problem that would affect the suitability of the data for the chart book. These 13 states are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming. This group of states includes 12.9 million beneficiaries (23 percent of all 55.8 million beneficiaries who were enrolled in Medicaid for any length of time in 2003). In addition:

- Thirteen states were assigned a score of 3, meaning either that (1) a significant proportion of beneficiary months were in managed care and as a result data were somewhat incomplete; or (2) more than one potentially serious problem was found that affected the suitability of the data for this chart book; these states include 21.4 million beneficiaries (38 percent of all beneficiaries).
- Eighteen states were assigned a score of 2, meaning either that (1) a majority of beneficiary months were in managed care and as a result data were mostly incomplete; or (2) multiple potentially serious problems were found; these states include 13.4 million beneficiaries (24 percent of all beneficiaries).
- Seven states were assigned a score of 1, meaning either that (1) the vast majority of beneficiary months were in managed care and data were almost totally incomplete; or (2) a substantial number of months were in managed care and several serious data problems were found; these states include 8.1 million beneficiaries (15 percent of all beneficiaries).

In many respects, the characteristics of the Medicaid beneficiaries in the 13 states included in the chart book are similar to all

Medicaid beneficiaries. For example, the percentage of the FFS Medicaid population who used mental health or substance abuse services in 2003 varied only slightly between the 13 states and all other states (11.7 percent compared with 11.1 percent). However, there are some differences. For example, beneficiaries residing in the 13 states included in the chart book were more likely to be under 22 years old (62 percent of all beneficiaries were under 22 years in the states used for this chart book, compared with 54 percent in other states). We cannot assume, therefore, that the data in this chart book are statistically representative of FFS Medicaid beneficiaries nationwide.

How do characteristics of state Medicaid programs and their data influence the information in the chart book?

Accurately interpreting the information in this chart book depends on understanding several characteristics of state Medicaid programs and their data. Most importantly, readers should remember that state Medicaid programs differ when it comes to covering services. Some states are quite generous in both the type and quantity of mental health and substance abuse services that their Medicaid programs pay for; others cover only a few of these services. Readers who wish to compare data from different states should keep in mind that states have adopted different approaches to paying for mental and substance abuse treatment and that these different approaches will impact the number and characteristics of beneficiaries who use mental health or substance abuse services. Furthermore, some state Medicaid programs have many more beneficiaries than others; consequently, these states have somewhat more impact on overall totals than do states with smaller Medicaid populations.

Readers also should note three other important characteristics of the data. First, the claims data we used for this chart book account only for services for which Medicaid paid. However, some Medicaid beneficiaries are also covered by Medicare because they are older than 64 or have disabilities. For these individuals (who are often referred to as "dual eligibles"), Medicare is more likely than Medicaid to pay for certain types of mental health or substance abuse services, especially services received in hospitals and physician offices. As a result, analysis of Medicaid claims alone will yield only a partial picture of their overall service use. This feature particularly affects the interpretation of the information presented for beneficiaries aged 65 and older because these individuals are likely to be enrolled in both Medicare and Medicaid (that is, to be dual eligibles). Sixty-five percent of dual eligibles are over age 65 (Holohan, Miller, & Rousseau, 2009).

Second, many states extend a limited benefit package to beneficiaries who do not qualify for full Medicaid coverage. For example, in some states, individuals may qualify only for family planning services through Medicaid. States vary widely in the percentage of Medicaid beneficiaries entitled to a limited benefit package. These beneficiaries are unlikely to use Medicaid-funded mental health or substance abuse services because the limited benefits to which they are entitled do not usually cover such services. We accounted for all Medicaid beneficiaries in our analyses, including those who only qualify for limited benefits. Therefore, our estimates of the proportion of Medicaid beneficiaries who use mental and substance abuse services will be lower than other studies or reports that excluded

such individuals from their analyses. This feature may be especially important to keep in mind when examining tables in Appendix D for states that have a large proportion of beneficiaries who qualify only for limited benefits. (States with a high proportion of beneficiaries eligible only for partial benefits are identified on the cover page for each set of state-specific tables in Appendix D.)

The third consideration involves the State Child Health Insurance Program (SCHIP), which began in 1996 and is designed to cover low-income children whose families earn too much to qualify for the standard Medicaid program. Some states implemented SCHIP by expanding their Medicaid programs to cover previously ineligible children (referred to as M-SCHIP programs); others established new programs separate from Medicaid (referred to as S-SCHIP programs). In addition to all children enrolled in standard Medicaid and M-SCHIP programs, we included children enrolled in S-SCHIP only if they were also enrolled in Medicaid or M-SCHIP at a different point during the year. Beneficiaries in states with M-SCHIP programs may have different service patterns than beneficiaries in states with S-SCHIP programs. Of the 13 states in the chart book, 7 had S-SCHIP programs, 3 had M-SCHIP programs, and 3 operated both types of programs in 2003.

Roadmap to the chart book

The 29 exhibits in the chart book, and the accompanying descriptions, are organized into the following topic areas:

- A national overview of beneficiaries using mental health or substance use services
- Medicaid beneficiaries aged 0 through 21
- Medicaid beneficiaries aged 22 through 64
- Medicaid beneficiaries aged 65 or older
- Beneficiaries with substance abuse service use

The information presented in each exhibit is distilled from summary tables included in Appendix A. These tables enable the reader to examine additional data related to the topic of each exhibit. The explanatory descriptions for each exhibit note the specific tables in Appendix A where related information can be found.

As noted above, Appendix A contains tables summarizing information for the 13 states whose data were used for the chart book. In addition:

- Appendix B describes the methods used to develop and assess the completeness and quality of data on mental health and substance abuse services and provides definitions of key terms.
- Appendix C includes summary tables combining information for all 50 states and the District of Columbia.
- Appendix D includes tables for each of the 50 states and the District of Columbia, as well as a cover page for each state's tables that provides information about the completeness and quality of each state's MAX data as they relate specifically to mental health and substance abuse services.

Appendices B, C, and D are available on the CD included on the back cover of the hard-copy version of this chart book and can be downloaded as separate documents from the SAMHSA website (samhsa.gov).

References

Child Welfare Information Gateway. (2004). *Adoption assistance for children adopted from foster care*. Washington, DC: Children's Bureau/ACYF.

Ellwood, M., & Kell, M. (2003). *Using MSIS data to analyze Medicaid eligibility and managed care enrollment patterns in 1999*. Washington DC: ASPE.

Holahan, J., Miller, D. M., & Rousseau, D. (2009, February). *Dual eligibles: Medicaid enrollment and spending for Medicaire beneficiaries in 2005*. Kaiser Commission on Medicaid and the Uninsured.

Kaiser Family Foundation. (2007). *The Medicaid program at a glance*. Menlo Park, CA: Kaiser Family Foundation. Accessed March 31, 2009, from http://www.kff.org/medicaid/upload/7235-02.pdf.

Kaiser Family Foundation. (2009). *Medicaid: A primer, 2009*. Menlo Park, CA: Kaiser Family Foundation. Accessed January 19, 2009, from http://www.kff.org/medicaid/upload/7334-03.pdf.

Kronick, R. G., Bella, M., Gilmer, T. P., & Somers, S. A. (2007, October). *The faces of Medicaid II: Recognizing the care needs of people with multiple chronic conditions*. Hamilton, NJ: Center for Health Care Strategies.

Levit, K. R., Kassed, C. H., Coffey, R. M., Mark, T. L., Stranges, E. M., Buck, J. A., et al. (2008). Future funding for mental health and substance abuse: Increasing burdens for the public sector. *Health Affairs 27*, 513–522.

Mark, T. L., Levit, K. R., Coffey, R. M., McKusick, D. R., Harwood, H. J., King, E. C., et al. (2007). *National expenditures for mental health services and substance abuse treatment, 1993–2003*. SAMHSA Publication No. SMA 07-4227. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Robinson, G., Kaye, N., Bergman, D., Moreaux, M., & Baxter, C. (2005). *State profiles of mental health and substance abuse services in Medicaid*. Washington, DC: Substance Abuse and Mental Health Services Administration.

Schneider, A., Elias, R., Garfield, R., Rousseau, D., & Wachino, W. (2002, July). *The Medicaid resource book*. Washington, DC: Kaiser Commission on Medicaid and the Uninsured.

Shirk, C. (2008, October). *Medicaid and mental health services*. Background Paper No. 66. Washington, DC: National Health Policy Forum.

Short, P. F., & Freedman V. A. (1998, December). Single women and the dynamics of Medicaid. *Health Services Research, 33*.

Smith, V., Gifford, K., Ellis, E., Rudowitz, R., O'Malley, M., & Marks, C. (2008, September). *Headed for a crunch: An update on Medicaid spending, coverage and policy heading into an economic downturn: Results from a 50-state Medicaid budget survey for state fiscal years 2008 and 2009*. Washington, DC: Kaiser Family Foundation.

Verdier, J., Barrett, A., & Davis, S. (2007). *Administration of mental health services by Medicaid agencies*. DHHS Publication No. (SMA) 07-4301. Rockville, MD: Center for Mental Health Services, Substance Abuse and Mental Health Services Administration.

Wenzlow, A., Finkelstein, D., Le Cook, B., Shepperson, K., Yip, C., & Baugh, D. (2007). *The Medicaid analytic eXtract chartbook*. Baltimore, MD: Centers for Medicare & Medicaid Services.

Exhibits 1–7

Medicaid Beneficiaries Using Mental Health or Substance Abuse Services: A National Overview

Exhibit 1
Medicaid Beneficiaries Who Received Mental Health or Substance Abuse Services and Their Medicaid Expenditures (2003)

About 12 percent of Medicaid beneficiaries received mental health or substance abuse services in 2003, accounting for almost 32 percent of total Medicaid expenditures.

Understanding the role of Medicaid in paying for mental health and substance abuse services is important because Medicaid is the largest source of coverage for mental health treatment services in the United States (Levit et al., 2008). Overall, Medicaid covered about 26 percent of all U.S. expenditures for mental health services in 2003 (Mark et al., 2007). Provision of services for substance abuse disorders adds to Medicaid's costs for treating behavioral and physical health problems (Clark, Samnaliev, & McGovern, 2009). Between 2006 and 2014, Medicaid expenditures for mental health and substance abuse services are projected to increase annually by 8.3 percent and 6.2 percent, respectively (Levit et al., 2008).

In 2003, about 11 percent of Medicaid beneficiaries received mental health services, and almost 1 percent received substance abuse services. Together, the Medicaid beneficiaries receiving these services accounted for almost 32 percent of Medicaid spending. These expenditures covered a broad range of services, including inpatient treatment in general and psychiatric hospitals, outpatient care, emergency room care, prescription drugs, physician services, and counseling. Medicaid is especially critical for people with limited income because they have few other options for obtaining mental health care. Policy and program decisions that state Medicaid programs make during the next several years will affect the extent to which beneficiaries can obtain the treatment they need for mental health and substance abuse disorders.

More information on these findings appears in Appendix A, Tables 1 and 2.

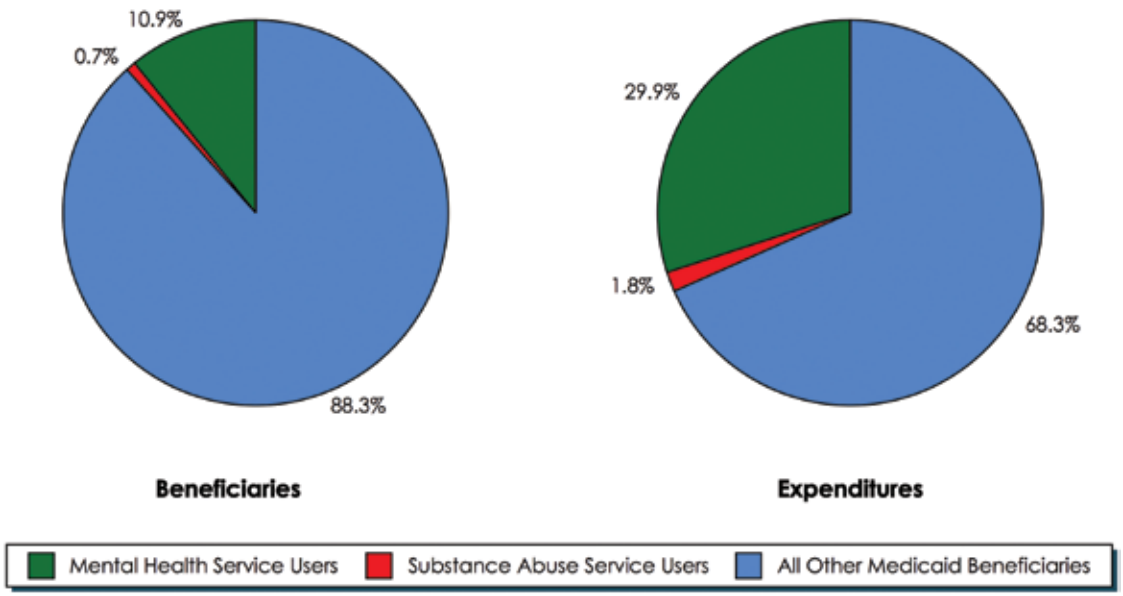
References

Clark, R. E., Samnaliev, M., & McGovern, M. P. (2009, January). Impact of substance disorders on medical expenditures for Medicaid beneficiaries with behavioral health disorders. *Psychiatric Services, 60*(1), 35–42.

Levit, K., Kassed, C., Coffey, R., Mark, T., Stranges, E., Buck, J., et al. (2008, October). Future funding for mental health and substance abuse: Increasing burdens for the public sector. *Health Affairs, 27*(6), 513–522.

Mark, T. L., Levit, K. R., Coffey, R. M., McKusick, D. R., Harwood, H. J., King, E. C., et al. (2007). *National expenditures for mental health services and substance abuse treatment, 1993–2003*. SAMHSA Publication No. SMA 07-4227. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Exhibit 1. Medicaid Beneficiaries Who Used Mental Health or Substance Abuse Services and Their Medicaid Expenditures (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

Note: Appendix A contains summary tables with data from the 13 states included in this exhibit. The 13 states are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming. These states include 23 percent of all beneficiaries enrolled in Medicaid for any length of time in 2003. See Tables 1 and 2. For detailed data tables from all 50 states and the District of Columbia, see the enclosed CD-ROM.

Exhibit 2
Percentage of Inpatient Hospital Days for Mental Health and Substance Abuse Treatment Compared with Other Inpatient Hospital Services Among Medicaid Beneficiaries (2003)

Nearly 27 percent of all inpatient hospital days paid for by Medicaid in 2003 were for mental health and substance abuse treatments.

Understanding patterns of hospital utilization among Medicaid beneficiaries is important because inpatient stays are the third most costly service covered by Medicaid, following nursing facility stays and prescription medications (Wenzlow et al., 2007). Fourteen percent of all Medicaid beneficiaries had at least one inpatient stay in 2003, with an average yearly cost of over $5,000. The likelihood of an inpatient stay was higher among beneficiaries with mental health and substance abuse service use; 18 percent of beneficiaries who used mental health services in 2003 also had an inpatient stay, compared with 33 percent among beneficiaries with substance abuse service use (Appendix A, Table 9A).

In 2003, 27 percent of all inpatient hospital days that Medicaid funded were for mental health and substance abuse services. Treatment for mental health services accounted for nearly 26 percent of all inpatient days and another 1 percent was for treatment of substance abuse disorders. Among days for mental health treatment, 7.9 percent were for treatment in general hospitals and the other 17.7 percent were for treatment in psychiatric hospitals. Treatment in psychiatric hospitals was associated with the longest inpatient stays: 61 days per person-year, on average, compared with 6 to 10 days for all other types of hospitalizations (Appendix A, Table 4).[1]

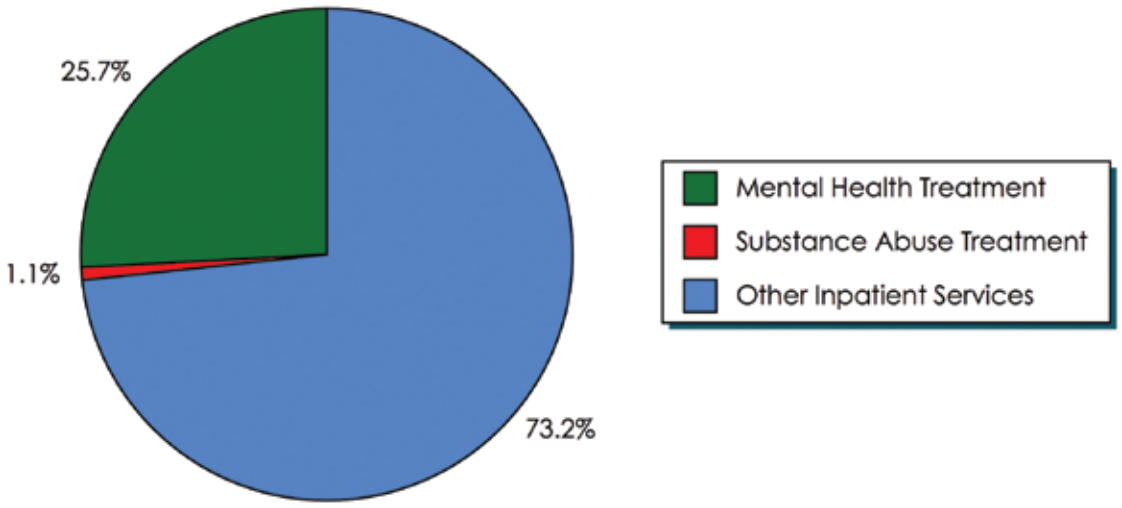
More information on inpatient hospitalizations for mental health and substance abuse treatment appears in Appendix A, Tables 4 and 9A.

[1] The number of person-years that a group of inpatient users represents is the sum of their months enrolled in Medicaid divided by 12. For example, two beneficiaries who each spent 6 months enrolled in Medicaid would represent 1 person-year of utilization and expenditures. Days per person-year are the total number of days that all beneficiaries spend in a specific type of facility, divided by the total number of person-years that those beneficiaries are in Medicaid.

Reference

Wenzlow, A. T., Finkelstein, D., Le Cook, B., Shepperson, K., Yip, C., & Baugh, D. (2007, May). *The Medicaid analytic eXtract chartbook*. Cambridge, MA: Mathematica Policy Research, Inc.

Exhibit 2. Percentage of Inpatient Hospital Days for Mental Health and Substance Abuse Treatment Compared with Other Inpatient Hospital Services Among Medicaid Beneficiaries (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

Note: Appendix A contains summary tables with data from the 13 states included in this exhibit. The 13 states are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming. These states include 23 percent of all beneficiaries enrolled in Medicaid for any length of time in 2003. See Table 4. For detailed data tables from all 50 states and the District of Columbia, see the enclosed CD-ROM.

Exhibit 3
Percentage of Emergency Room Users with Mental Health or Substance Abuse Service Use (2003)

Medicaid beneficiaries who received mental health or substance abuse services at some time during the year accounted for 18 percent of all Medicaid beneficiaries with an emergency room visit.

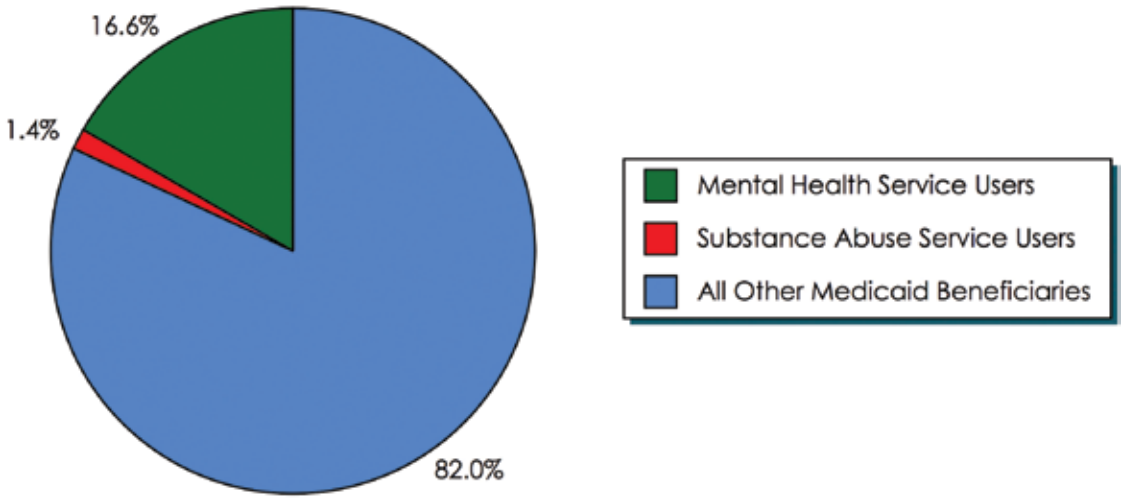
Medicaid beneficiaries who receive mental health or substance abuse services have a wide range of health care needs and are more likely than other Medicaid beneficiaries to use certain types of medical interventions, such as emergency services. In 2003, beneficiaries who used mental health or substance abuse services accounted for 18 percent of all beneficiaries with an emergency room visit, despite making up only 12 percent of all Medicaid beneficiaries. Nearly half of mental health service users and over 60 percent of substance abuse service users visited an emergency room in 2003, compared with less than one-third of all other Medicaid beneficiaries (Appendix A, Table 5).

While mental health and substance abuse service users were more likely to use emergency rooms than other beneficiaries, the majority of their visits were not for mental health or substance abuse treatment (Appendix A, Table 5). For example, beneficiaries with any mental health service use during the year made, on average, a total of 3.52 emergency room visits per person-year in 2003. Of these visits, 2.95 (83.8 percent) were for non-mental health treatment. Similarly, beneficiaries who used substance abuse services during the year had 4.25 emergency room visits per person-year, on average, in 2003, and 3.67 (86.4 percent) were for reasons other than substance abuse treatment. By comparison, beneficiaries who did not receive mental health or substance abuse services in 2003 had 2.54 emergency room visits per person-year.

The fact that a majority of emergency room visits for beneficiaries who received mental health or substance abuse services were for reasons other than mental health or substance abuse treatment suggests that these beneficiaries have other serious health care needs that are not being addressed adequately. It is important to understand their patterns of emergency room use to determine how resources can best be provided to meet their immediate health care needs and reduce the need for emergency care.

More information on emergency room use appears in Appendix A, Table 5.

Exhibit 3. Percentage of Emergency Room Users with Mental Health or Substance Abuse Service Use (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

Note: Appendix A contains summary tables with data from the 13 states included in this exhibit. The 13 states are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming. These states include 23 percent of all beneficiaries enrolled in Medicaid for any length of time in 2003. See Table 5. For detailed data tables from all 50 states and the District of Columbia, see the enclosed CD-ROM.

Exhibit 4
Psychotropic Drug Use Among Medicaid Beneficiaries (2003)

Almost 17 percent of all Medicaid beneficiaries used psychotropic drugs in 2003; of these, almost half used other mental health or substance abuse services.

In 2003, almost 17 percent of all Medicaid beneficiaries used a psychotropic drug, which includes antidepressants, antipsychotics, antianxiety agents, and stimulants (Appendix A, Table 6). The majority of beneficiaries who used mental health services also used a psychotropic medication during the year (70 percent), as did nearly half of beneficiaries with substance abuse service use (46 percent). In comparison, about 10 percent of beneficiaries who did not use mental health or substance abuse services used a psychotropic medication in 2003 (Appendix A, Tables 7A–7C). However, because the latter group made up most of the Medicaid population, only about half of all beneficiaries using psychotropic drugs also used mental health or substance abuse services during the year.

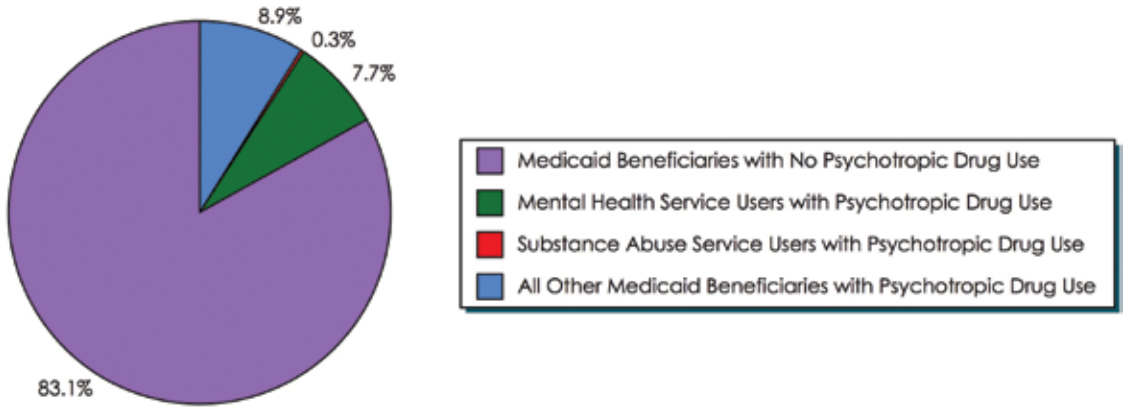
Psychotropic drugs are among the most costly class of medications covered by Medicaid. In 2003, spending on antipsychotic and antidepressant medications alone accounted for more than 19 percent of all Medicaid expenditures for prescription drugs (Bencio, Verdier, Bagchi, & Esposito, 2008). Several states have implemented cost-control mechanisms to reduce spending on these and other classes of medications that make up a disproportionate share of Medicaid spending. It is important to document how these drugs are used, and by whom, to understand how cost containment policies are likely to affect the treatments available to Medicaid beneficiaries.

More information on psychotropic drug use appears in Appendix A, Tables 6 and 7A–7C.

Reference

Bencio, D., Verdier, J. M., Bagchi, A. D., & Esposito, D. (2008, October). *Statistical compendium: Medicaid pharmacy benefit use and reimbursement in 2003*. Princeton, NJ: Mathematica Policy Research, Inc. Available at http://www.cms.hhs.gov/medicaiddatasourcesgeninfo/08_medicaidpharmacy.asp.

Exhibit 4. Psychotropic Drug Use Among Medicaid Beneficiaries (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

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Exhibit 5
Percentage of Medicaid Beneficiaries with Mental Health and Substance Abuse Service Use and Co-Occurring Costly Physical Conditions (2003)

Beneficiaries with mental health and substance abuse service use are more likely than other Medicaid beneficiaries to have one or more costly co-occurring physical health conditions.

Identifying the types of physical comorbidities that are common among Medicaid beneficiaries with mental health and substance abuse service use is important for understanding the patterns of inpatient and emergency room use that these beneficiaries experience. This information can also assist in developing programs to improve utilization of preventive care services and reduce the need for more costly health interventions.

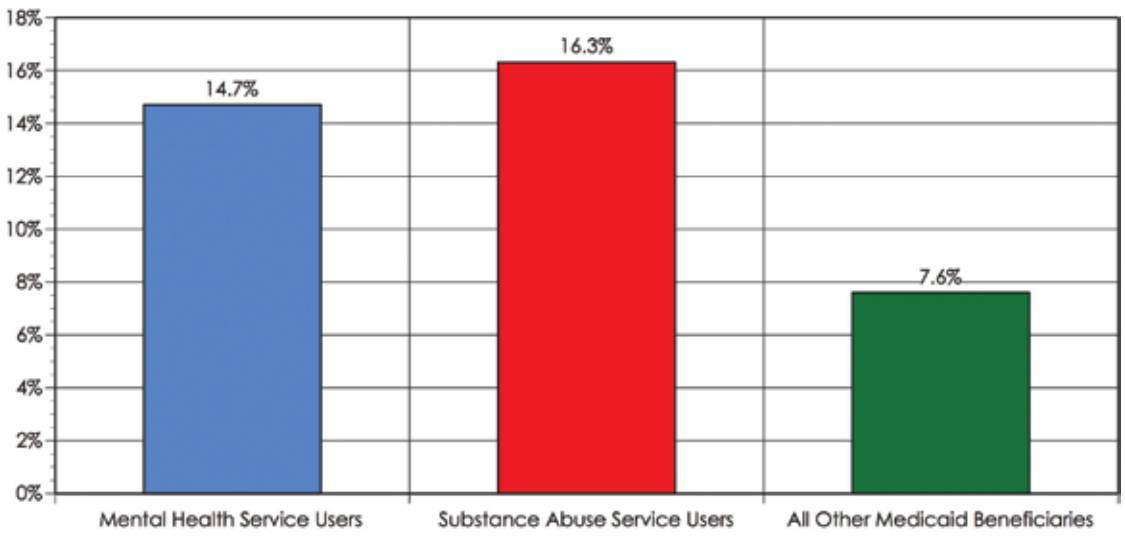
Beneficiaries with mental health or substance abuse service use are more likely than other Medicaid beneficiaries to have co-occurring costly physical conditions, as defined by the Chronic Illness and Disability Payment System (CDPS) (Kronick, Gilmer, Dreyfus, & Lee, 2000).[1] Nearly 8 percent of all Medicaid beneficiaries had one or more costly co-occurring conditions in 2003, compared with 14.7 percent of beneficiaries with mental health service use and 16.3 percent among those with substance abuse service use.

Although the percentages varied considerably by age group (Appendix A, Table 8), cardiovascular problems were the most common costly conditions among mental health service users who had at least one costly physical condition (29 percent), followed by renal disorders (24 percent) and diabetes (21 percent). Among beneficiaries who received substance abuse services in 2003 and had at least one costly condition, gastrointestinal disorders were the most common (32 percent), followed by cardiovascular (24 percent) and pulmonary conditions (22 percent).

More information on costly physical conditions among Medicaid beneficiaries with and without mental health service use appears in Appendix A, Table 8.

[1] Costly physical conditions were identified using the diagnoses classified as "medium," "high," or "very high" cost in the Chronic Illness and Disability Payment System (CDPS), but they do not include diagnoses identified as "low" or "very low" cost or diagnoses in the "psychiatric" or "substance abuse" categories. For example, diabetes includes all type I diabetes but type II diabetes only with complications. Cardiovascular disease includes congestive heart failure, cardiomyopathy, and heart transplants, but not hypertension, coronary atherosclerosis, or myocardial infarction. Renal disease includes acute or chronic renal failure but not kidney infections or kidney stones. For more information on the CDPS, see Kronick et al. (2000) as noted above.

Exhibit 5. Percentage of Medicaid Beneficiaries with Mental Health and Substance Abuse Service Use and Co-Occurring Costly Physical Conditions (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

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Reference

Kronick, R., Gilmer, T., Dreyfus, T., & Lee, L. (2000, Spring). Improving health-based payment for Medicaid beneficiaries: CDPS. *Health Care Financing Review, 21*(3), 29–64.

Exhibit 6
Average Monthly Expenditures for Medicaid Beneficiaries With and Without Co-Occurring Costly Physical Conditions (2003)

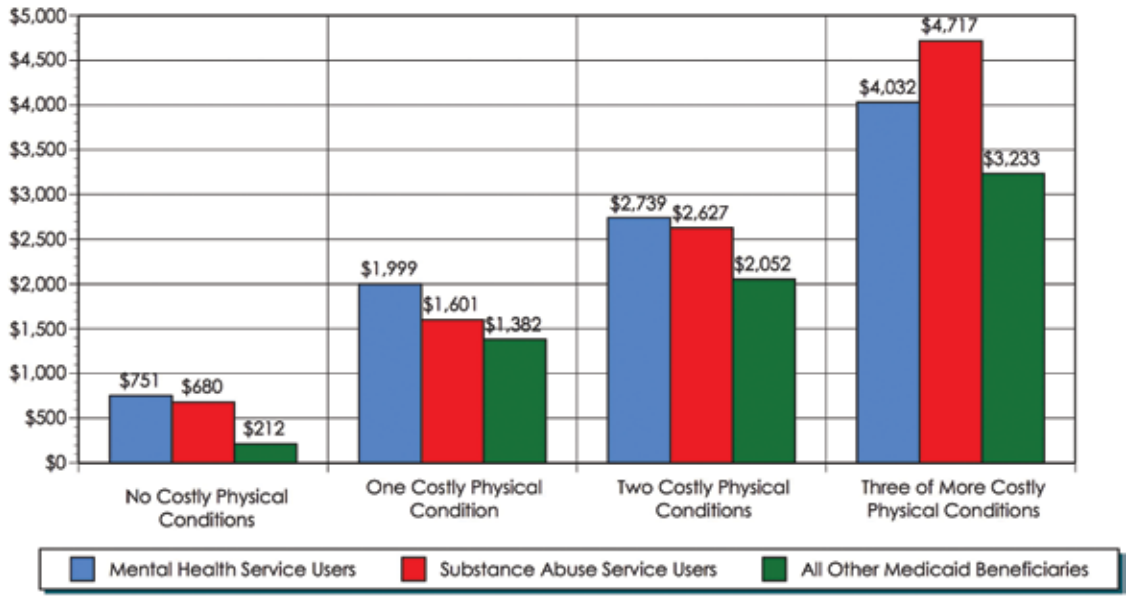
Medicaid beneficiaries who receive mental health or substance abuse services and who have costly co-occurring physical conditions have higher average monthly expenditures than beneficiaries with costly physical conditions alone.

Understanding how the presence of costly co-occurring physical conditions affects Medicaid spending can help policymakers determine how best to prioritize and allocate resources. Addressing the needs of beneficiaries with multiple physical and mental health conditions has the potential for substantially improving their quality of life and reducing overall Medicaid spending.

In the absence of costly physical conditions, average monthly expenditures were about three to four times lower for Medicaid beneficiaries who did not use mental health or substance use services compared with those who used mental health or substance abuse services ($212 versus $751 and $680, respectively). As the number of costly co-occurring physical conditions increases, average monthly expenditures grow substantially for all beneficiaries but remain higher for those who receive mental health or substance abuse services. For example, average monthly expenditures for mental health service users are 2.7 times higher in the presence of one costly co-occurring condition (that is, $751 for beneficiaries without a co-occurring condition, compared with $1,999 for beneficiaries with one condition). Average monthly expenditures are greatest among substance abuse service users with three or more costly co-occurring conditions ($4,717), but these figures represent only 2.1 percent of all beneficiaries with substance abuse service use (Appendix A, Table 8).

More information on the average expenditures for beneficiaries with costly physical conditions appears in Appendix A, Table 8.

Exhibit 6. Average Monthly Expenditures for Medicaid Beneficiaries With and Without Co-Occurring Costly Physical Conditions (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

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Exhibit 7
Percentage of Medicaid Beneficiaries Using the Five Most Common Types of Services (2003)

Medicaid beneficiaries who received mental health or substance abuse services in 2003 had substantially higher rates of use of the most common types of Medicaid-covered services than other beneficiaries.

Compared with other Medicaid beneficiaries, those with mental disorders have higher risks for other health conditions, which tend to complicate their health care needs (Dickey, Normand, Weiss, Drake, & Azeni, 2002; Jones, Macias, Barreira, Fisher, Hargreaves, & Harding, 2004). Documenting the patterns of service utilization of these beneficiaries can assist policymakers in deciding how to allocate resources to more efficiently address their service needs.

The five most commonly used types of services paid for by Medicaid in 2003 were prescription drugs, physician services, lab and X-ray services, outpatient hospital services, and dental services. For all these services, beneficiaries with mental health and substance abuse service use had significantly higher utilization rates than other Medicaid beneficiaries. For example, while nearly 91 percent of mental health service users and around 83 percent of substance abuse service users used a prescription drug in 2003, only 62 percent of other Medicaid beneficiaries did so.

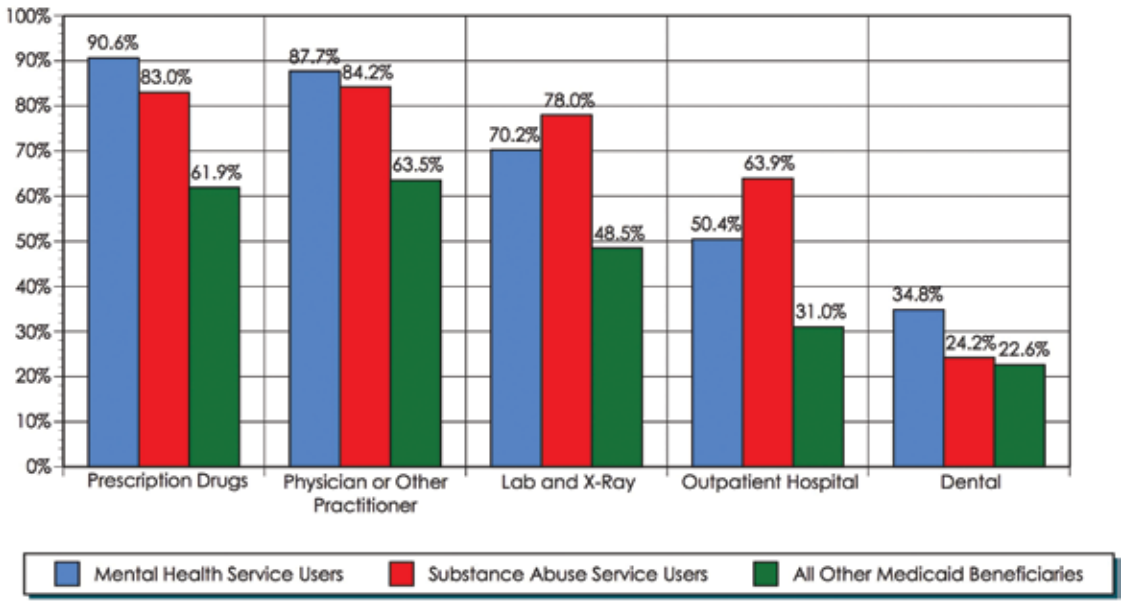
More information on usage patterns by type of service appears in Appendix A, Table 9A.

References

Dickey, B., Normand, S. T., Weiss, R. D., Drake, R. E., & Azeni, H. (2002, April). Medical morbidity, mental illness, and substance use disorders. *Psychiatric Services, 53*(7), 861–867.

Jones, D. R., Macias, C., Barreira, P. J., Fisher, W. H., Hargreaves, W. A., & Harding, C. M. (2004, November). Prevalence, severity, and co-occurrence of chronic physical health problems of persons with serious mental illness. *Psychiatric Services, 55*(11), 1250–1257.

Exhibit 7. Percentage of Medicaid Beneficiaries Using the Five Most Common Classes of Services (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

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Exhibits 8–14

Medicaid Beneficiaries Aged 0 Through 21

Exhibit 8
Medicaid Beneficiaries Aged 0 Through 21 Who Used Mental Health or Substance Abuse Services and Their Medicaid Expenditures (2003)

Just over 9 percent of Medicaid beneficiaries aged 0 through 21 used mental health or substance abuse services in 2003, but they accounted for almost 33 percent of total Medicaid expenditures for that age group.

In 2003, 9 percent of Medicaid beneficiaries aged 0 through 21 used mental health services, and 0.3 percent used substance abuse services. Together, these beneficiaries accounted for almost 33 percent of total Medicaid spending in this age group, with substance abuse service users accounting for about 1 percent of the expenditure total.

Although there is substantial evidence that many children who have mental disorders do not receive appropriate services, inadequate national prevalence estimates for mental disorders in children make it difficult to precisely assess treatment needs and develop effective programs; as a result, Medicaid's role in this larger national context is hard to determine. Nonetheless, Medicaid's contribution to meeting the needs of children with mental disorders is critically important because half of all adults with mental disorders report onset of their conditions by age 14, and three-quarters by age 24 (Kessler, Chiu, Demler, & Walters, 2005).

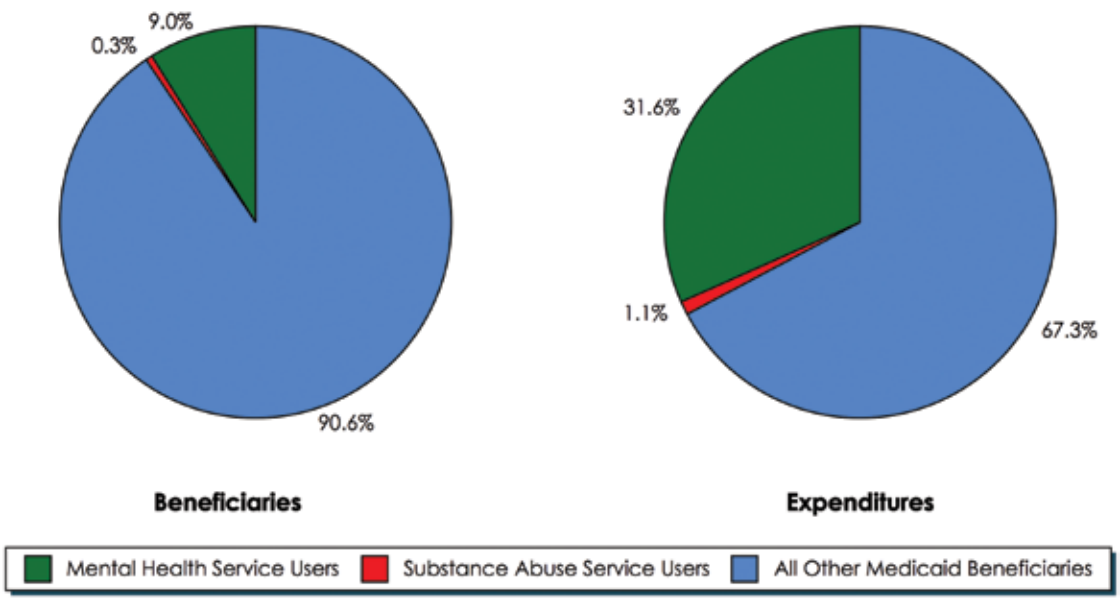
More research is needed to understand the factors related to the total Medicaid costs of services for mental health and substance abuse service users. Expenditures associated directly with the receipt of mental health and substance abuse treatment may partly explain the disproportionate share of Medicaid spending on beneficiaries who used mental health and substance abuse services. However, other factors such as differences in demographic characteristics, general health status, and use of inpatient services, emergency rooms, and prescription medications are likely to be important contributing factors to their higher overall costs.

More information on the number of beneficiaries with mental health and substance abuse service use appears in Appendix A, Tables 1 and 2.

Reference

Kessler, R. C., Chiu, W. T., Demler, O., & Walters, E. E. (2005, June). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey replication. *Archives of General Psychiatry, 62*.

Exhibit 8. Medicaid Beneficiaries Aged 0 Through 21 Who Used Mental Health or Substance Abuse Services and Their Medicaid Expenditures (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

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Exhibit 9
Age Distribution of All Medicaid Beneficiaries Aged 0 Through 21 Compared with Beneficiaries Who Used Mental Health Services (2003)

Eighty-one percent of Medicaid beneficiaries aged 21 or younger who received mental health services in 2003 were between the ages of 6 and 18, although only 53 percent of all Medicaid beneficiaries were in this age group.

It is important to understand the age distribution of children who use mental health services because it may reflect how mental disorders are identified and diagnosed within the Medicaid population.[1] Compared with all children under age 22 who were covered by Medicaid, those who used mental health services during the year were substantially more likely to be of school age. Children aged 6–18 made up 53 percent of all Medicaid beneficiaries under the age of 22, but made up 81 percent of beneficiaries using mental health services. This percentage reflects the high need for mental health services by Medicaid-enrolled children (Katoka, Zhang, & Wells, 2002).

Despite substantial use of mental health services, school-aged Medicaid beneficiaries still have many unmet needs. Reasons for the gap between need and use include a failure by beneficiaries and their parents to recognize mental health service needs and seek care, and difficulties in accessing services and using them with the appropriate intensity and continuity even when the need is recognized (Bronstein, 2008). As a result of these factors, as well as differences by state in Medicaid eligibility requirements, there are wide variations in Medicaid mental health service use among children in different states (Howell & Teich, 2008).

More information on the characteristics of beneficiaries with and without mental health service use appears in Appendix A, Tables 1 and 2.

[1] Children are eligible for two major types of service not available to adults: the Early and Periodic Screening and Diagnostic Treatment program (EPSDT), which is available to children through age 20, and inpatient psychiatric services at institutes for mental disease (IMDs), which is available to children through age 21. Because this chart book focuses on mental health service use (including services provided through IMDs), we define children as beneficiaries aged 0 through 21.

References

Bronstein, J. M. Policy levers that improve low income children's access to mental health services. (2008, June). *Medical Care, 46*(2), 555–557.

Howell, E. B., & Teich, J. (2008). Variations in Medicaid mental health service use and cost for children. *Administration and Policy in Mental Health, 35*, 220–228.

Katoka, S. H., L. Zhang, L., & Wells, K. B. (2002). Unmet need for mental health care among U.S. children: Variation by ethnicity and insurance status. *American Journal of Psychiatry, 159*, 1548–1555.

Exhibit 9. Age Distribution of All Medicaid Beneficiaries Aged 0 Through 21 Compared with Beneficiaries Who Used Mental Health Services (2003)

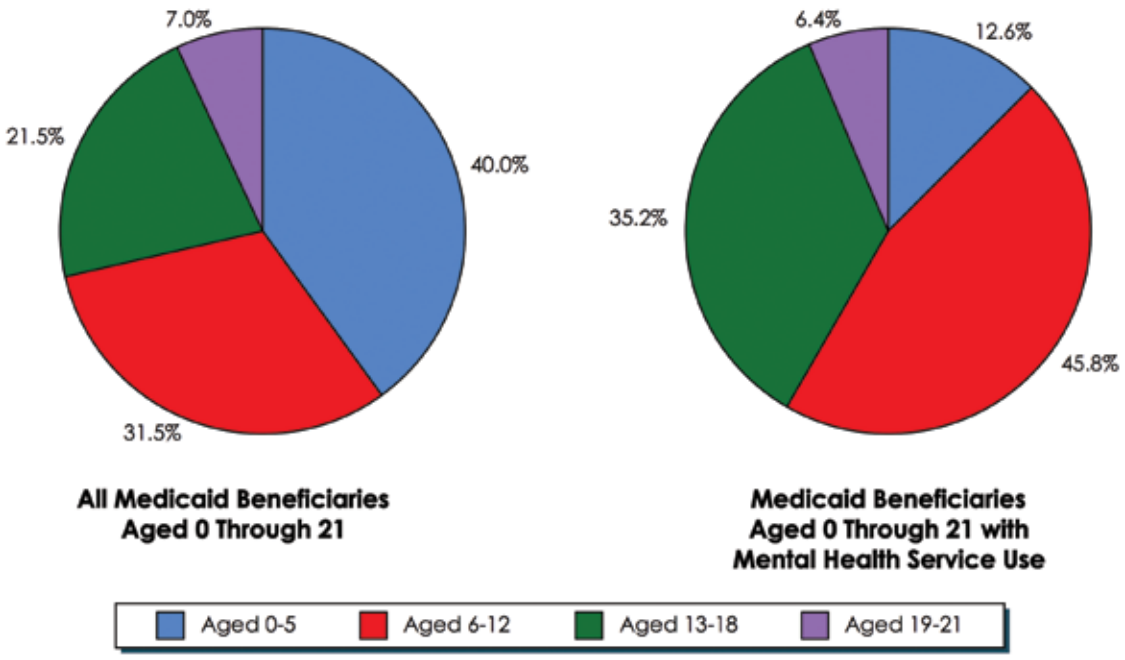

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Exhibit 10
Primary Diagnoses of Medicaid Beneficiaries Aged 0 Through 21 Who Used Mental Health Services (2003)

Of children aged 0 through 21 who used mental health services, over 53 percent were diagnosed with either hyperkinetic syndrome or stress and adjustment reactions as their primary diagnosis.

The prevalence and type of mental disorders among school-aged children varies by age. One study of 6- to 16-year-olds found that mental disorders tend to increase between ages 12 and 15 and that social anxiety, panic disorders, and depression are more common among older adolescents; whereas, separation anxiety and attention deficit and hyperactivity disorders (ADHD) are more common among young school-age children (Costello, Mustill, Erhkanli, Keeler, & Angold, 2003). Understanding the distribution of specific disorders in childhood is important in helping states to better target their spending on mental health services.

In the 13 states used for this chart book, approximately 36 percent of mental health service users aged 0 through 21 were diagnosed with a hyperkinetic syndrome disorder, which includes attention deficient disorder and other disorders characterized by the inability to focus attention for a normal period of time. Eighteen percent were diagnosed with a stress or adjustment reaction disorder, which includes acute reaction to stress, depressive reaction, and separation anxiety. Fourteen percent were diagnosed with a neurotic or other depressive disorder (including general anxiety, hysteria, obsessive-compulsive disorders, and neurotic depression).

More information on the most frequent diagnoses of mental health service users appears in Appendix A, Table 3.

Reference

Costello, E. J., Mustill, S., Erhkanli, A., Keeler, G., & Angold, A. (2003, August). Prevalence and development of psychiatric disorders in childhood and adolescence. *Archives of General Psychiatry, 60*.

Exhibit 10. Primary Diagnoses of Medicaid Beneficiaries Aged 0 Through 21 Who Used Mental Health Services (2003)

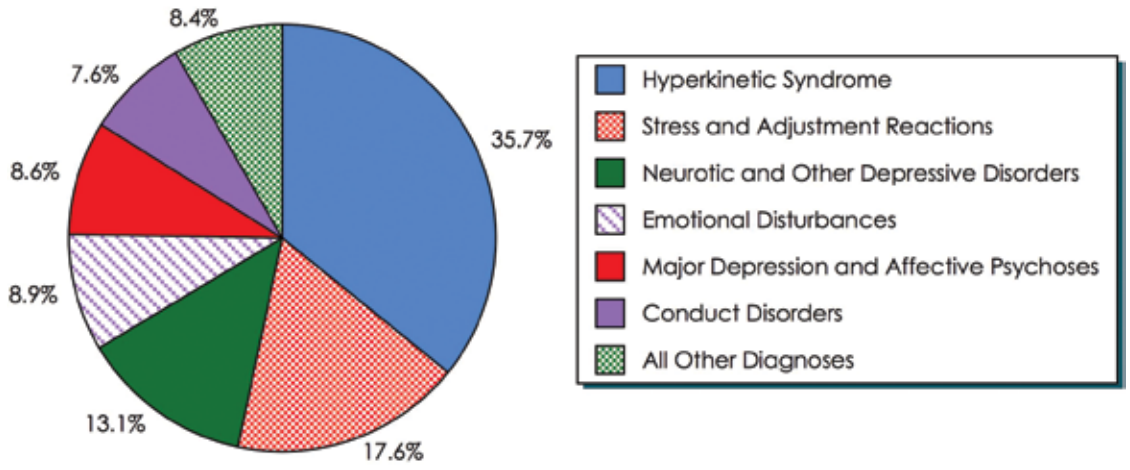

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Exhibit 11
Most Common Costly Physical Conditions Among Mental Health Service Users and All Medicaid Beneficiaries Aged 0 Through 21 (2003)

Although costly co-occurring physical conditions were uncommon among Medicaid beneficiaries aged 0 through 21, these conditions were more common among children who used mental health services in 2003 than in the overall population of beneficiaries in this age group.

Overall, 3 percent of mental health service users under the age of 22 had a costly physical condition in 2003, compared with fewer than 2 percent of all children in Medicaid. Fewer than 1 percent of children had any single costly physical condition. Pulmonary conditions such as bacterial pneumonia, chronic obstructive asthma, and cystic fibrosis were the most common costly co-occurring conditions, occurring for 7 or 8 out of every 1,000 children. Regardless of the type of costly physical condition, mental health service users were more likely to have such a condition than all beneficiaries in the age group combined.

Very little information has previously been available on the co-occurrence of mental health and physical health conditions among children in Medicaid. Using data from 1999 and 2000, Irvin and Johnson (2007) estimated that among the population of Medicaid beneficiaries aged 0 through 20 with identifiable chronic conditions, approximately 13 percent had co-occurring mental and physical health conditions. Identifying the needs of children with these co-occurring disorders is important in ensuring adherence to treatments and in designing programs that can more efficiently provide care (Bronstein, 2008; Howell & Teich, 2008).

More information on costly physical conditions appears in Appendix A, Table 8.

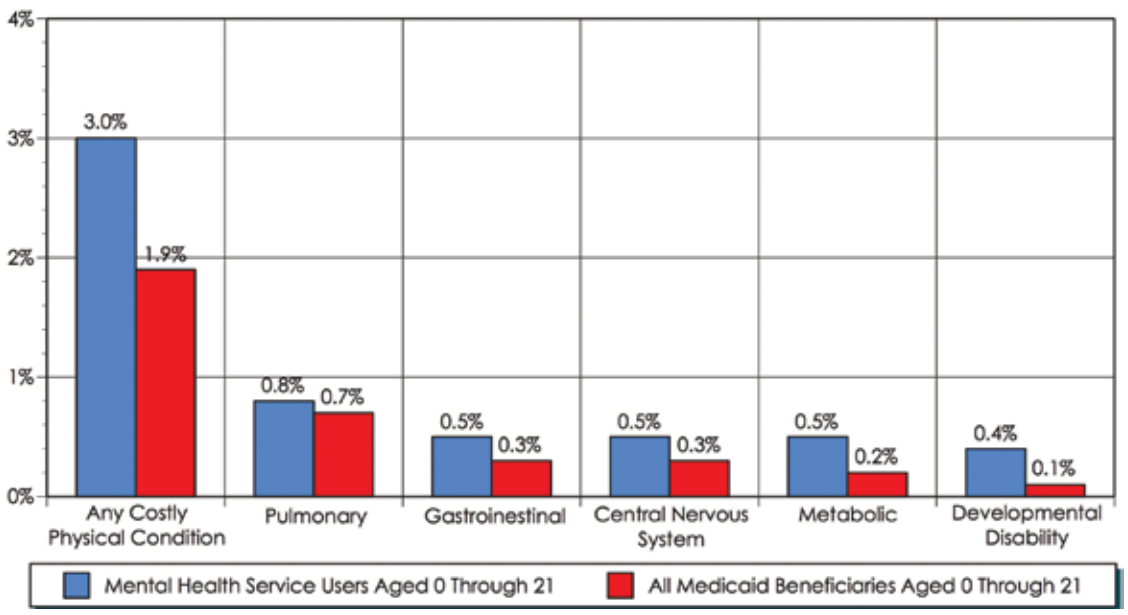
References

Bronstein, J. M. (2008, June). Policy levers that improve low income children's access to mental health services. *Medical Care, 46*(2) 555–557.

Howell, E. B., & Teich, J. (2008). Variations in Medicaid mental health service use and cost for children. *Administration and Policy in Mental Health, 35*, 220–228.

Irvin, C. V., & Johnson, C. (2007, March 16). *Medicaid populations with chronic and disabling conditions: A compilation of data on their characteristics, health conditions, service use, and Medicaid payments*. Mathematica Policy Research, Inc., Cambridge, MA.

Exhibit 11. Most Common Costly Physical Conditions Among Mental Health Service Users and All Medicaid Beneficiaries Aged 0 Through 21 (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

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Exhibit 12
Inpatient Hospital Days Among Medicaid Beneficiaries Aged 0 Through 21 Who Used Mental Health Services (2003)

Over 80 percent of inpatient hospital days for Medicaid beneficiaries aged 0 through 21 who used mental health services were for mental health treatment rather than for treatment of other conditions.

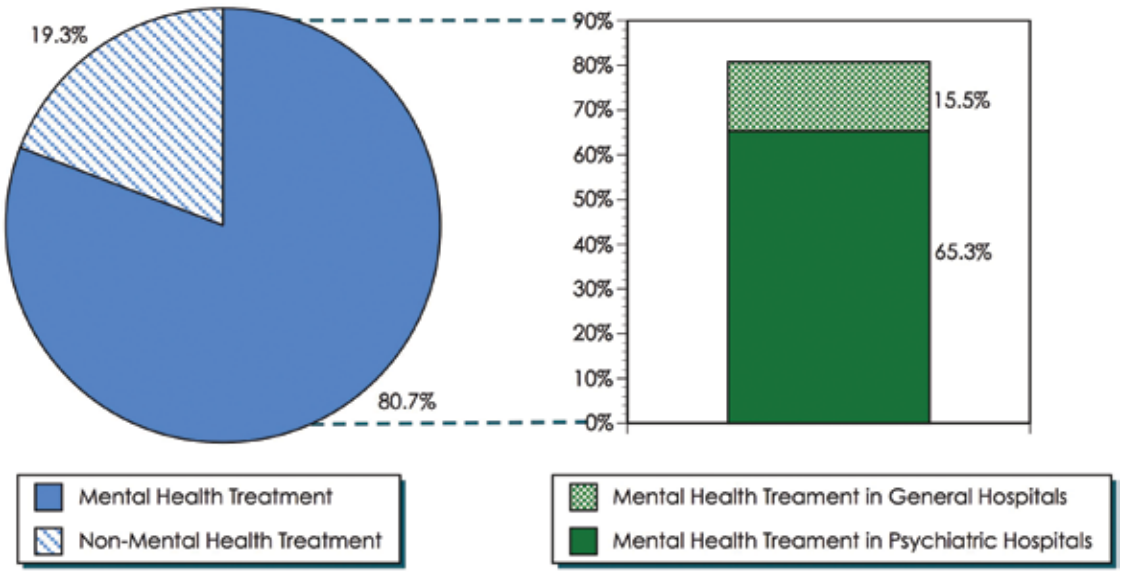
By law, all Medicaid programs must provide inpatient services to beneficiaries who are eligible for the full array of program benefits. Medicaid programs place few limits on general inpatient services, and Medicaid inpatient benefits are typically more generous than what is available through employer-based plans. However, states commonly place limits on the number of days and require prior authorizations for inpatient psychiatric services, though these limits are less stringent for children than for other Medicaid beneficiaries (Robinson et al., 2005). Documenting patterns of inpatient hospitalizations for children can help states anticipate the need for these services and provide them in a cost-efficient manner.

Children aged 0 through 21 who received mental health services through Medicaid were slightly less likely to use inpatient hospital services than all Medicaid beneficiaries in the age group (9 percent versus 10 percent, respectively; Appendix A, Table 9B). However, for those mental health service users who did have a hospital stay, over 80 percent of the inpatient days were for mental health treatment. The vast majority of these days were provided in specialized psychiatric hospitals. Although a small percentage (3 percent) received treatment in a specialized psychiatric hospital, these individuals spent on average 47 days receiving treatment (Appendix A, Table 4). In comparison, the 4 percent of individuals who received inpatient mental health treatment in a general hospital spent on average 9 days receiving treatment.

The pattern of hospital use in this exhibit contrasts strikingly with that in Exhibit 19, which shows inpatient hospital use for mental health service users aged 22 through 64: 34 percent of the inpatient days for these adults were for mental health treatment, compared with over 80 percent for the 0-through-21 age group. The main reason for this pattern is that Medicaid provides states with an option for covering psychiatric hospital care for children (often in freestanding psychiatric hospitals referred to as "institutions for mental diseases"), whereas no such option exists for adults. Most states have elected to cover psychiatric hospital care for children (Geller, 2000). Another reason is that children who are Medicaid beneficiaries are usually healthier than adult beneficiaries, many of whom are eligible for Medicaid because of a disability. As a result, children's overall use of inpatient hospital services for all conditions is lower.

More information on inpatient hospitalizations for mental health service users appears in Appendix A, Tables 4 and 9B.

Exhibit 12. Inpatient Hospital Days Among Medicaid Beneficiaries Aged 0 Through 21 Who Used Mental Health Services (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

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References

Draper, D. A., McHugh, M. C., Achman, L. & Kuo, S. (2003). *Medicaid financing of state and county psychiatric hospitals*. HHS Pub. No. (SMA) 03-3830. Rockville, MD: Center for Mental Health Services, Substance Abuse and Mental Health Services Administration.

Geller, J. L. (2000, November). Excluding institutions for mental diseases from Federal reimbursement for services: Strategy or tragedy? *Psychiatric Services, 51*(11), 1397–1403.

Robinson, G., Kaye, N., Bergman, D., Moreaux, M., & Baxter, C. (2005). *State profiles of mental health and substance abuse services in Medicaid*. SAMHSA Publication No. SMA 05-4111. Rockville, MD.

Exhibit 13
Medicaid Beneficiaries Aged 0 Through 21 with an Emergency Room Visit and Their Average Number of Visits per Person-Year (2003)

Medicaid beneficiaries aged 0 through 21 who received mental health services during the year were more likely than other beneficiaries in this age group to have an emergency room visit, but their average number of visits was nearly equal.

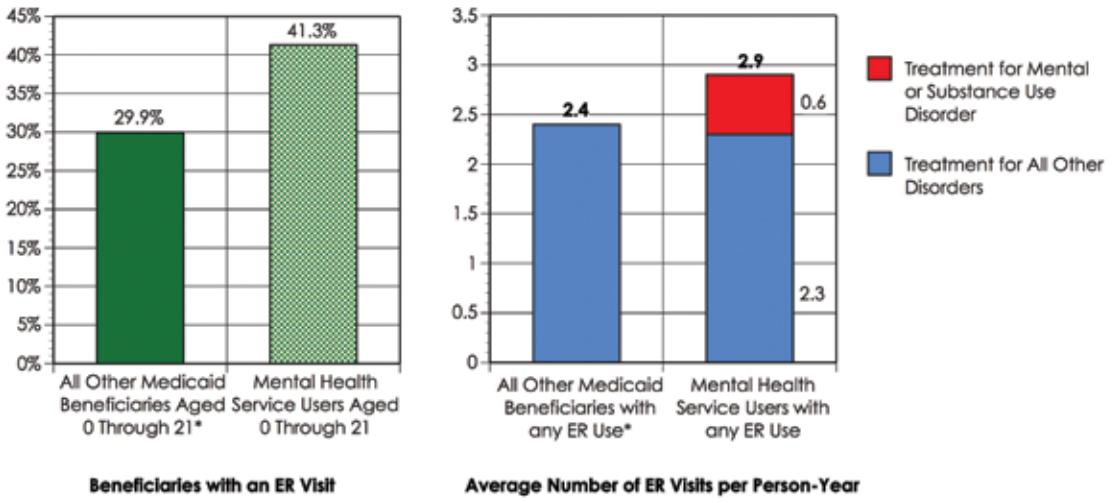
More than 41 percent of children who received mental health services in 2003 had an emergency room visit, compared with 30 percent of other beneficiaries in this age group. Among children using mental health services, those who visited the emergency room made about three visits per person-year, not all of which were for mental health treatment. Visits for mental health treatment were less than one visit per person-year (0.6 visits). Children who used mental health services and all other children made a similar number of visits to the emergency room to obtain other types of treatment (2.3 compared with 2.4 visits per person-year).

Since the mid-1990s, child mental health-related visits to emergency rooms have increased substantially (Cooper & Masi, 2007). Many hospital emergency departments are ill-equipped to diagnose and handle mental health disorders in children, contributing to long delays in completing psychiatric evaluations as well as inappropriate hospitalizations, lack of family involvement in decisionmaking, and little coordination with community-based services (Christodulu, Lichenstein, Weist, Shafer, & Simone, 2002; Grupp-Phelan, Harman, & Kelleher, 2007).

A similar pattern of greater use of emergency rooms by mental health service users also appears in Exhibit 20, which shows emergency room use by beneficiaries aged 22 through 64. This pattern may reflect, in part, reluctance on the part of emergency room personnel to assign a mental illness diagnosis when physical conditions are sufficient to justify the visit. It also may indicate that mental health conditions are leading to behaviors that produce injuries requiring emergency room treatment. More research is needed to determine the validity of these hypotheses.

Additional information on emergency room use appears in Appendix A, Table 5.

Exhibit 13. Medicaid Beneficiaries Aged 0 Through 21 with an Emergency Room Visit and Their Average Number of Visits per Person-Year (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

Note: Appendix A contains summary tables with data from the 13 states included in this exhibit. The 13 states are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming. These states include 23 percent of all beneficiaries enrolled in Medicaid for any length of time in 2003. See Tables 1, 2, and 5. For detailed data tables from all 50 states and the District of Columbia, see the enclosed CD-ROM.

* All Other Medicaid Beneficiaries excludes mental health and substance abuse service users.

References

Christodulu, K. V., Lichenstein, R., Weist, M., Shafer, M., & Simone, M. (2002). Psychiatric emergencies in children. *Pediatric Emergency Care, 18*, 268–270.

Cooper, J., & Masi, R, (2007). *Child and youth emergency mental health care: A national problem*. Unclaimed Children Revisited, Issue Brief No. 1. New York, NY: National Center for Children in Poverty, Columbia University.

Grupp-Phelan, J., Harman, J., & Kelleher, K. (2007). Trends in mental health and chronic conditions visits by children presenting for care at U.S. emergency departments. *Public Health Reports, 122*(1), 55–61.

Exhibit 14
Use of Psychotropic Medications by Medicaid Mental Health Service Users Aged 0 Through 21, by Diagnosis (2003)

Rates of psychotropic drug use among mental health service users aged 0 through 21 varied substantially by diagnosis and drug type, with use of stimulants for those diagnosed with hyperkinetic syndrome being especially high.

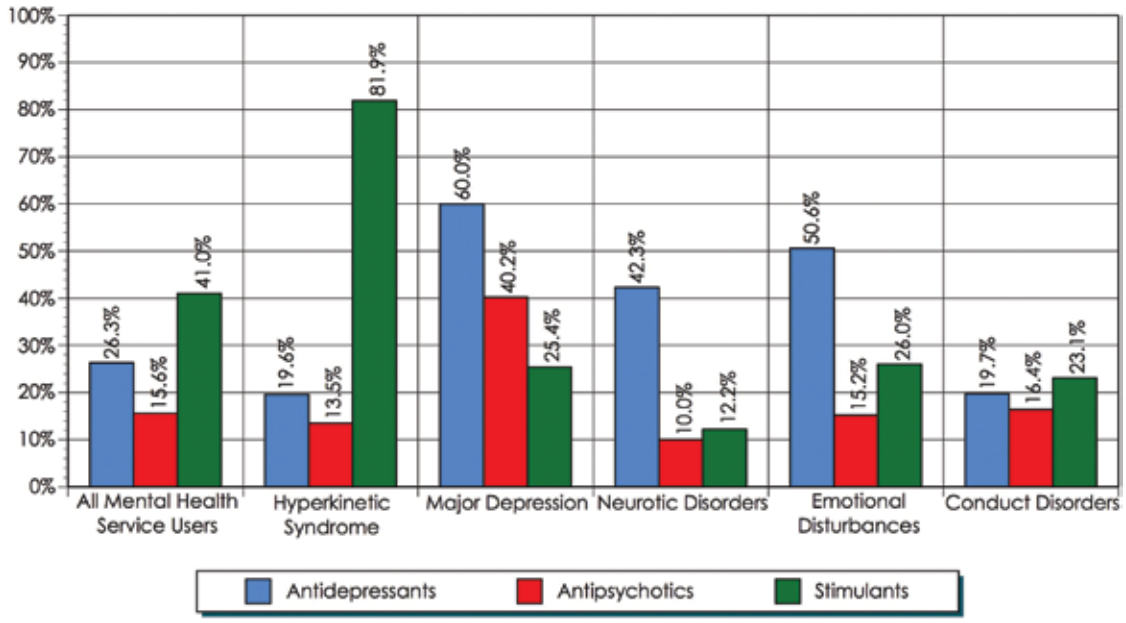
Nearly 60 percent of Medicaid beneficiaries aged 0 through 21 who used mental health services in 2003 received a psychotropic medication that year, and almost 23 percent received more than one type of psychotropic medication (Appendix A, Table 7A). (Psychotropic medications include antidepressants, antipsychotics, antianxiety agents, and stimulants.) In comparison, only 4 percent of beneficiaries who did not receive mental health or substance abuse treatment during the year used psychotropic drugs. Among those with hyperkinetic syndrome, the most common mental disorder for children in Medicaid, 85 percent received a psychotropic medication and 27 percent received multiple types of psychotropic medications (Appendix A, Table 7A). Stimulants were the most commonly prescribed psychotropic drug for this condition, with 82 percent of beneficiaries diagnosed with hyperkinetic syndrome receiving some type of stimulant. About one in five beneficiaries with this condition received an antidepressant.

Beneficiaries with major depression and affective psychoses also received prescriptions for psychotropic medications at high rates. Three-quarters received at least one such prescription, and 44 percent received multiple types of psychotropic drugs (Appendix A, Table 7A). This group of beneficiaries most frequently received antidepressants (60 percent), but 40 percent received antipsychotics and a quarter received stimulants. Antidepressants were also frequently prescribed to beneficiaries with neurotic and other depressive disorders, with 42 percent receiving an antidepressant. About 40 percent of beneficiaries receiving treatment for emotional disturbances or conduct disorders received prescriptions for psychotropic medications. About 25 percent received stimulants while 20 percent received antidepressants.

Overall, prescription drug use was unusually high among children who used mental health services. Among all Medicaid beneficiaries aged 0 through 21, 65 percent filled a prescription in 2003, compared with 88 percent among children with mental health service use (Appendix A, Table 9B). Prescription of psychotropic medications to children has become more common, but more research is needed to determine the reasons for these prescriptions and the appropriateness of such treatments (Zito, Safer, dosReis, Gardner, Soeken, Boles, et al., 2002; Goodwin, Gould, Blanco, & Olfson, 2001).

More information on psychotropic drug use by beneficiaries aged 0–21 appears in Appendix A, Tables 6 and 7A.

Exhibit 14. Use of Psychotropic Medications by Medicaid Mental Health Service Users Aged 0 Through 21, by Diagnosis (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

Note: Appendix A contains summary tables with data from the 13 states included in this exhibit. The 13 states are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming. These states include 23 percent of all beneficiaries enrolled in Medicaid for any length of time in 2003. See Table 7A. For detailed data tables from all 50 states and the District of Columbia, see the enclosed CD-ROM.

References

Goodwin, R., Gould, M. S., Blanco, C., & Olfson, M. (2001, August). Prescription of psychotropic medications to youths in office-based practice. *Psychiatric Services, 52*(8).

Zito, J. M., Safer, D. J., dosReis, S., Gardner, J. F., Soeken, K., Boles, et al. (2002, May). Rising prevalence of antidepressants among U.S. youths. *American Academy of Pediatrics, 109*(5).

Exhibits 15–21

Medicaid Beneficiaries Aged 22 Through 64

Exhibit 15
Medicaid Beneficiaries Aged 22 Through 64 Who Used Mental Health or Substance Abuse Services and Their Medicaid Expenditures (2003)

Nearly one in five working-age Medicaid beneficiaries received mental health or substance abuse services in 2003.

Over 18 percent of adult Medicaid beneficiaries aged 22 through 64 received services for a mental health or substance abuse disorder in 2003. Most of those beneficiaries (16.5 percent) received mental health services, while about 2 percent received substance abuse services. The lower percentage of adults with substance abuse service use likely reflects the fact that many state Medicaid programs cover fewer substance abuse services than mental health services (Robinson et al., 2005).

The share of expenditures for beneficiaries who received mental health or substance abuse services was disproportionate to their share of the population. Although they represent 18 percent of the Medicaid population aged 22 through 64, these beneficiaries accounted for 38 percent of total Medicaid expenditures for this age group. This high level of spending is due to the type and intensity of services received, but it also reflects that these beneficiaries were enrolled in Medicaid for more months in 2003. On average, in 2003, users of mental health services were enrolled for 10.5 months and users of substance abuse services were enrolled for 9.8 months. In contrast, all other adults were enrolled for an average of 8.2 months.

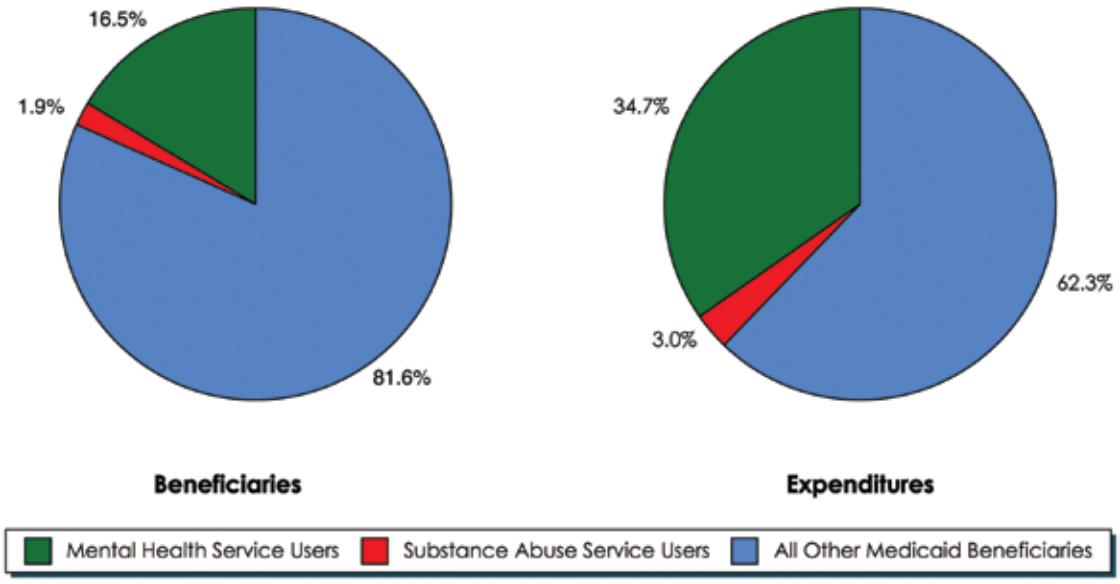
Adult beneficiaries aged 22 through 64 make up almost half of all Medicaid beneficiaries who used mental health and substance abuse services (Appendix A, Table 2). Among mental health service users, 41 percent are between age 22 and 64, while among substance abuse service users, 70 percent are between 22 and 64. Because the diagnoses and service needs vary so much between children and adults, it is important to look separately at patterns of mental health and substance abuse service use for this adult age group to help state Medicaid programs identify populations with unmet needs and develop programs for efficient program spending.

More information on the number of beneficiaries with mental health service use appears in Appendix A, Tables 1 and 2.

Reference

Robinson, G., Kaye, N., Bergman, D., Moreaux, M., & Baxter, C. (2005). *State profiles of mental health and substance abuse services in Medicaid.* SAMHSA Publication No. SMA 05-4111. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Exhibit 15. Medicaid Beneficiaries Aged 22 Through 64 Who Used Mental Health or Substance Abuse Services and Their Medicaid Expenditures (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

Note: Appendix A contains summary tables with data from the 13 states included in this exhibit. The 13 states are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming. These states include 23 percent of all beneficiaries enrolled in Medicaid for any length of time in 2003. See Tables 1 and 2. For detailed data tables from all 50 states and the District of Columbia, see the enclosed CD-ROM.

Exhibit 16

Proportion of Adult Medicaid Beneficiaries with Mental Health Service Use and Their Total Expenditures, by Basis of Eligibility (2003)

Adults who qualify for Medicaid due to disability are over three times as likely to use mental health services as adults who qualify due to family status.

The adult Medicaid population can be broadly divided into those who are eligible for the program due to disability and those who are eligible because they care for dependent children. The prevalence of mental illness is quite different between the two populations. Twenty-seven percent of all beneficiaries who qualify for Medicaid due to disability received mental health services in 2003. In comparison, fewer than 9 percent of adults who qualified due to family status received mental health services. In both populations, the average expenditures associated with beneficiaries who received mental health treatment were higher than for other beneficiaries. The higher rates of mental health service use among disabled beneficiaries—usually individuals who qualify for Supplementary Security Income (SSI)—are a reflection of the fact that about one-third of SSI recipients nationally are eligible due to a mental illness (Kochar & Scott, 1995). Many Medicaid beneficiaries who qualify for Medicaid due to disability are also enrolled in Medicare; in the 13 states included in this chart book, 41.7 percent of disabled beneficiaries were dually eligible for Medicare.

Most adult mental health service users are disabled beneficiaries who are likely to need both mental and physical health care. Individuals receiving mental health services in primary care settings do not always receive the most effective treatments for their mental disorder, while specialty mental health providers may not be equipped to provide appropriate physical health care for beneficiaries with co-occurring conditions (New Freedom Commission on Mental Health, 2003). State policymakers should be aware of the need to design mental health benefits and delivery systems for adult beneficiaries that promote coordination of care between physical and specialty mental health providers.

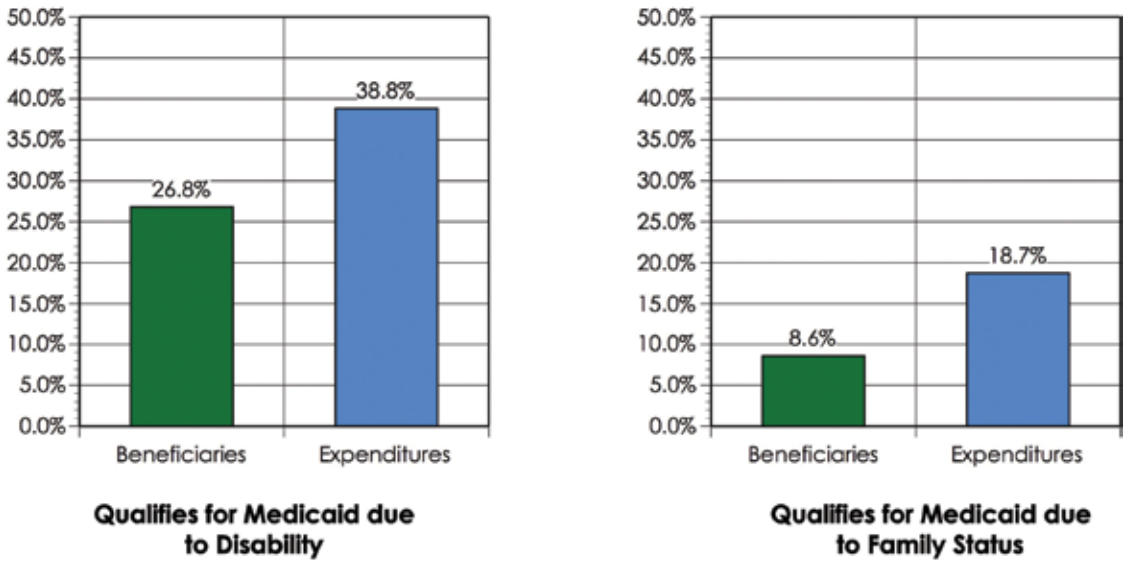
More information on the characteristics of beneficiaries with mental health service use appears in Appendix A, Tables 1 and 2.

References

Kochar, S., & Scott, C. G. (1995, Spring). Disability patterns among SSI recipients. *Social Security Bulletin, 58*(1), 3–14.

New Freedom Commission on Mental Health. (2003, July). *Achieving the promise: Transforming mental health care in America*. Final Report. HHS Pub. No. SMA-03-3832. Rockville, MD: Department of Health and Human Services. Available at http://www.mentalhealthcommission.gov/reports/FinalReport/downloads/FinalReport.pdf.

Exhibit 16. Proportion of Adult Medicaid Beneficiaries with Mental Health Service Use and Their Total Expenditures, by Basis of Eligibility (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

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Exhibit 17
Primary Diagnoses of Medicaid Beneficiaries Aged 22 Through 64 with Mental Health Service Use (2003)

Adult Medicaid beneficiaries who used mental health services were most likely to be diagnosed with major depression.

The most commonly diagnosed mental disorder among adult Medicaid beneficiaries was major depression and affective psychoses (including bipolar disorder), affecting nearly one-third of mental health service users. Neurotic disorders—which include most anxiety disorders, as well as obsessive-compulsive disorder and other unspecified depressive disorders—were the next most commonly diagnosed mental illness (30 percent of all mental health service users). Nearly one in five adult mental health service users had schizophrenia as their most frequent diagnosis.

Patterns of mental disorder diagnoses among adult Medicaid beneficiaries mirror those of the larger U.S. adult population, with one notable exception. While mood and anxiety disorders are the most common conditions for adults both in Medicaid and in the general U.S. population (Kessler, Chiu, Demler, & Walters, 2005), schizophrenia is much more common among Medicaid beneficiaries. Nationally, schizophrenia is estimated to affect only 1.3 percent of all adults (Narrow, Rae, Robins, & Regier, 2002), compared with nearly 3 percent of all Medicaid beneficiaries between ages 22 and 64 in the 13 states included in this chart book (Appendix A, Table 3). The higher rate of schizophrenia among adults in Medicaid is likely related to patterns of illness among SSI recipients, who qualify for Medicaid on the basis of disability; about 10 percent of all SSI recipients are eligible for SSI benefits due to schizophrenia (Kochar & Scott, 1995).

Given the variability in diagnoses of adult beneficiaries who use mental health services, it is important to ensure that the Medicaid program can meet diverse needs. State Medicaid programs should be aware of the particularly important role the program plays in providing health care to adults with schizophrenia.

More information on the most frequent diagnoses for mental health service users appears in Appendix A, Table 3.

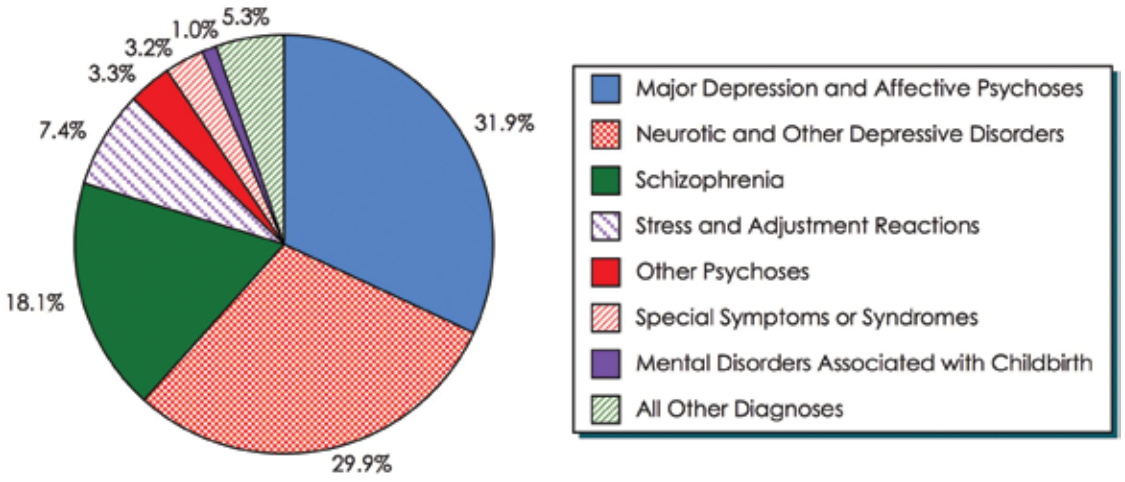
References

Kessler, R. C., Chiu, W. T., Demler, O., & Walters, E. E. (2005). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey replication. *Archives of General Psychiatry, 62*, 617–627.

Kochar, S., & Scott, C. G. (1995, Spring). Disability patterns among SSI recipients. *Social Security Bulletin, 58*(1), 3–14.

Narrow, W. E., Rae, D. S., Robins, L. N., & Regier, D. A. (2002). Revised prevalence estimates of mental disorder in the United States. *Archives of General Psychiatry, 59*, 115–123.

Exhibit 17. Primary Diagnoses of Medicaid Beneficiaries Aged 22 Through 64 with Mental Health Service Use (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

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Exhibit 18
Most Common Costly Physical Conditions Among Mental Health Service Users and All Medicaid Beneficiaries Aged 22 Through 64 (2003)

One in five adult mental health service users had a costly co-occurring physical condition, while the rate of co-occurring conditions for the entire adult Medicaid population was only one in seven.

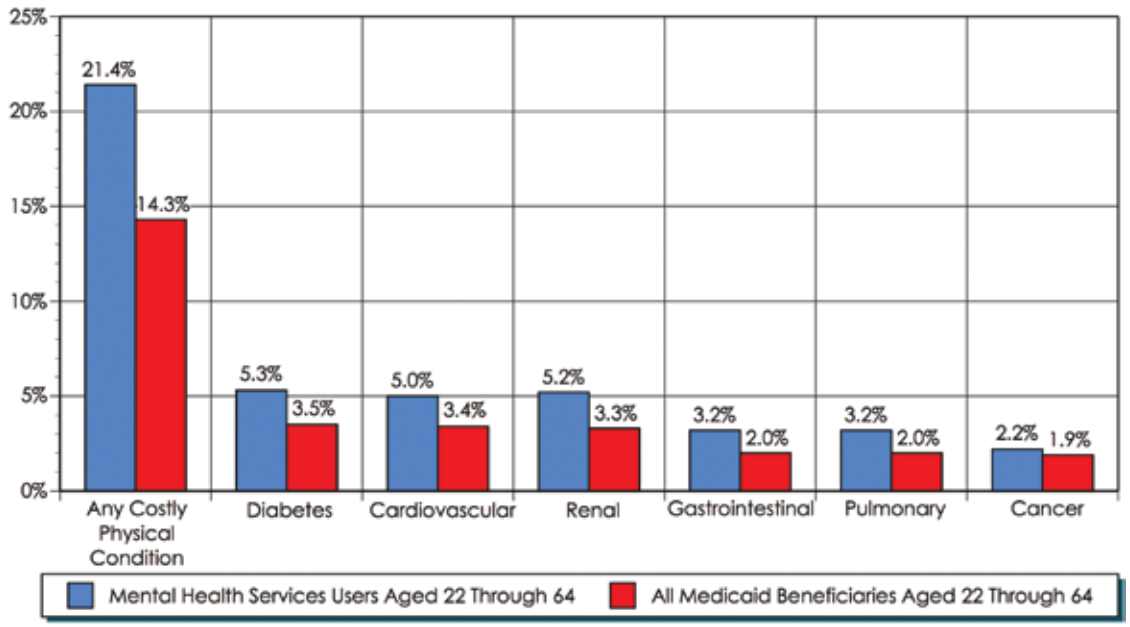
Fourteen percent of all adult Medicaid beneficiaries had a costly physical condition in 2003. The rate of costly physical conditions among adults who were receiving mental health services was much higher, at 21 percent. The most common costly conditions for adult beneficiaries were diabetes, affecting 4 percent of all beneficiaries aged 22 through 64, followed by cardiovascular and renal disease, which each affected 3 percent.

Among all adult Medicaid beneficiaries with a costly physical condition, nearly one-quarter have a comorbid mental illness (Appendix A, Table 8), well above the frequency of mental illness in the entire adult Medicaid population (16.5 percent; Table 2).

Analyses of Medicaid expenditures by type of beneficiary suggest that beneficiaries with mental disorders are responsible for a high proportion of Medicaid spending in each state. However, a more nuanced reading of the data suggests that high-cost beneficiaries—those with chronic conditions or severe illness—may be more likely to receive mental health treatment, and that the high costs associated with mental health service users may be due to other comorbid illnesses.

More information on costly physical conditions among beneficiaries with and without mental health service use appears in Appendix A, Table 8.

Exhibit 18. Most Common Costly Physical Conditions Among Mental Health Service Users and All Medicaid Beneficiaries Aged 22 Through 64 (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

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Exhibit 19
Inpatient Hospital Days Among Mental Health Service Users Aged 22 Through 64 (2003)

For adult mental health service users, most inpatient days occurred during hospitalizations for nonpsychiatric reasons.

Twenty-six percent of adult beneficiaries who received mental health services in 2003 also experienced a hospitalization during the year, compared with 19 percent among adults who did not receive mental health services (Appendix A, Table 9C). Beneficiaries who received inpatient care for a mental disorder spent more time in the hospital (an average of 19 days per person-year) compared with beneficiaries admitted for other reasons (an average of 7 days per person-year)(Appendix A, Table 4). However, among beneficiaries who received any mental health services during the year, 66 percent of all inpatient days were for treatment of conditions unrelated to their mental disorder. When these beneficiaries did receive inpatient mental health treatment, it was most often provided in a general hospital. (In contrast, over 80 percent of all inpatient days for mental health treatment for children are delivered in a psychiatric facility.) The lower proportion of inpatient days for adults provided in psychiatric hospitals is a result of Federal rules: States cannot use Medicaid to fund inpatient mental health treatment provided in freestanding psychiatric facilities unless the beneficiary's age is less than 22 or over 64 (Geller, 2000). As a result, virtually all inpatient mental health treatment for adults is provided in general hospitals.

Inpatient hospital care is a major component of every state's Medicaid benefit package. While beneficiaries with diagnosed mental disorders are higher-intensity users of inpatient care, it appears that most of the additional use is not directly related to mental health treatment. Instead, the higher rate of hospitalizations among adults receiving mental health services is likely related to the higher proportion of disabled beneficiaries and beneficiaries with costly physical conditions who have comorbid mental disorders.

More information on inpatient hospitalizations for mental health service users appears in Appendix A, Tables 4 and 9C.

Reference

Geller, J. L. (2000, November). Excluding institutions for mental diseases from Federal reimbursement for services: Strategy or tragedy? *Psychiatric Services*, *51*(11), 1397–1403.

Exhibit 19. Inpatient Hospital Days Among Mental Health Service Users Aged 22 Through 64 (2003)

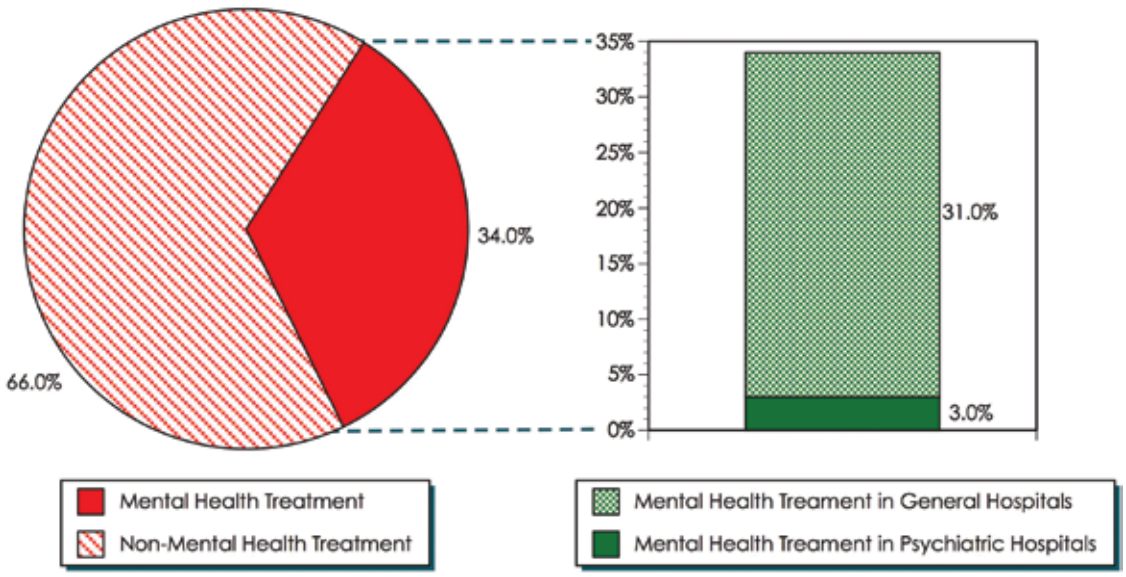

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Exhibit 20
Medicaid Beneficiaries Aged 22 Through 64 with an Emergency Room Visit and Their Average Number of Visits per Person-Year (2003)

Over half of all adult beneficiaries who received mental health services during the year also had at least one emergency room visit, and those beneficiaries averaged more visits to the emergency room during the year than beneficiaries who received no mental health services.

Fifty-four percent of adult mental health service users visited the emergency room (ER) in 2003. Among ER users, those who had received mental health treatment during the year averaged 4.1 ER visits per person-year. In comparison, beneficiaries who did not receive any behavioral health treatment only averaged 3.0 ER visits per person-year. This difference is partly due to beneficiaries with mental illness receiving mental health treatment in the ER. However, mental health service users visited the ER more frequently than other beneficiaries for non-mental health treatment: 3.5 visits per person-year, compared with 3.0 visits among other ER users.

Emergency room use among adults covered by Medicaid is considerably higher than the national average. Only 14 percent of adults in the United States visited an emergency room in 2003 (Machlin, 2006) compared with 35 percent of adult Medicaid beneficiaries (Appendix A, Table 5). Within the Medicaid adult population, beneficiaries who used mental health services are more likely to visit the ER, and to visit it more often, than other Medicaid beneficiaries.

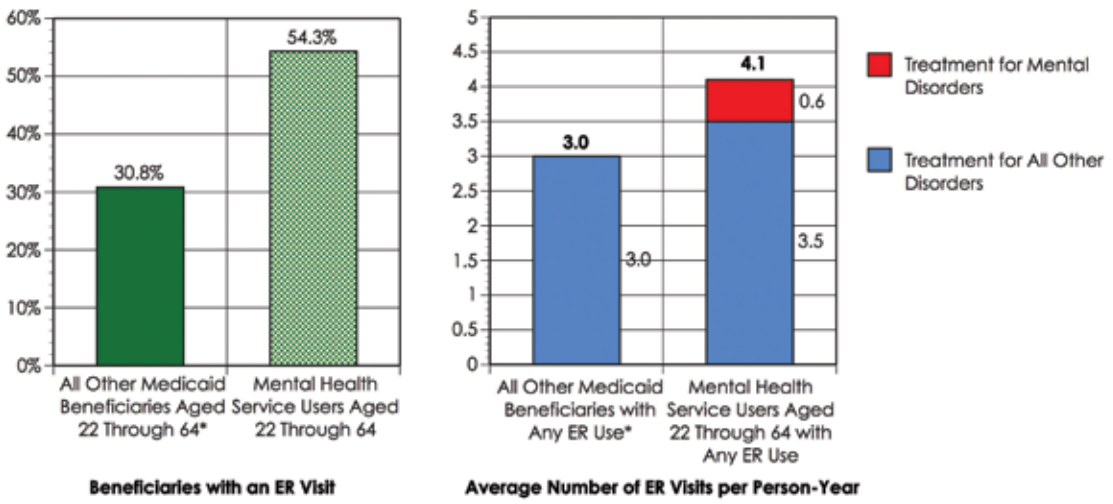
Programs aimed at reducing Medicaid expenditures often focus on reducing the number of emergency room visits. Such programs may have a disproportionate effect on beneficiaries with a diagnosed mental disorder, who represent 34 percent of all adult beneficiaries who visited an emergency room in 2003 (Appendix A, Table 5).

More information on emergency room use appears in Appendix A, Table 5.

Reference

Machlin, S. R. (2006, January). *Expenses for a hospital emergency room visit, 2003*. Statistical Brief No. 111. Rockville, MD: Agency for Healthcare Research and Quality.

Exhibit 20. Medicaid Beneficiaries Aged 22 Through 64 with an Emergency Room Visit and Their Average Number of Visits per Person-Year (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

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* All Other Medicaid Beneficiaries excludes mental health and substance abuse service users.

Exhibit 21
Mental Health Service Users Aged 22 Through 64 Using Psychotropic Medications, by Diagnosis (2003)

Among beneficiaries with any mental health service use in 2003, antidepressants were the most common psychotropic drug prescribed; nearly two-thirds of these beneficiaries filled a prescription for an antidepressant medication during the year.

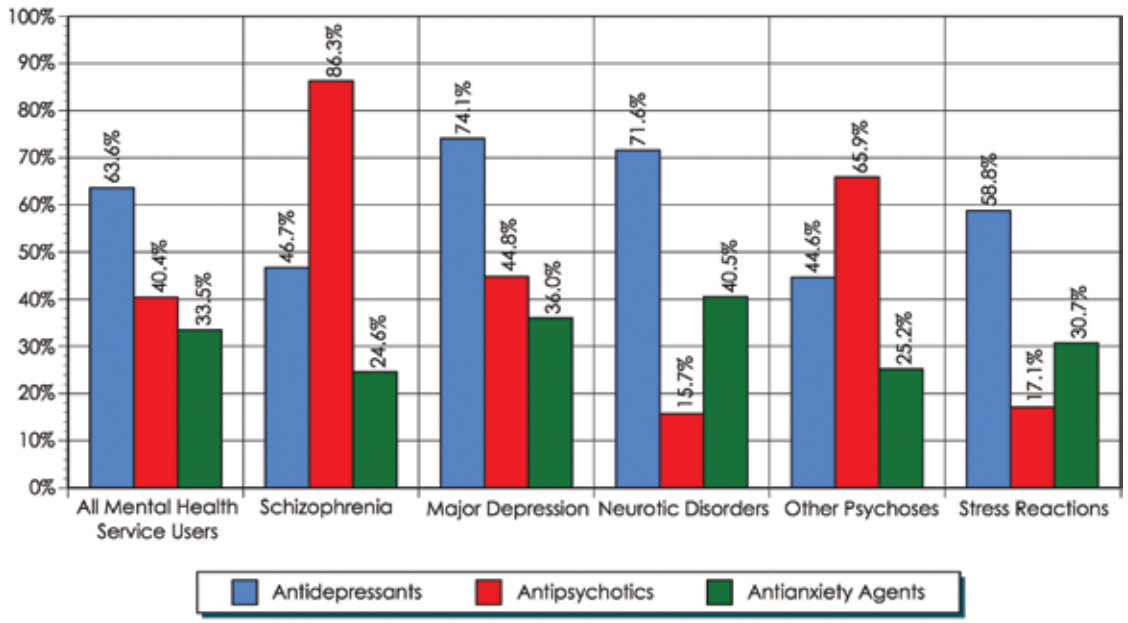
Eighty-two percent of beneficiaries aged 22 through 64 who received mental health services in 2003 also used a psychotropic medication during the year (Appendix A, Table 7B). In comparison, 17 percent of beneficiaries who received no mental health or substance abuse treatment during the year used psychotropic medication. The highest rates of use were found among adults receiving treatment for schizophrenia, with nearly 90 percent taking psychotropic drugs. Over 80 percent of beneficiaries with major depression or neurotic disorders—the most common mental disorders among this age group—used a psychotropic drug in 2003 (Appendix A, Table 7B).

Overall, use of antidepressants was most common among adult mental health service users; this was driven by the high percentage of beneficiaries who were diagnosed with depression and other mood disorders. Among adult beneficiaries with diagnoses of neurotic or depressive disorders, nearly 72 percent were taking an antidepressant. Antipsychotic use was also quite common. More than 86 percent of beneficiaries with schizophrenia were taking an antipsychotic; nearly 47 percent were also taking an antidepressant. More than half of the beneficiaries who took psychotropic drugs filled prescriptions for drugs from multiple classes (Appendix A, Table 7B).

Spending on prescription drugs represents a large portion of the Medicaid budget, accounting for 17 percent of all fee-for-service expenditures in 2002 (Wenzlow et al., 2007). Beneficiaries receiving mental health treatment are particularly likely to use prescription drugs, with over 90 percent of mental health service users filling at least one prescription during the year, compared with 68 percent of all adult beneficiaries (Appendix A, Table 9C). Average yearly expenditures for prescription drugs among adults with mental health service use were over $3,300 in 2003, compared with $1,772 among adults with no mental health service use. While the implementation of Medicare Part D in 2006 has reduced Medicaid's responsibility for prescription drug costs among beneficiaries who are also eligible for Medicare, costs for psychotropic medications will remain a significant expenditure for state Medicaid programs (Verdier et al., 2007).

More information on psychotropic drug use for beneficiaries aged 22 through 64 appears in Appendix A, Tables 6 and 7B.

Exhibit 21. Mental Health Service Users Aged 22 Through 64 Using Psychotropic Medications, by Diagnosis (2003)



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References

Verdier, J., Bagchi, A., & Esposito, D. (2007, June). *New Medicaid drug use and cost data highlight issues for states after Medicare Part D*. Washington, DC: Mathematica Policy Research, Inc. Available at http://www.mathematica-mpr.com/publications/PDFs/medicaiddruguse.pdf.

Wenzlow, A., Finkelstein, D., Cook, B., Shepperson, K., Yip, C., & Baugh, D. (2007). *The Medicaid analytic eXtract chartbook*. Baltimore, MD: Centers for Medicare & Medicaid Services. Available at http://www.cms.hhs.gov/MedicaidDataSourcesGenInfo/Downloads/ MAX_Chartbook_2007.pdf.

Exhibits 22–25

Medicaid Beneficiaries Aged 65 or Older

Exhibit 22
Medicaid Beneficiaries Aged 65 and Older Who Used Mental Health or Substance Abuse Services and Their Medicaid Expenditures (2003)

More than 8 percent of Medicaid beneficiaries aged 65 and older used mental health or substance abuse services in 2003, but they accounted for almost 21 percent of total Medicaid expenditures for that age group.

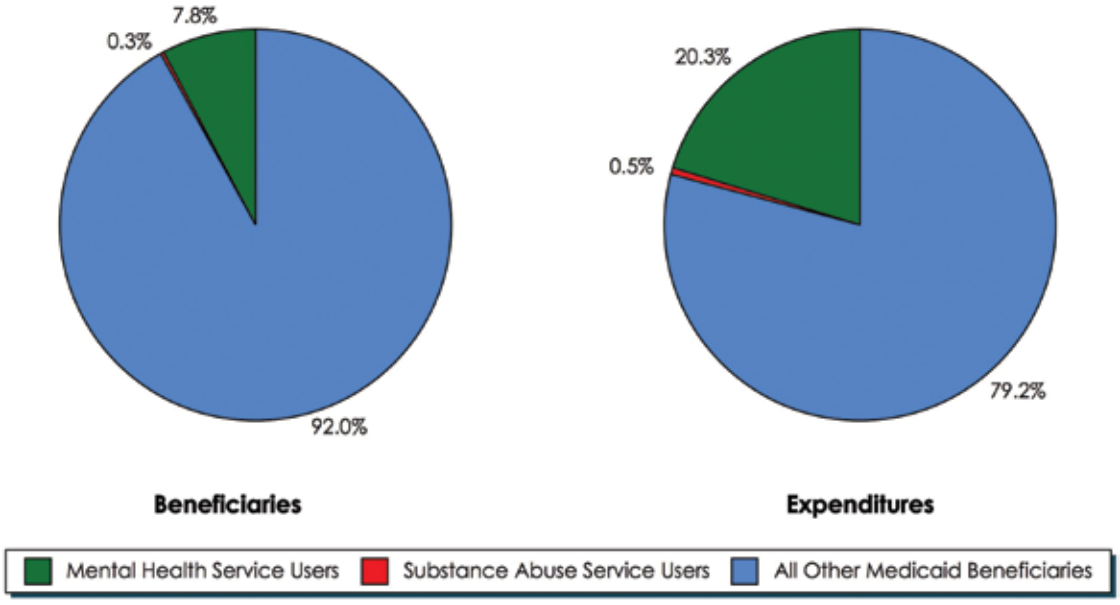
In 2003, Medicaid was especially important for beneficiaries aged 65 and older who needed prescription drugs or long-term nursing facility services to treat their mental health or substance abuse disorders. At that time, most would have relied on Medicaid for such treatment because Medicare did not cover those services. (In 2006, Medicare began paying for prescription drugs for almost all Medicaid beneficiaries aged 65 and older under the new Part D program but still does not cover long-term treatment in nursing facilities.)

In 2003, more than 8 percent of Medicaid beneficiaries aged 65 and older received mental health services funded by Medicaid, but these beneficiaries accounted for almost 21 percent of all Medicaid expenditures in that age group. Very few (0.3 percent) received substance abuse services, and the total cost of all services received by these beneficiaries was about one-half of 1 percent of all Medicaid dollars spent that year. However, these percentages may understate the actual numbers of Medicaid beneficiaries in this age group who use mental health or substance abuse services because almost all of them obtain their hospital, physician, and other acute care services through Medicare.

Some Medicaid beneficiaries aged 65 and older receive only Medicare-covered mental health or substance abuse services; consequently, for this chart book, these individuals would not be identified as mental health service users because we only examined Medicaid data. Medicare is an important source of insurance coverage for mental health and substance abuse services for individuals over age 64. An overview of mental health services for Medicare beneficiaries with mental health and substance use disorders can be found elsewhere (for example, Loftis & Salinsky, 2006). Information on psychiatric hospital admissions and use of pharmaceuticals among Medicare beneficiaries is available in several recent reports (for example, Cotterill, 2008; Donohue, Huskamp, & Zuvekas, 2009).

More information on the number of older Medicaid beneficiaries with mental health and substance abuse service use appears in Appendix A, Tables 1 and 2.

Exhibit 22. Medicaid Beneficiaries Aged 65 and Older Who Used Mental Health or Substance Abuse Services and Their Medicaid Expenditures (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

Note: Appendix A contains summary tables with data from the 13 states included in this exhibit. The 13 states are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming. These states include 23 percent of all beneficiaries enrolled in Medicaid for any length of time in 2003. See Tables 1 and 3. For detailed data tables from all 50 states and the District of Columbia, see the enclosed CD-ROM.

References

Cotterill, P. (2008, July/August). Medicare psychiatric admission, 1987–2004: Does the past offer insights for the future? *Health Affairs, 27*(4), 1132–1139.

Donohue, J., Huskamp, H., & Zuvekas, S. (May/June). Dual eligibles with mental disorders and Medicare Part D: How are they faring? *Health Affairs, 28*(3), 746–759.

Loftis, C., & Sallinsky, E. (2007, November 27). *Medicare and mental health: The fundamentals*. Background paper from the National Health Policy Forum. Washington, DC: The George Washington University.

Exhibit 23
Primary Diagnoses of Medicaid Beneficiaries Aged 65 and Older Who Used Mental Health Services (2003)

Medicaid beneficiaries aged 65 and older who used mental health services were most likely to be diagnosed with neurotic disorders and major depression.

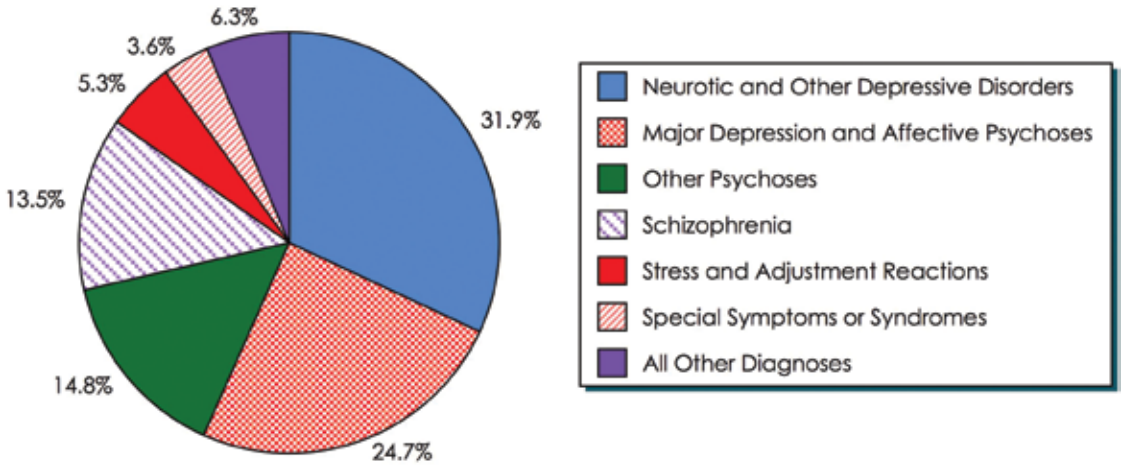
Among Medicaid beneficiaries aged 65 and older who received mental health services in 2003, almost 32 percent had primary diagnoses of neurotic and other depressive disorders, including anxiety, phobia, obsessive-compulsive disorder, and unspecified depressive disorders. Nearly 25 percent had primary diagnoses of major depression and affective psychoses, including manic-depressive and bipolar disorders.

The distribution of diagnoses for beneficiaries aged 65 and older likely reflects that of the Medicaid population in nursing facilities in 2003. This is due, in part, to the fact that diagnostic data are generally not available for beneficiaries 65 or older who receive services exclusively from community-based hospitals, physicians, and other providers because these services are primarily paid through Medicare. Additionally, while Federal law generally prohibits Medicaid reimbursement for services in nursing facilities that have a high percentage of residents with mental illness ("institutions for mental diseases"), states have the option of covering stays in these facilities for beneficiaries aged 65 and older (Geller, 2000). Over 55 percent of beneficiaries aged 65 or older who received mental health services paid for by Medicaid in 2003 were in nursing facilities for part or all of the year, compared with only 6 percent of beneficiaries receiving mental health services in the 22 to 64 age group (Appendix A, Tables 9C and 9D).

While Medicaid has primary responsibility for overseeing the care provided to Medicaid beneficiaries aged 65 and older who reside in nursing facilities, responsibility for their prescription drug coverage shifted from Medicaid to Medicare in 2006. Since Medicaid no longer has direct access to information on the use of prescription drugs among Medicaid beneficiaries in nursing facilities, review of their drug use is now largely the responsibility of Medicare (Verdier et al., 2008). Given longstanding concerns about the appropriateness of antipsychotic and other drug use in nursing facilities (Briesacher, Limcangco, Simoni-Wastila, Doshi, Levens, Shea, et al., 2005), this is an important area for Medicaid and Medicare to monitor.

More information on the most frequent diagnoses for mental health service users appears in Appendix A, Table 3.

Exhibit 23. Primary Diagnoses of Medicaid Beneficiaries Aged 65 and Older Who Used Mental Health Services (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

Note: Appendix A contains summary tables with data from the 13 states included in this exhibit. The 13 states are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming. These states include 23 percent of all beneficiaries enrolled in Medicaid for any length of time in 2003. See Table 3. For detailed data tables from all 50 states and the District of Columbia, see the enclosed CD-ROM.

References

Briesacher, B.A., Limcangco, R., Simoni-Wastila, L., Doshi, J. A., Levens, S. R., Shea, D. G., et al. (2005). The quality of antipsychotic drug prescribing in nursing homes. *Archives of Internal Medicine*, *165*(11), 1280–1285.

Geller, J. L. (2000, November). Excluding institutions for mental diseases from Federal reimbursement for services: Strategy or tragedy?" *Psychiatric Services*, *51*(11), 1397–1403.

Verdier, J., Bagchi, A., & Esposito, D. *Medicaid prescription drug use by dual eligibles: Issues for Medicare Part D*. Washington, DC: Mathematica Policy Research, Inc. Available at http://www.mathematica-mpr.com/publications/PDFs/medicaidprescript.pdf.

Exhibit 24
Most Common Costly Physical Conditions Among Mental Health Service Users and All Medicaid Beneficiaries Aged 65 and Older (2003)

Medicaid beneficiaries aged 65 and older who used mental health services were almost twice as likely as beneficiaries as a whole in this age group to have costly physical conditions.

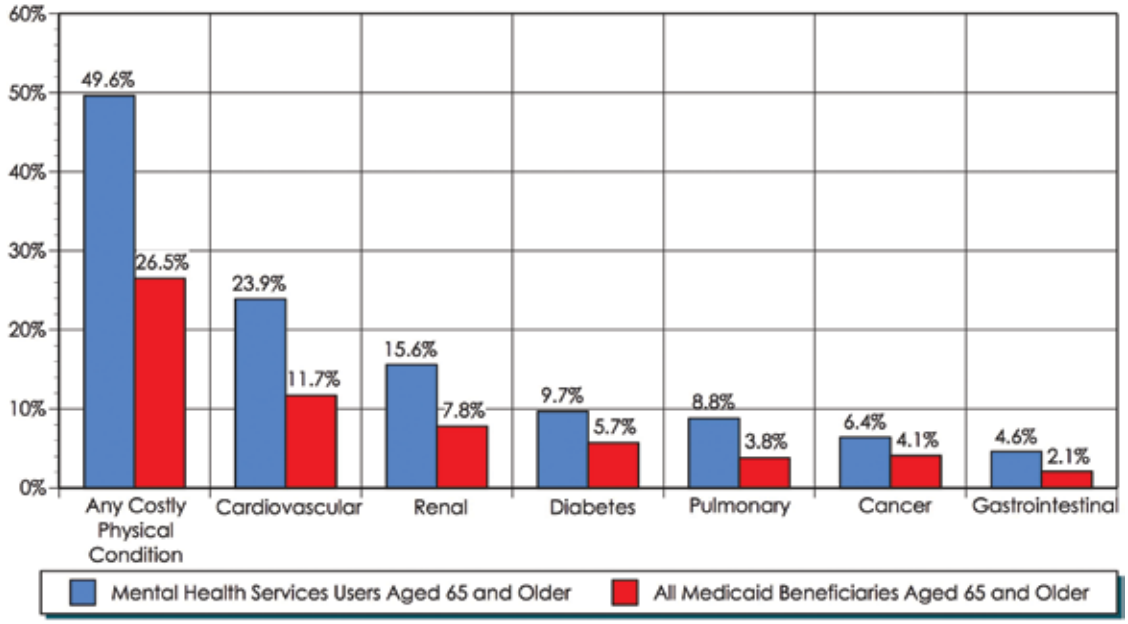
In 2003, nearly half (49.6 percent) of Medicaid beneficiaries aged 65 and older who received mental health services in 2003 had a costly physical condition, compared with just over one quarter (26.5 percent) of all beneficiaries in this age group. That same pattern holds for the specific costly physical conditions shown in the exhibit: Beneficiaries who received mental health service were about twice as likely to have one of these costly physical conditions as were all beneficiaries combined. The six costly physical conditions shown in the exhibit were the most prevalent among beneficiaries aged 65 and older in 2003 (Appendix A, Table 8).

Coexisting physical and mental health conditions can complicate care for beneficiaries and their care providers. Mental health conditions like depression and schizophrenia can make it more difficult for beneficiaries to follow complicated care regimens that may be required to manage chronic physical conditions. Providers who specialize in treating only mental or physical conditions may not always recognize coexisting conditions outside their area of specialization, which may limit their ability to make appropriate referrals.

These care coordination issues are especially complex for Medicaid beneficiaries aged 65 and older since their care is divided between Medicare and Medicaid. This can make it even more difficult for providers to coordinate and communicate and for beneficiaries to understand their care options. Medicare's relatively limited coverage of mental health services may also affect providers' ability to prescribe such care.

More information on costly physical conditions among beneficiaries with and without mental health service use appears in Appendix A, Table 8.

Exhibit 24. Most Common Costly Physical Conditions Among Mental Health Service Users and All Medicaid Beneficiaries Aged 65 and Older (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

Note: Appendix A contains summary tables with data from the 13 states included in this exhibit. The 13 states are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming. These states include 23 percent of all beneficiaries enrolled in Medicaid for any length of time in 2003. See Tables 1, 2, and 8. For detailed data tables from all 50 states and the District of Columbia, see the enclosed CD-ROM. Costly physical conditions were identified using the Chronic Illness and Disability Payment System (CDPS) categories (Kronick et al., 2000).

Exhibit 25
Mental Health Service Users Aged 65 and Older Using Psychotropic Medications, by Diagnosis (2003)

Rates of psychotropic drug use among mental health service users aged 65 and older varied substantially by diagnosis and drug type, with use of antipsychotics for those diagnosed with schizophrenia being especially high.

Prescription drug use was higher among beneficiaries aged 65 and over who used mental health services in 2003 than among all Medicaid beneficiaries aged 65 and over. Among all Medicaid beneficiaries in this age group, 60 percent had a filled prescription during the year, compared with 94 percent of mental health service users aged 65 and older (Appendix A, Table 9D).

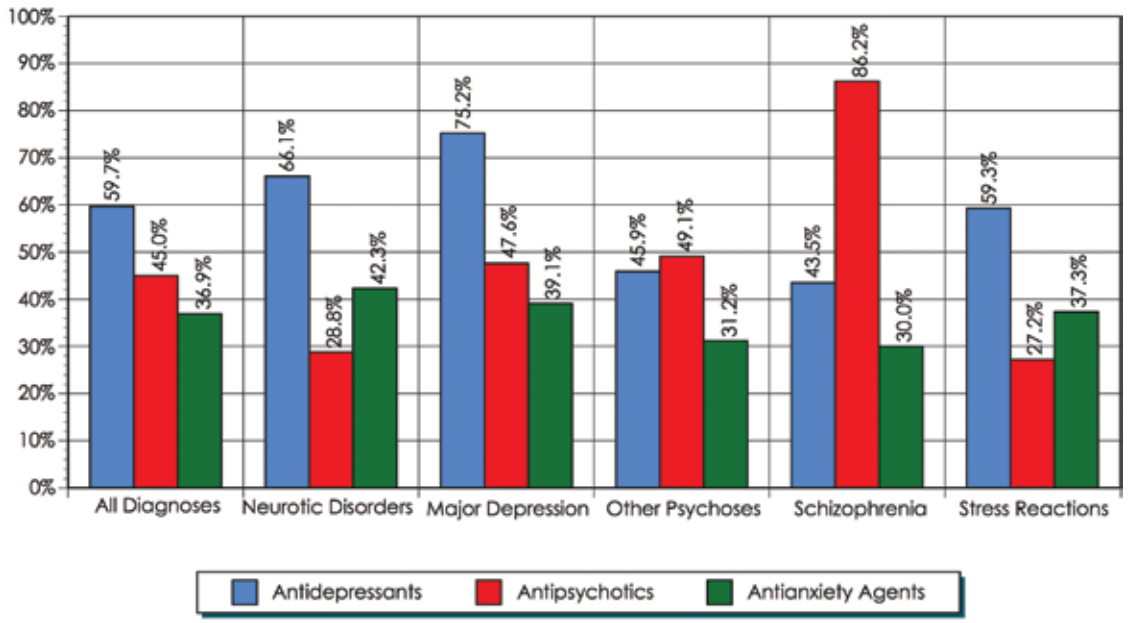
Over 80 percent of Medicaid beneficiaries aged 65 and older who received mental health services used at least one psychotropic drug in 2003 (Appendix A, Table 7C). (Psychotropic drugs include antipsychotics, antidepressants, antianxiety agents, and stimulants.) In comparison, 26 percent of beneficiaries in this age group who did not receive any Medicaid-funded mental health or substance abuse treatment used psychotropic drugs during the year. Beneficiaries with the most serious kinds of mental illness (schizophrenia or major depression and affective psychoses) were most likely to use psychotropic drugs.

As shown in Appendix A, Table 7C, over 47 percent of all beneficiaries in this age group who received mental health services used more than one type of psychotropic drug during the year, including higher percentages of those with primary diagnoses of schizophrenia (nearly 54 percent) and major depression and affective psychoses (nearly 57 percent). While psychotropic drugs are widely prescribed for elderly Medicaid beneficiaries who receive mental health services, such drugs are not always clinically appropriate for this population (Malone, Carnahan, & Kutscher, 2007). The possibility of elderly beneficiaries using multiple types of drugs at the same time (polypharmacy) is also a concern, given the potential for side effects and adverse drug interactions (Gurwitz, 2004).

With the shift of prescription drug coverage for almost all Medicaid beneficiaries aged 65 and older to Medicare in 2006 under the new Part D program, coordination of prescription drug use with other medical services has likely improved for those services paid for by Medicare. However, it is important to determine what effects the change in drug coverage has had on services primarily paid for by Medicaid, such as nursing home care, since Medicaid no longer has direct access to data on the prescription drugs received by dually eligible beneficiaries who use these services (Verdier et al., 2007).

More information on psychotropic drug use appears in Appendix A, Table 7C.

Exhibit 25. Mental Health Service Users Aged 65 and Older Using Psychotropic Medications, by Diagnosis (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

Note: Appendix A contains summary tables with data from the 13 states included in this exhibit. The 13 states are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming. These states include 23 percent of all beneficiaries enrolled in Medicaid for any length of time in 2003. See Table 7C. For detailed data tables from all 50 states and the District of Columbia, see the enclosed CD-ROM.

References

Gurwitz, J. H. (2004, October 11). Polypharmacy: A new paradigm for quality drug therapy in the elderly? *Archives of Internal Medicine*, *164*, 1957–1959.

Malone, M., Carnahan, R. M., & Kutscher, E. C. (2007). Antipsychotic medication use in the elderly patient. *Journal of Pharmacy Practice*, *20*(4), 318–326.

Verdier, J., Bagchi, A., & Esposito, D. (2007, June). New *Medicaid drug use and cost data highlight issues for states after Medicare Part D*. Washington, DC: Mathematica Policy Research, Inc. Available at http://www.mathematica-mpr.com/publications/PDFs/medicaiddruguse.pdf.

Exhibits 26–29

Medicaid Beneficiaries Using Substance Abuse Services

Exhibit 26
Age Distribution of Medicaid Beneficiaries Who Used Substance Abuse Services (2003)

Adults aged 22 through 64 were the primary users of Medicaid substance abuse services in 2003.

Medicaid provides coverage for several types of services for treatment of substance abuse disorders, including reimbursement for treatments provided in long-term care institutions, prescription drugs, and laboratory and physician services. Overall, 14 percent of all Medicaid expenditures on behavioral health services are for substance abuse treatments (Mark, Buck, Dilonardo, Coffey, & Chalk, 2003). Understanding the age distribution of beneficiaries who receive substance abuse services is important because diagnoses and treatments differ significantly by age, which can affect resource allocation.

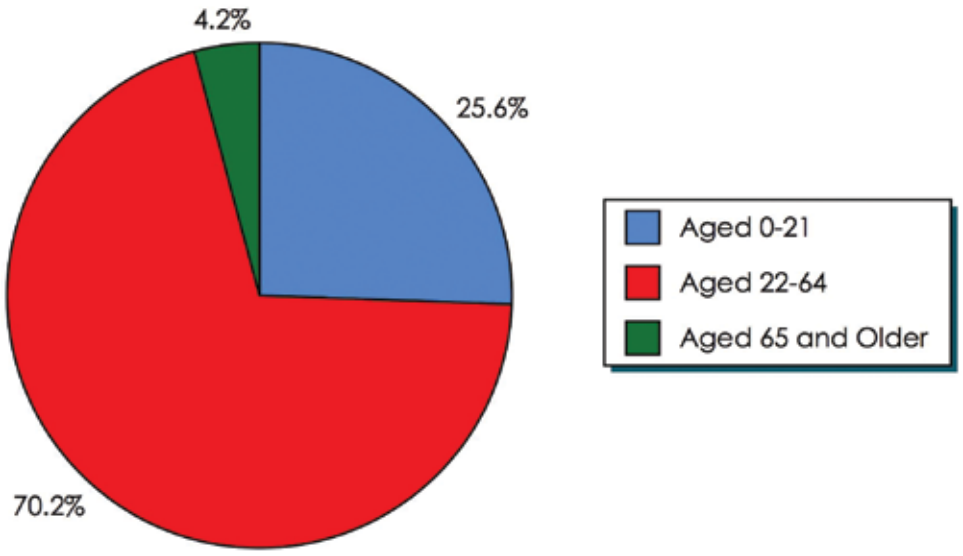
Although beneficiaries under the age of 22 made up over 60 percent of all Medicaid beneficiaries in the 13 states used for this study (Appendix A, Table 1), they only represented about a quarter (25.6 percent) of beneficiaries with any substance abuse service use. Adults aged 22 through 64 made up over 70 percent of beneficiaries with substance abuse service use, but were only 27 percent of all Medicaid beneficiaries. Beneficiaries aged 65 and older represented the remaining 4.2 percent of substance abuse service users. Because working-age adults make up the majority of Medicaid beneficiaries receiving substance abuse services, documenting the health care needs of these beneficiaries can assist state Medicaid programs in determining what services are most needed and at what cost.

More information on the number of beneficiaries with substance abuse service use appears in Appendix A, Tables 1 and 2.

Reference

Mark, T. L., Buck, J. A., Dilonardo, J. D., Coffey, R. M., & Chalk, M. (2003, February). Medicaid expenditures on behavioral health care. *Psychiatric Services, 54*(2), 188–194.

Exhibit 26. Age Distribution of Medicaid Beneficiaries Who Used Substance Abuse Services (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

Note: Appendix A contains summary tables with data from the 13 states included in this exhibit. The 13 states are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming. These states include 23 percent of all beneficiaries enrolled in Medicaid for any length of time in 2003. See Table 2. For detailed data tables from all 50 states and the District of Columbia, see the enclosed CD-ROM.

Exhibit 27
Distribution of Diagnoses Among Medicaid Beneficiaries Who Used Substance Abuse Services (2003)

The distribution of identified substance abuse disorders differed considerably by age group, with drug dependence most prevalent among adolescents and adults, and alcohol dependence most prevalent among those aged 65 and older.

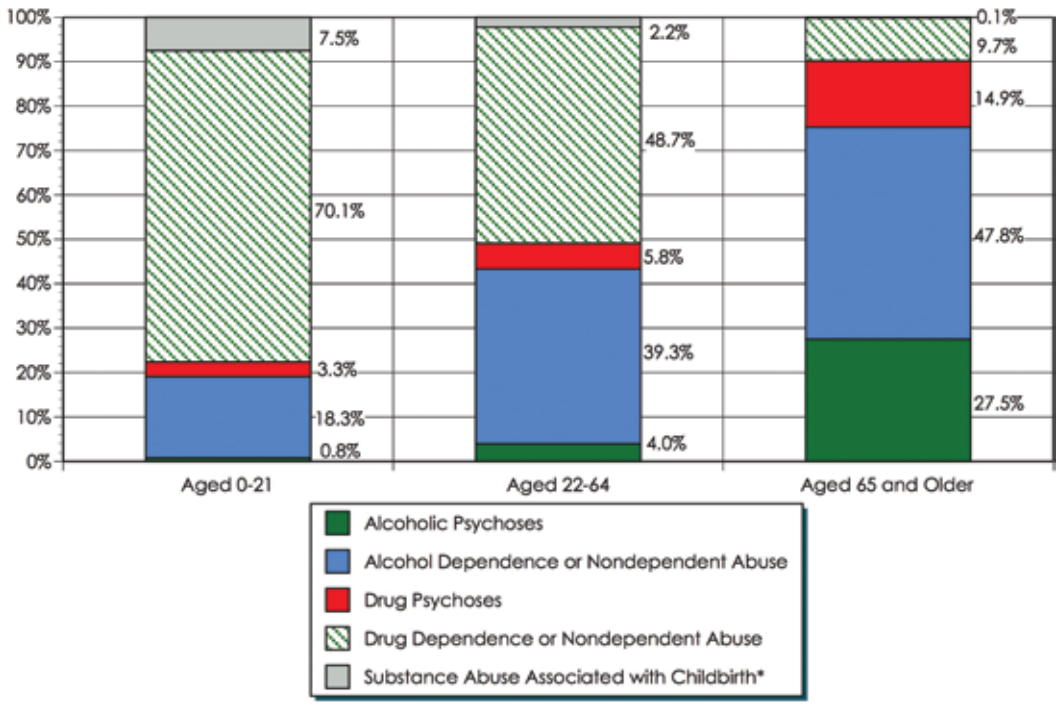
Identifying the most common diagnoses among beneficiaries who received substance abuse services is important to determining the types of services they need and in which treatment settings. Over 70 percent of beneficiaries under age 22 who used substance abuse services in 2003 were diagnosed with drug dependence or nondependent drug abuse, and nearly one-fifth of these adolescents (18.3 percent) were diagnosed with alcohol dependence or nondependent abuse. Another 7.5 percent of beneficiaries in this age group were diagnosed with substance abuse associated with childbirth. Relatively few beneficiaries under age 22 were diagnosed with drug or alcoholic psychoses (less than 5 percent combined).

Drug and alcohol dependence were also the two most common diagnoses among beneficiaries aged 22 through 64 (48.7 percent and 39.3 percent, respectively). Substance abuse associated with childbirth was a far less common diagnosis among working-age adults (2.2 percent), while drug and alcoholic psychoses were more common than among adolescents (4 percent and 5.8 percent, respectively).

The distribution of substance abuse-related diagnoses was much different among beneficiaries aged 65 and older than among adolescents and working-age adults. Only 9.7 percent had a diagnosis of drug dependence or nondependent abuse. Alcohol dependence or nondependent abuse was the most common diagnosis (47.8 percent). Alcoholic and drug psychoses were far more common among elderly beneficiaries than among their younger counterparts (27.5 percent and 14.9 percent, respectively).

More information on the most frequent diagnoses among beneficiaries with substance abuse service use appears in Appendix A, Table 3.

Exhibit 27. Distribution of Diagnoses Among Medicaid Beneficiaries Who Used Substance Abuse Services (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

Note: Appendix A contains summary tables with data from the 13 states included in this exhibit. The 13 states are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming. These states include 23 percent of all beneficiaries enrolled in Medicaid for any length of time in 2003. See Table 3. For detailed data tables from all 50 states and the District of Columbia, see the enclosed CD-ROM.

* Substance abuse associated with childbirth includes fetal alcohol syndrome, drug withdrawal syndrome, or drug dependence of the mother, complicating pregnancy, childbirth, or the puerperium.

Exhibit 28
Percentage of Inpatient Hospital Days for Substance Abuse Treatment Compared with Other Inpatient Services Among Substance Abuse Service Users (2003)

Among beneficiaries who used any substance abuse services in 2003, the majority of inpatient hospital stays were for treatment of conditions other than substance abuse.

Because inpatient hospitalizations are one of the most costly services covered by Medicaid (Wenzlow et al., 2007), documenting patterns of inpatient stays can help state Medicaid programs in determining how resources are being used and identify areas for more efficient spending. Although Medicaid covers inpatient stays for mental health services provided in general and specialty psychiatric hospitals, Medicaid reimbursements are available for inpatient substance abuse services only for those treatments provided in general hospitals.

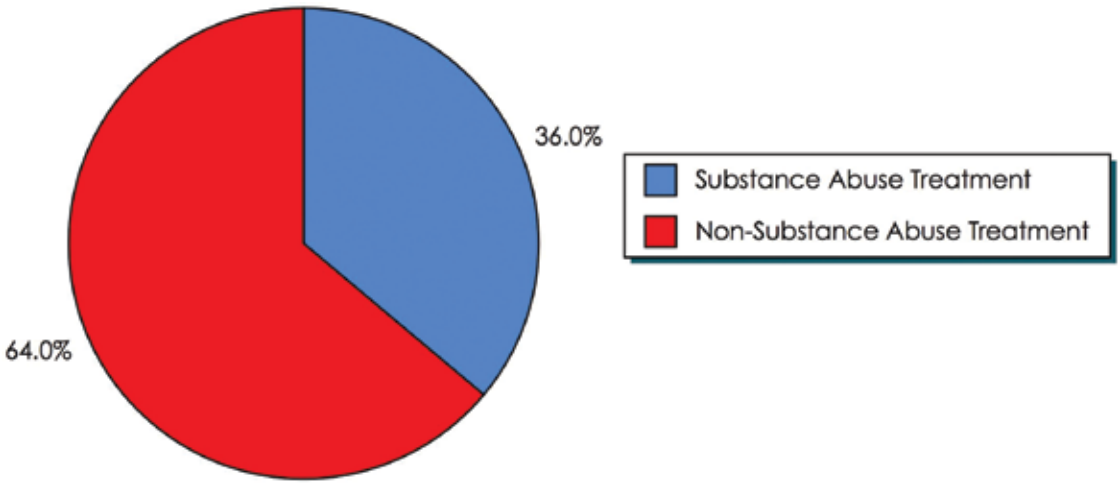
Thirty-three percent of substance abuse service users had an inpatient hospitalization at some point in 2003, substantially higher than for Medicaid beneficiaries as a whole, only 14 percent of whom used inpatient hospital services (Appendix A, Table 9A). Only 36 percent of the inpatient days for substance abuse service users were primarily for substance abuse treatment; the remaining 64 percent of days involved stays for other types of hospital treatment.

Hospitalizations were somewhat longer for stays that involved substance abuse treatment (Appendix A, Table 4). Substance abuse service users with a hospitalization for substance abuse treatment stayed an average of 10 days per person-year versus 9 days for those who were in the hospital for non-substance abuse treatments. By comparison, Medicaid beneficiaries who did not use mental health or substance abuse services in 2003 had average inpatient hospital stays of 6 days per person-year.

The fact that most inpatient hospitalizations among beneficiaries with substance abuse service use were for reasons other than substance abuse treatment suggests that these beneficiaries often have complex health care needs. Identifying the reasons for inpatient hospitalizations among these beneficiaries can help in determining whether these health needs could be met in other treatment settings or through preventive care services.

More information on inpatient hospitalizations for substance abuse service users appears in Appendix A, Tables 4 and 9A.

Exhibit 28. Percentage of Inpatient Hospital Days for Substance Abuse Treatment Compared with Other Inpatient Services Among Substance Abuse Service Users (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

Note: Appendix A contains summary tables with data from the 13 states included in this exhibit. The 13 states are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming. These states include 23 percent of all beneficiaries enrolled in Medicaid for any length of time in 2003. See Table 4. For detailed data tables from all 50 states and the District of Columbia, see the enclosed CD-ROM.

Reference

Wenzlow, A. T., Finkelstein, D., Le Cook, B., Shepperson, K., Yip, C., & Baugh, D. (2007, May). *The Medicaid analytic eXtract chartbook*. Cambridge, MA: Mathematica Policy Research, Inc.

Exhibit 29
Emergency Room Use Among Beneficiaries with Substance Abuse Service Use (2003)

Medicaid beneficiaries who used substance abuse services in 2003 were over twice as likely as other beneficiaries to have had an emergency room visit, but more than 86 percent of their visits were for reasons other than substance abuse treatment.

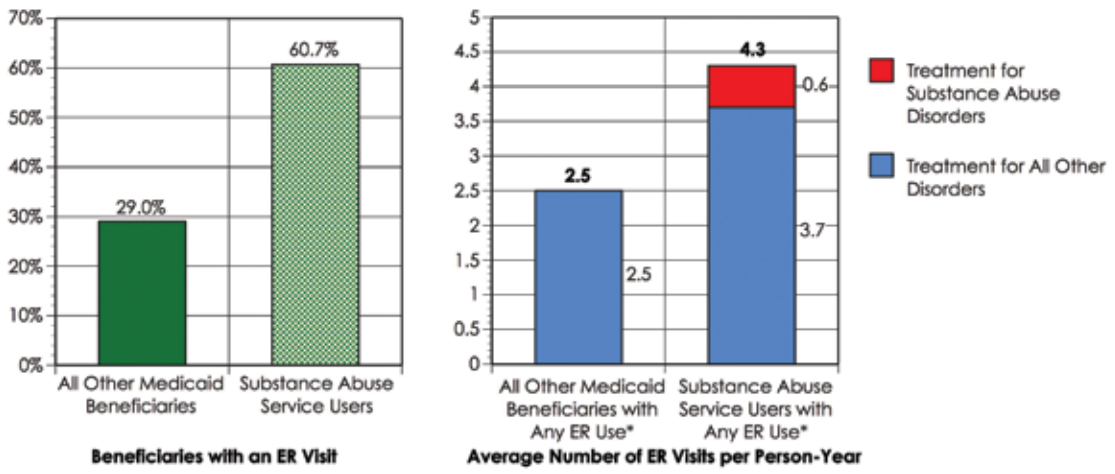
Emergency room visits are expensive and frequently occur due to insufficient management of chronic conditions that should be treatable in an outpatient setting. Sixteen percent of Medicaid beneficiaries who used substance abuse services in 2003 also had one or more diagnosed costly physical health conditions (Appendix A, Table 8). Because substance abuse reduces the likelihood of adhering to medical treatments, these beneficiaries may be at higher risk for emergency room visits due to mismanagement of chronic health conditions.

Almost 61 percent of beneficiaries who received substance abuse services had an emergency room visit in 2003, compared with 29 percent of all Medicaid beneficiaries who received no behavioral health treatment during the year. Beneficiaries with substance abuse service use had an average of 4.3 emergency room visits per person-year in 2003, 1.7 times as many visits as other beneficiaries. However, over 86 percent of these visits (3.7 of 4.3 visits) were for reasons other than substance abuse treatment.

The high percentage of emergency room visits for reasons other than substance abuse treatment suggests that beneficiaries receiving substance abuse services may benefit from programs to improve management of co-occurring physical and mental health care needs. Identifying the reasons for emergency department use could lead to more effective outpatient treatment and more efficient Medicaid spending.

More information on emergency room use by substance abuse service users appears in Appendix A, Table 5.

Exhibit 29. Emergency Room Use Among Beneficiaries with Substance Abuse Service Use (2003)



Source: Medicaid Analytic eXtract (MAX), 2003

Note: Appendix A contains summary tables with data from the 13 states included in this exhibit. The 13 states are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming. These states include 23 percent of all beneficiaries enrolled in Medicaid for any length of time in 2003. See Table 5. For detailed data tables from all 50 states and the District of Columbia, see the enclosed CD-ROM.

* All Other Medicaid Beneficiaries excludes mental health or substance abuse service users.

Members of the Expert Panel

The authors appreciate the assistance of the project's expert panel members:

- Barry Brauth
  New York State Office of Mental Health
- Teresa Coughlin
  The Urban Institute
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  Centers for Medicare & Medicaid Services
- Renata Henry
  Delaware Division of Substance Abuse and Mental Health
- Chuck Ingoglia
  National Council for Community Behavioral Healthcare
- Tricia Leddy
  Rhode Island Department of Mental Health, Retardation and Hospitals
- Julia Measheyy
  National Long-Term Care Ombudsman Resource Center
- David Shern
  Mental Health America

Appendix A

Summary Tables for 13 States Combined

ASSESSMENT OF DATA QUALITY AND COMPLETENESS CHART BOOK STATES, 2003

Tables 1–9 show the use and cost of services for Medicaid beneficiaries who received Medicaid-funded treatment for a mental illness or substance use disorder in 2003 and who reside in one of the 13 states that received the highest possible score for data quality and completeness: Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming. The data from these 13 states are the source of the tables used for the chart book. This page presents our assessment of the quality and completeness of the MAX data as they relate specifically to accurately identifying mental health and substance abuse service users and describing their service use patterns. Appendix B explains our assessment procedures.

CHART BOOK STATES DATA QUALITY AND COMPLETENESS = 4

Poor 1 2 3 Good 4

CHART BOOK STATES SCORE

The score to the left reflects the suitability of the MAX data in the chart book states for use in these tables. It is calculated by deducting points for data quality issues and managed care exclusions. Further details on the scoring methodology appear in Appendix B.

The score for the chart book states reflects the following:
Zero points deducted for data quality issues
Zero points deducted for managed care exclusions

DATA COMMENTS

Managed Care Enrollment	All states included in the chart book tables have less than one-third of all beneficiary months in managed care. Overall, 13 percent of the beneficiary months in the chart book states are excluded because of managed care, compared to over 40 percent nationally.
Type of Service	Four of the 13 states had at least one beneficiary during the year with an inpatient claim in a psychiatric hospital despite not covering such services in the state plan.
S-SCHIP	Some states operated both Medicaid and a separate SCHIP program (S-SCHIP), and in those states children could be enrolled in both programs at different points during the year. In 6 of the 13 states, claims incurred during months that these children were enrolled in S-SCHIP may have been erroneously included in the MAX files as Medicaid claims, causing expenditures and service use to be overstated in the tables. In one of the states, the S-SCHIP and Medicaid programs do not cover the same mental health and substance abuse benefits, which may affect the identification of mental health and substance abuse service users in this population.

Tables 2–9 do not include months in which an individual was enrolled in a comprehensive or behavioral managed care program. The effects of these exclusions vary by state, and within states, by eligibility group. The total number of beneficiary months in the MAX file excluded from those states included in the chart book is shown in the graph to the right.

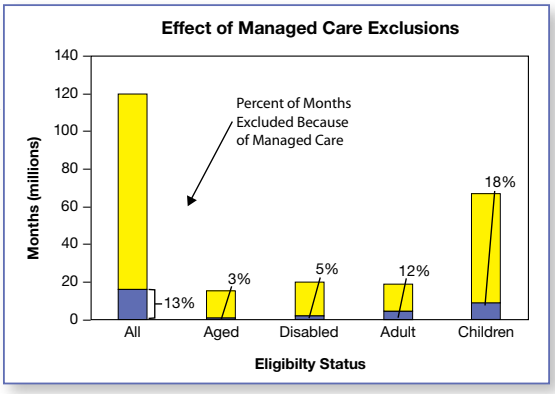

Table 1. Medicaid Beneficiaries and Expenditures Total and Fee-For-Service, Chart Book States, Calendar Year 2003

Population Characteristics	Beneficiaries[1]				Expenditures[2]		
	Total	Fee for Service (FFS)[3]			Total	FFS	
		In FFS 1 or More Months	Percent of All FFS Beneficiaries[4]	Average Number of Months in FFS		Expenditures	Percent of Total Expenditures[5]
All	12,905,148	11,813,939	100%	8.88	49,920,202,834	45,820,140,122	92%
Age							
0-5	3,252,210	2,838,533	24%	8.38	6,494,848,693	5,142,397,671	79%
6-12	2,512,348	2,238,658	19%	9.16	3,605,443,734	3,060,195,516	85%
13-18	1,687,186	1,527,716	13%	9.04	3,850,370,530	3,441,060,309	89%
19-21	532,228	495,983	4%	7.38	1,627,610,465	1,471,313,697	90%
22-44	2,397,452	2,263,255	19%	8.05	11,336,777,496	10,480,719,981	92%
45-64	1,011,722	974,520	8%	9.93	10,402,531,141	9,916,459,380	95%
65 and Older	1,511,579	1,474,853	12%	10.36	12,602,598,358	12,307,973,278	98%
Gender							
Female	7,656,966	7,042,343	60%	8.82	29,842,198,016	27,415,111,846	92%
Male	5,246,160	4,769,587	40%	8.98	20,074,571,675	18,401,667,952	92%
Race							
White	5,656,551	5,387,411	46%	9.08	27,613,739,390	26,357,756,681	95%
Black	3,877,987	3,474,049	29%	9.26	12,725,645,089	11,350,554,190	89%
Hispanic	2,655,473	2,279,164	19%	7.74	6,611,469,312	5,363,146,907	81%
American Indian/Alaska Native	97,137	91,862	1%	9.13	373,468,770	354,455,989	95%
Asian/Hawaiian/Pacific Islander	168,306	145,320	1%	8.72	525,307,480	424,538,062	81%
Other/Unknown	449,694	436,133	4%	9.48	2,070,572,793	1,969,688,293	95%
Eligibility Group[6]							
Aged	1,420,568	1,384,229	12%	10.30	11,674,770,206	11,388,616,747	98%
Disabled	1,840,607	1,763,978	15%	10.55	21,282,376,735	20,310,429,195	95%
Adults	2,388,828	2,246,530	19%	7.24	5,835,089,637	5,120,349,364	88%
Children	7,254,989	6,419,046	54%	8.69	11,127,955,281	9,000,733,947	81%
Dual Medicare Status[7]							
Aged Duals with Full Medicaid	1,180,776	1,144,869	10%	10.44	11,729,717,985	11,451,650,664	98%
Disabled Duals with Full Medicaid	543,798	527,913	4%	10.86	7,237,884,401	7,036,676,642	97%
Duals with Limited Medicaid	386,598	386,577	3%	10.42	599,778,118	591,507,860	99%
Other Duals	17,988	17,497	0%	8.54	110,039,119	103,007,794	94%
Disabled Non-Duals	1,072,523	1,012,121	9%	10.38	12,928,735,428	12,169,278,098	94%
All Other Non-Duals	9,703,465	8,724,962	74%	8.32	17,314,047,783	14,468,019,064	84%

For footnotes 1–7, see next page.

[1] Beneficiaries are all individuals enrolled in Medicaid, including children in a Medicaid-expansion State Children's Health Insurance Program (M-SCHIP), for at least 1 month during the year.

[2] FFS months refer to the total number of months that a beneficiary is not enrolled in a comprehensive or behavioral health managed care plan (that is, receiving services through the FFS system). Any beneficiary with at least 1 FFS month in 2003 is included in the count of FFS beneficiaries in subsequent tables.

[3] Expenditures are claims-based Medicaid payments, including both Federal and state share. FFS expenditures are expenditures for services delivered through the FFS system during FFS months.

[4] Calculated as a column percent, this is the percentage of all FFS beneficiaries in the state with the selected characteristic.

[5] Calculated as a row percent, this is the percentage of total expenditures for each subgroup that are FFS expenditures.

[6] Eligibility groups are mutually exclusive. The Disabled group includes beneficiaries of all ages who qualify for Medicaid due to disability. Children who qualify through receipt of Supplemental Security Income (SSI) payments are generally included in this group; disabled beneficiaries over 65 may be reported in either the Disabled or Aged group, depending on their classification in state enrollment files. The remaining beneficiaries are classified as Aged, Adults, or Children according to the basis of eligibility established and reported by the state in its enrollment files. Beneficiaries who had multiple bases of eligibility at different points during the year were classified according to their status in the last month they were eligible for Medicaid in 2003.

[7] Dual Medicare Status indicates whether, due to age or disability, an individual was eligible for both Medicare and Medicaid. In this situation, Medicare is the primary payer for benefits covered by both programs, and Medicaid acts as supplemental coverage. For beneficiaries who are eligible for both programs, the subgroups further differentiate between full Medicaid benefits—which entitle beneficiaries to assistance with Medicare cost-sharing as well as to services covered by Medicaid but not Medicare (for example, certain long-term care services or prescription drugs)—and limited Medicaid benefits, which may cover only part of Medicare cost-sharing. Beneficiaries were classified according to their dual eligible status in the last month they were eligible for Medicaid in 2003.

Note: The states included in this table are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming.

Table 2. Medicaid FFS Mental Health and Substance Abuse Service Users and Expenditures, Chart Book States, Calendar Year 2003

Population Characteristics	FFS Mental Health Service Users[1,2]				FFS Substance Abuse Service Users[2]				FFS Expenditures on Mental Health Service Users[7]	FFS Expenditures on Substance Abuse Service Users
	Number	Percent of FFS Beneficiaries[3]	Average Number of Months in FFS	Average Number of Months Receiving a MH Service[4]	Number	Percent of FFS Beneficiaries[5]	Average Number of Months in FFS	Average Number of Months Receiving SA Service[6]		
All	1,292,854	11%	10.5	4.3	87,336	1%	9.8	3.0	13,720,428,879	812,158,173
Age										
0-5	80,673	3%	10.1	3.0	1,223	0%	8.4	1.9	533,658,881	19,125,644
6-12	294,139	13%	10.6	4.3	539	0%	10.8	2.8	1,388,593,661	3,844,356
13-18	226,422	15%	10.5	4.5	15,444	1%	9.8	3.0	1,829,999,654	96,689,575
19-21	41,270	8%	9.7	3.2	5,110	1%	8.7	2.5	388,182,949	27,294,154
22-44	329,204	15%	10.2	4.1	42,424	2%	9.5	3.0	3,599,081,309	342,735,813
45-64	206,563	21%	11.0	5.2	18,891	2%	10.6	3.1	3,485,042,836	262,441,063
65 and Older	114,582	8%	11.0	4.4	3,705	0%	11.0	3.2	2,495,868,226	60,027,568
Gender										
Female	708,103	10%	10.5	4.1	44,856	1%	9.7	2.9	7,497,014,065	383,543,623
Male	584,625	12%	10.6	4.6	42,475	1%	9.9	3.0	6,222,718,965	428,604,874
Race										
White	783,057	15%	10.5	4.5	48,268	1%	9.6	3.2	8,824,921,617	439,638,014
Black	310,275	9%	10.7	4.2	28,202	1%	10.2	2.8	3,143,726,676	283,864,217
Hispanic	129,516	6%	10.3	3.7	6,328	0%	9.5	2.3	984,248,105	46,322,211
American Indian/Alaska Native	11,192	12%	10.7	4.3	1,795	2%	9.9	2.7	112,647,251	14,566,732
Asian/Hawaiian/Pacific Islander	7,512	5%	10.6	4.5	212	0%	9.6	2.6	82,122,688	2,039,605
Other/Unknown	51,302	12%	10.9	4.6	2,531	1%	10.0	2.9	572,762,542	25,727,394
Eligibility Group[8]										
Aged	101,319	7%	11.0	4.3	3,120	0%	10.9	3.2	2,205,528,699	51,277,804
Disabled	473,203	27%	11.2	5.5	31,527	2%	10.9	3.2	7,877,628,143	437,085,954
Adults	193,563	9%	9.3	2.5	34,804	2%	8.9	2.8	955,921,291	207,934,219
Children	524,769	8%	10.4	3.9	17,885	0%	9.5	2.9	2,681,350,746	115,860,196
Dual Medicare Status[9]										
Aged Duals with Full Medicaid	103,073	9%	11.0	4.5	3,215	0%	11.0	3.4	2,324,011,548	53,768,873
Disabled Duals with Full Medicaid	153,553	29%	11.3	5.9	9,101	2%	11.1	3.4	2,715,747,949	85,656,134
Duals with Limited Medicaid	24,440	6%	10.9	3.7	1,321	0%	10.7	2.0	124,343,279	5,571,985
Other Duals	4,914	28%	9.9	4.5	385	2%	9.6	3.7	42,207,612	3,481,593
Disabled Non-Duals	290,115	29%	11.1	5.4	20,860	2%	10.8	3.1	4,833,339,994	339,964,822
All Other Non-Duals	716,759	8%	10.1	3.5	52,454	1%	9.1	2.8	3,680,778,497	323,714,766

For footnotes 1–9, see next page.

[1] Beneficiaries are all individuals enrolled in Medicaid, including children in a Medicaid-expansion State Children's Health Insurance Program (M-SCHIP), for at least 1 month during the year. FFS months represent the total number of months that a beneficiary is not enrolled in a comprehensive or behavioral health managed care plan (that is, receiving services through the FFS system). Any beneficiary with at least 1 FFS month in 2003 is included in the count of FFS beneficiaries.

[2] FFS mental health service users include FFS beneficiaries who, during the year, (1) had at least one claim in which a mental health disorder was the primary diagnosis or (2) received a clearly identifiable inpatient mental health service. FFS substance abuse service users include FFS beneficiaries who, during the year, had at least one claim in which a substance use disorder was the primary diagnosis. The specific diagnoses and services used to define these beneficiary groups are listed in Section II of Appendix B. If beneficiaries had at least one claim in which a mental disorder was the primary diagnosis and at least one claim in which a substance use disorder was the primary diagnosis, they are included in the category that represents the diagnosis most frequently listed during the year.

[3] Percentage of FFS beneficiaries in the subgroup who used mental health services during the year. The denominator for this calculation can be found in Table 1.

[4] Months receiving a mental health (MH) service are those in which the beneficiary received a service (not including prescription drugs) that produced a claim with a primary diagnosis of a mental disorder, or a month in which the beneficiary received a clearly identifiable inpatient mental health service.

[5] Percentage of FFS beneficiaries in the subgroup who used a substance abuse service during the year. The denominator for this calculation can be found in Table 1.

[6] Months receiving a substance abuse (SA) service are those in which the beneficiary received a service that produced a claim with a primary diagnosis of a substance use disorder.

[7] Expenditures are claims-based Medicaid payments for all services, both MH/SA treatment and non-MH/SA treatment, and including both Federal and state share. FFS expenditures are expenditures for services delivered through the FFS system during FFS months.

[8] Eligibility groups are mutually exclusive. The Disabled group includes beneficiaries of all ages who qualify for Medicaid due to disability. Children who qualify through receipt of Supplemental Security Income (SSI) payments are generally included in this group; disabled beneficiaries over 65 may be reported in either the Disabled or Aged group, depending on their classification in state enrollment files. The remaining beneficiaries are classified as Aged, Adults, or Children according to the basis of eligibility established and reported by the state in its enrollment files. Beneficiaries who had multiple bases of eligibility at different points during the year were classified according to their status in the last month that they were eligible for Medicaid in 2003.

[9] Dual Medicare Status indicates whether, due to age or disability, an individual was eligible for both Medicare and Medicaid. In this situation, Medicare is the primary payer for benefits covered by both programs, and Medicaid acts as supplemental coverage. For beneficiaries who are eligible for both programs, the subgroups further differentiate between full Medicaid benefits–which entitle beneficiaries to assistance with Medicare cost-sharing as well as to services covered by Medicaid but not Medicare (for example, certain long-term care services or prescription drugs)–and limited Medicaid benefits, which may cover only part of Medicare cost-sharing. Beneficiaries were classified according to their dual eligible status in the last month they were eligible for Medicaid in 2003.

Note: The states included in this table are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming.

Table 3. Medicaid FFS Mental Health and Substance Abuse Service Users by Diagnostic Category and Age Group, Chart Book States, Calendar Year 2003

Diagnostic Category[1]	All Ages		21 and Under		22-64		65 and Older	
	Number	Percent[2]	Number	Percent	Number	Percent	Number	Percent
FFS Mental Health Service Users[3,4]								
Schizophrenia	116,116	9%	3,636	1%	97,050	18%	15,430	13%
Major depression and affective psychoses	254,669	20%	55,423	9%	170,967	32%	28,279	25%
Other psychoses	38,199	3%	3,648	1%	17,649	3%	16,902	15%
Childhood psychoses	20,965	2%	17,241	3%	3,414	1%	310	0%
Neurotic and other depressive disorders	280,681	22%	84,048	13%	160,043	30%	36,590	32%
Personality disorders	6,953	1%	1,515	0%	4,679	1%	759	1%
Other mental disorders	16,311	1%	4,090	1%	7,475	1%	4,746	4%
Special symptoms or syndromes	42,436	3%	21,402	3%	16,954	3%	4,080	4%
Stress and adjustment reactions	158,617	12%	113,030	18%	39,488	7%	6,099	5%
Conduct disorders	57,902	4%	48,831	8%	7,997	1%	1,074	1%
Emotional disturbances	57,894	4%	57,383	9%	447	0%	64	0%
Hyperkinetic syndrome	234,093	18%	229,542	36%	4,477	1%	74	0%
Mental disorders associated with childbirth	7,799	1%	2,686	0%	5,111	1%	2	0%
No diagnosis	218	0%	29	0%	16	0%	173	0%
Total	1,292,853	100%	642,504	100%	535,767	100%	114,582	100%
FFS Substance Abuse Service Users[4]								
Alcoholic psychoses	3,672	4%	178	1%	2,475	4%	1,019	28%
Alcohol dependence or nondependent abuse	29,939	34%	4,080	18%	24,087	39%	1,772	48%
Drug psychoses	4,830	6%	743	3%	3,534	6%	553	15%
Drug dependence or nondependent abuse	45,847	52%	15,647	70%	29,842	49%	358	10%
Substance abuse associated with childbirth	3,048	3%	1,668	7%	1,377	2%	3	0%
Total	87,336	100%	22,316	100%	61,315	100%	3,705	100%

For footnotes 1–4, see next page.

[1] The diagnostic categories are mutually exclusive. The ICD-9-CM codes used to define each condition are listed at the bottom of this table. Each beneficiary was classified into a single diagnostic category according to the diagnosis that occurred most frequently on claims during the year.

[2] Calculated as a column percent, this is the percentage of FFS mental health or substance abuse service users in the age subgroup who are categorized into each diagnostic category.

[3] Beneficiaries are all individuals enrolled in Medicaid, including children in a Medicaid-expansion State Children's Health Insurance Program (M-SCHIP), for at least 1 month during the year. FFS beneficiaries are all beneficiaries who received services through the FFS system for at least 1 month in 2003.

[4] FFS mental health service users include FFS beneficiaries who, during the year, (1) had at least one claim in which a mental health disorder was the primary diagnosis or (2) received a clearly identifiable inpatient mental health service. FFS substance abuse service users include FFS beneficiaries who, during the year, had at least one claim in which a substance use disorder was the primary diagnosis. The specific diagnoses and services used to define these beneficiary groups are listed in Section II of Appendix B. If beneficiaries had at least one claim in which a mental disorder was the primary diagnosis and at least one claim in which a substance use disorder was the primary diagnosis, they are included in the category that represents the diagnosis most frequently listed during the year.

Schizophrenia (ICD-9 CM diagnosis codes beginning with 295) includes both chronic and acute schizophrenic disorders.

Major depression and affective psychoses (ICD-9 CM diagnosis codes beginning with 296) include manic, depressive, and bipolar disorders.

Other psychoses (ICD-9 CM diagnosis codes beginning with 297 or 298) include paranoid states, delusional disorders, depressive psychosis, and reactive psychoses.

Childhood psychoses (ICD-9 CM diagnosis codes beginning with 299) include infantile autism, disintegrative disorders, and childhood type schizophrenia.

Neurotic and other depressive disorders (ICD-9 CM diagnosis codes beginning with 300 or 311) include anxiety states; phobic, obsessive compulsive, and other neurotic disorders; and unspecified depressive disorders.

Personality disorders (ICD-9 CM diagnosis codes beginning with 301) include affective, schizoid, explosive, histrionic, antisocial, dependent, and other personality disorders.

Other mental disorders (ICD-9 CM diagnosis codes beginning with 302, 306, or 310) include sexual deviations, physiological malfunction arising from mental factors, and nonpsychotic mental disorders due to organic brain damage.

Special symptoms or syndromes (ICD-9 CM diagnosis codes beginning with 307) include eating disorders, tics and repetitive movement disorders, sleep disorders, and enuresis.

Stress and adjustment reactions (ICD-9 CM diagnosis codes beginning with 308 or 309) include acute reaction to stress, depressive reaction, and separation disorders, and conduct disturbance.

Conduct disorders (ICD-9 CM diagnosis codes beginning with 312) include aggressive outbursts, truancy, delinquency, kleptomania, impulse control disorder, and other conduct disorders.

Emotional disturbances (ICD-9 CM diagnosis codes beginning with 313) include overanxious disorder, shyness, relationship problems, and other mixed emotional disturbances of childhood or adolescence such as oppositional disorder.

Hyperkinetic syndrome (ICD-9 CM diagnosis codes beginning with 314) includes attention deficit with and without hyperactivity and hyperkinesis with or without developmental delay.

Mental disorders associated with childbirth (ICD-9 CM diagnosis codes 648.40 through 648.44) include mental disorders of the mother associated with pregnancy, delivery, and postpartum periods.

Alcohol psychoses (ICD-9 CM diagnosis codes beginning with 291) include alcohol-induced mental disorders.

Alcohol dependence or nondependent abuse (ICD-9 CM diagnosis codes beginning with 303 and 305.0) includes alcohol dependence sydrome, acute alcoholic intoxication, and nondependent alcohol abuse.

Drug psychoses (ICD-9 CM diagnosis codes beginning with 292) include drug-induced mental disorders and drug withdrawal.

Drug dependence or nondependence abuse (ICD-9 CM diagnosis codes beginning with 304, 305.2–305.9, and 965.0) includes all drug dependence and nondependent abuse except for those relating to alcohol or nicotine, and poisoning by opiates and related narcotics.

Substance abuse associated with childbirth (ICD-9 CM diagnosis codes 648.3, 760.71, and 779.5) includes drug dependence complicating pregnancy, childbirth, or the puerperium; fetal alcohol syndrome or alcohol withdrawal in a newborn; and drug withdrawal syndrome in a newborn.

Note: The states included in this table are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming.

Table 4. Inpatient Hospital Use and Average Annual Hospital Days per Person-Year for Medicaid FFS Beneficiaries,[1] by Age Group, Chart Book States, Calendar Year 2003

			All Ages	Age Group						
				0-5	6-12	13-18	19 21	22-44	45 64	65+
FFS Mental Health Service Users[2]										
MH Treatment	Total Inpatient Utilization	Number of Beneficiaries	100,899	8,489	9,891	21,921	4,620	33,439	17,946	4,593
		Percentage of FFS MH Service Users[4]	8%	11%	3%	10%	11%	10%	9%	4%
		Total Days	2,080,915	14,782	259,183	681,248	71,240	474,734	418,825	160,903
		Average Annual Days per Person-Year[5]	24	3	28	35	19	16	25	37
	Psychiatric Hospital	Number of Beneficiaries	26,448	235	5,496	13,012	1,464	2,527	2,027	1,687
		Percentage of FFS MH Service Users[6]	2%	0%	2%	6%	4%	1%	1%	1%
		Total Days	1,437,747	4,018	202,408	583,225	39,894	198,936	261,098	148,168
		Average Annual Days per Person-Year	61	18	40	52	33	85	135	95
	General Inpatient Hospital	Number of Beneficiaries	77,797	8,271	5,008	10,369	3,552	31,380	16,188	3,029
		Percentage of FFS MH Service Users[7]	6%	10%	2%	5%	9%	10%	8%	3%
		Total Days	643,168	10,764	56,775	98,023	31,346	275,798	157,727	12,735
		Average Annual Days per Person-Year	10	2	12	11	11	10	10	4
Non-MH Treatment	Total Inpatient Utilization	Number of Beneficiaries	178,736	13,318	5,647	10,245	8,481	54,580	46,772	39,693
		Percentage of FFS MH Service Users[8]	14%	17%	2%	5%	21%	17%	23%	35%
		Total Days	923,866	118,030	29,275	57,132	40,327	306,348	322,278	50,476
		Average Annual Days per Person-Year	6	14	5	6	6	6	7	1
FFS Substance Abuse Service Users[9]										
SA Treatment[10]	Total Inpatient Utilization	Number of Beneficiaries	11,025	59	5	268	359	6,107	3,736	491
		Percentage of FFS SA Service Users[11]	13%	5%	1%	2%	7%	14%	20%	13%
		Total Days	90,159	671	8	1,081	1,640	51,356	34,622	781
		Average Annual Days per Person-Year	10	18	2	5	6	10	10	2
Non-SA Treatment	Total Inpatient Utilization	Number of Beneficiaries	21,550	598	31	1,011	1,390	10,629	6,494	1,397
		Percentage of FFS SA Service Users[12]	25%	49%	6%	7%	27%	25%	34%	38%
		Total Days	160,580	9,147	318	5,069	5,533	72,571	64,977	2,965
		Average Annual Days per Person-Year	9	26	11	6	5	8	11	2
All Other FFS Beneficiaries[13]										
Total Inpatient Utilization		Number of Beneficiaries	1,322,998	449,390	24,552	55,715	100,960	357,860	134,382	200,139
		Percentage of All Other FFS Beneficiaries[14]	13%	16%	1%	4%	22%	19%	18%	15%
		Total Days	4,853,775	1,831,239	118,395	212,631	318,246	1,319,192	868,018	186,054
		Average Annual Days per Person-Year	6	7	6	5	5	6	8	1

For footnotes 1–14, see next page.

[1] Beneficiaries are all individuals enrolled in Medicaid, including children in a Medicaid-expansion State Children's Health Insurance Program (M-SCHIP), for at least 1 month during the year. FFS beneficiaries are all beneficiaries who received services through the FFS system for at least 1 month in 2003.

[2,9] FFS mental health service users include FFS beneficiaries who, during the year, (1) had at least one claim in which a mental health disorder was the primary diagnosis or (2) received a clearly identifiable inpatient mental health service. FFS substance abuse service users include FFS beneficiaries who, during the year, had at least one claim in which a substance use disorder was the primary diagnosis. The specific diagnoses and services used to define these beneficiary groups are listed in Section II of Appendix B. If beneficiaries had at least one claim in which a mental disorder was the primary diagnosis and at least one claim in which a substance use disorder was the primary diagnosis, they are included in the category that represents the diagnosis most frequently listed during the year.

[3] Inpatient hospital stays for mental health service users were classified as mental health (MH) treatment or non-mental health (non-MH) treatment based on the primary diagnosis for the stay. Inpatient stays for mental health treatment are further divided into stays at a general inpatient hospital and stays at a psychiatric hospital based on the type of service code. Beneficiaries with inpatient mental health treatment at both a general hospital and a psychiatric hospital will appear in the data for both types of hospitalization, but the "total inpatient utilization" rows only count individuals with inpatient mental health treatment once ("deduplicated"). Beneficiaries with inpatient stays for both mental health and non-mental health treatment will appear in both the "MH treatment" and "Non-MH treatment" rows.

[4] The percentage of all mental health service users in the specified age group who had an inpatient stay for mental health treatment. The denominator for this statistic can be found in Table 2.

[5] Average annual days per person-year is the sum of inpatient days, shown in the preceding row, divided by the sum of person-years in FFS Medicaid among the beneficiaries who received those inpatient days. Person-years are the sum of months in FFS Medicaid among users of the inpatient service, divided by 12. For example, two beneficiaries who were each enrolled in FFS Medicaid for 6 months in 2003 would represent 1 person-year.

[6] The percentage of FFS mental health service users in the specified age group who had an inpatient stay in a psychiatric facility for mental health treatment. The denominator for this statistic can be found in Table 2.

[7] The percentage of FFS mental health service users in the specified age group who had an inpatient stay in a general inpatient hospital for mental health treatment. The denominator for this statistic can be found in Table 2.

[8] The percentage of FFS mental health service users in the specified age group who had an inpatient stay in a general inpatient hospital for non-mental health treatment. The denominator for this statistic can be found in Table 2.

[9] See footnote 2.

[10] Inpatient hospital stays for mental health service users were classified as mental health (MH) treatment or non-mental health (non-MH) treatment based on the primary diagnosis for the stay. Inpatient stays for mental health treatment are further divided into stays at a general inpatient hospital and stays at a psychiatric hospital based on the type of service code. Beneficiaries with inpatient MH treatment at both a general hospital and a psychiatric hospital will appear in the data for both types of hospitalization, but the "total inpatient utilization" rows only count individuals with inpatient MH treatment once ("deduplicated"). Beneficiaries with inpatient stays for both MH and non-MH treatment will appear in both the "MH treatment" and "Non-MH treatment" rows.

[11] The percentage of FFS substance abuse service users in the specified age group who had an inpatient stay for substance abuse treatment. The denominator for this statistic can be found in Table 2.

[12] The percentage of FFS substance abuse service users in the specified age group who had an inpatient stay for non-substance abuse treatment. The denominator for this statistic can be found in Table 2.

[13] FFS beneficiaries that are not included in the mental health or substance abuse service user groups above.

[14] The percentage of all FFS beneficiaries in the specified age group with no mental health or substance abuse service use who had an inpatient stay during the year.

Note: The states included in this table are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming.

Table 5. Emergency Room Use for Medicaid FFS Beneficiaries,[1] by Sex and Age Group, Chart Book States, Calendar Year 2003

Sex	Age Group	FFS Mental Health Service Users with Any Emergency Room Use[2]					FFS Substance Abuse Service Users with Any Emergency Room Use[3]					All Other FFS Beneficiaries With Any Emergency Room Use		
		Number	Percent of FFS MH Service Users[5]	Average Number of Emergency Room Visits per Person Year[4]			Number	Percent of FFS SA Service Users[7]	Average Number of Emergency Room Visits per Person Year			Number	Percent of Total Other FFS Beneficiaries[9]	Average Number of Emergency Room Visits per Person Year
				For MH Treatment[6]	For Non MH Treatment	Total ER Visits			For SA Treatment[8]	For Non SA Treatment	Total ER Visits			
Female	0-21	116,169	45%	0.53	2.54	3.07	5,182	56%	0.35	2.74	3.09	1,002,971	30%	2.36
	22-64	207,797	57%	0.52	3.61	4.13	22,257	65%	0.48	3.92	4.40	605,104	31%	2.96
	65+	41,650	49%	0.24	2.76	3.00	897	65%	0.34	3.00	3.34	213,504	22%	2.50
	All Ages	365,616	52%	0.49	3.17	3.66	28,336	63%	0.45	3.67	4.12	1,821,579	29%	2.57
Male	0-21	148,902	39%	0.59	2.20	2.80	5,441	41%	0.37	2.09	2.46	922,450	30%	2.34
	22-64	148,902	39%	0.59	2.20	2.80	5,441	41%	0.37	2.09	2.46	922,450	30%	2.34
	65+	14,660	49%	0.33	2.93	3.26	1,384	60%	0.60	3.11	3.71	76,873	19%	2.67
	All Ages	246,744	42%	0.69	2.63	3.32	24,635	58%	0.72	3.68	4.39	1,207,456	29%	2.49
Total	0-21	265,071	41%	0.57	2.35	2.92	10,623	48%	0.36	2.40	2.77	1,925,421	30%	2.35
	22-64	290,979	54%	0.64	3.54	4.18	40,067	65%	0.64	4.05	4.69	813,237	31%	3.00
	65+	56,310	49%	0.26	2.80	3.06	2,281	62%	0.50	3.07	3.57	290,377	21%	2.54
	All Ages	612,360	47%	0.57	2.95	3.52	52,971	61%	0.58	3.67	4.25	3,029,035	29%	2.54

For footnotes 1–9, see next page.

[1] Beneficiaries are all individuals enrolled in Medicaid, including children in a Medicaid-expansion State Children's Health Insurance Program (M-SCHIP), for at least 1 month during the year. FFS beneficiaries are all beneficiaries who received services through the FFS system for at least 1 month in 2003.

[2,3] FFS mental health service users include FFS beneficiaries who, during the year, (1) had at least one claim in which a mental health disorder was the primary diagnosis or (2) received a clearly identifiable inpatient mental health service. FFS substance abuse service users include FFS beneficiaries who, during the year, had at least one claim in which a substance use disorder was the primary diagnosis. The specific diagnoses and services used to define these beneficiary groups are listed in Section II of Appendix B. If beneficiaries had at least one claim in which a mental disorder was the primary diagnosis and at least one claim in which a substance use disorder was the primary diagnosis, they are included in the category that represents the diagnosis most frequently listed during the year.

[4] Average number of emergency room visits per person-year is the sum of the number of visits among users divided by the number of person-years that those users were enrolled in FFS Medicaid. Person-years are the sum of months in FFS Medicaid among users of the inpatient service, divided by 12. For example, two beneficiaries who were each enrolled in FFS Medicaid for 6 months in 2003 would represent 1 person-year.

[5] The percentage of FFS mental health service users in the specified age group who had an emergency room visit in 2003. The denominator for this statistic can be found in Table 2.

[6] An emergency room visit is classified as "for MH treatment" if the primary diagnosis on the claim is a mental disorder.

[7] The percentage of FFS substance abuse service users in the specified age group who had an emergency room visit in 2003. The denominator for this statistic can be found in Table 2.

[8] An emergency room visit is classified as "for SA treatment" if the primary diagnosis on the claim is a substance use disorder.

[9] The percentage of all FFS beneficiaries not included in the mental health or substance abuse service user groups at left who had an emergency room visit in 2003.

Note: The states included in this table are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming.

Table 6. Prescription Psychotropic Drug Use[1] for Medicaid FFS Beneficiaries,[2] by Age Group, Chart Book States, Calendar Year 2003

Age Group	Total FFS Beneficiaries with Any Psychotropic Drug Use		FFS Mental Health Service Users with Any Psychotropic Drug Use[3]		FFS Substance Abuse Service Users with Any Psychotropic Drug Use[4]		All Other FFS Beneficiaries with Any Psychotropic Drug Use[5]	
	Number	Percent of FFS Beneficiaries[6]	Number	Percent of FFS MH Service Users[7]	Number	Percent of FFS SA Service Users[8]	Number	Percent of All Other FFS Beneficiaries[9]
0-5	95,506	3%	19,986	25%	60	5%	75,460	3%
6-12	277,173	12%	193,350	66%	160	30%	83,663	4%
13-18	205,765	13%	141,065	62%	3,963	26%	60,737	5%
19-21	55,017	11%	27,098	66%	1,502	29%	26,417	6%
22-44	526,965	23%	262,080	80%	21,243	50%	243,642	13%
45-64	399,802	41%	174,611	85%	11,198	59%	213,993	29%
65+	441,565	30%	92,456	81%	2,154	58%	346,955	26%
All Ages	2,001,793	17%	910,646	70%	40,280	46%	1,050,867	10%

For footnotes 1–9, see next page.

[1] Psychotropic drugs include antidepressants, antipsychotics, antianxiety agents, and stimulants. Further information on the drugs included in each category can be found in Appendix B.

[2] Beneficiaries are all individuals enrolled in Medicaid, including children in a Medicaid-expansion State Children's Health Insurance Program (M-SCHIP), for at least 1 month during the year. FFS beneficiaries are all beneficiaries who received services through the FFS system for at least 1 month in 2003.

[3,4] FFS mental health service users include FFS beneficiaries who, during the year, (1) had at least one claim in which a mental health disorder was the primary diagnosis or (2) received a clearly identifiable inpatient mental health service. FFS substance abuse service users include FFS beneficiaries who, during the year, had at least one claim in which a substance use disorder was the primary diagnosis. The specific diagnoses and services used to define these beneficiary groups are listed in Section II of Appendix B. If beneficiaries had at least one claim in which a mental disorder was the primary diagnosis and at least one claim in which a substance use disorder was the primary diagnosis, they are included in the category that represents the diagnosis most frequently listed during the year.

[5] All other FFS beneficiaries not included in the mental health or substance abuse service user groups at left.

[6] The percentage of all FFS beneficiaries in the specified age group who used a psychotropic drug during the year. The denominator for this statistic can be found in Table 1.

[7] The percentage of FFS mental health service users in the specified age group who used a psychotropic drug during the year. The denominator for this statistic can be found in Table 2.

[8] The percentage of FFS substance abuse service users in the specified age group who used a psychotropic drug during the year. The denominator for this statistic can be found in Table 2.

[9] The percentage of all FFS beneficiaries not included in the mental health and substance abuse service user groups who used a psychotropic drug during the year.

Note: The states included in this table are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming.

Table 7A. Percent of Medicaid FFS Mental Health or Substance Abuse Service Users Who Used Prescription Psychotropic Drugs, by Diagnostic Category and Drug Type, Ages 21 and Under, Chart Book States, Calendar Year 2003

Diagnostic Category	Total FFS Beneficiaries[2]	Percent Using Psychotropic Drug[1]					Percent with No Psychotropic Drug Us
		Antidepressants	Antipsychotics	Antianxiety Agents	Stimulants	More than One Psychotropic Drug Type	
FFS Mental Health Service Users[3,4]							
Schizophrenia	3,636	48%	78%	14%	12%	54%	18%
Major depression and affective psychoses	55,423	60%	40%	9%	25%	44%	25%
Other psychoses	3,648	36%	64%	9%	19%	42%	28%
Childhood psychoses	17,241	24%	32%	10%	24%	28%	48%
Neurotic and other depressive disorders	84,048	42%	10%	9%	12%	18%	49%
Personality disorders	1,515	32%	22%	7%	17%	23%	53%
Other mental disorders	4,090	12%	6%	7%	6%	7%	79%
Special symptoms or syndromes	21,402	12%	4%	6%	7%	5%	78%
Stress and adjustment reactions	113,030	19%	8%	5%	16%	13%	68%
Conduct disorders	48,831	20%	16%	5%	23%	18%	60%
Emotional disturbances	57,383	21%	15%	4%	26%	19%	59%
Hyperkinetic syndrome	229,542	20%	14%	5%	82%	27%	15%
Mental disorders associated with childbirth	2,686	40%	2%	8%	0%	7%	56%
Mental health beneficiary with no diagnosis	29	7%	10%	3%	7%	3%	79%
Total	642,504	26%	16%	6%	41%	23%	41%
FFS Substance Abuse Service Users[4]							
Alcoholic psychoses	178	16%	3%	7%	6%	6%	76%
Alcohol dependence or nondependent abuse	4,080	17%	6%	4%	5%	8%	77%
Drug psychoses	743	18%	6%	11%	5%	9%	70%
Drug dependence or nondependent abuse	15,647	20%	7%	5%	7%	10%	73%
Substance abuse associated with childbirth	1,668	7%	3%	3%	5%	4%	87%
Total	22,316	18%	7%	5%	7%	9%	75%
All FFS MH and SA Service Users	664,820	26%	15%	6%	40%	22%	42%

For footnotes 1–4, see next page.

[1] Percentage of FFS beneficiaries in each diagnostic category who filled a prescription for each type of psychotropic drug during the year. Further information on the drugs included in each category can be found in Appendix B. The percentages within a row do not add to 100 percent because beneficiaries may use more than one type of psychotropic drug.

[2] The number of FFS mental health or substance abuse service users who are classified into each diagnostic category, regardless of psychotropic drug use. Each beneficiary was classified into a single diagnostic category according to the diagnosis that occurred most frequently in claims during the year.

[3] Beneficiaries are all individuals enrolled in Medicaid, including children in a Medicaid-expansion State Children's Health Insurance Program (M-SCHIP), for at least 1 month during the year. FFS beneficiaries are all beneficiaries who received services through the FFS system for at least 1 month in 2003.

[4] FFS mental health service users include FFS beneficiaries who, during the year, (1) had at least one claim in which a mental health disorder was the primary diagnosis or (2) received a clearly identifiable inpatient mental health service. FFS substance abuse service users include FFS beneficiaries who, during the year, had at least one claim in which a substance use disorder was the primary diagnosis. The specific diagnoses and services used to define these beneficiary groups are listed in Section II of Appendix B. If beneficiaries had at least one claim in which a mental disorder was the primary diagnosis and at least one claim in which a substance use disorder was the primary diagnosis, they are included in the category that represents the diagnosis most frequently listed during the year.

Note: The states included in this table are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming.

Table 7B. Percent of Medicaid FFS Mental Health or Substance Abuse Service Users Who Used Prescription Psychotropic Drugs, by Diagnostic Category and Drug Type, Ages 22 to 64, Chart Book States, Calendar Year 2003

Diagnostic Category	Total FFS Beneficiaries[2]	Percent Using Psychotropic Drug[1]					Percent with No Psychotropic Drug Use
		Antidepressants	Antipsychotics	Antianxiety Agents	Stimulants	More than One Psychotropic Drug Type	
FFS Mental Health Service Users[3,4]							
Schizophrenia	97,050	47%	86%	25%	1%	54%	11%
Major depression and affective psychoses	170,967	74%	45%	36%	3%	55%	15%
Other psychoses	17,649	45%	66%	25%	1%	46%	21%
Childhood psychoses	3,414	42%	59%	25%	4%	42%	23%
Neurotic and other depressive disorders	160,043	72%	16%	40%	2%	39%	18%
Personality disorders	4,679	59%	41%	29%	3%	44%	27%
Other mental disorders	7,475	41%	20%	24%	2%	25%	44%
Special symptoms or syndromes	16,954	45%	9%	30%	1%	22%	42%
Stress and adjustment reactions	39,488	59%	17%	31%	2%	33%	32%
Conduct disorders	7,997	47%	59%	27%	3%	45%	21%
Emotional disturbances	447	42%	35%	21%	4%	32%	36%
Hyperkinetic syndrome	4,477	50%	20%	21%	60%	50%	16%
Mental disorders associated with childbirth	5,111	42%	3%	10%	0%	9%	54%
Mental health beneficiary with no diagnosis	16	56%	31%	38%	0%	44%	25%
Total	535,767	64%	40%	34%	3%	46%	18%
FFS Substance Abuse Service Users[4]							
Alcoholic psychoses	2,475	36%	24%	36%	1%	29%	40%
Alcohol dependence or nondependent abuse	24,087	40%	15%	25%	1%	24%	49%
Drug psychoses	3,534	49%	17%	51%	1%	38%	29%
Drug dependence or nondependent abuse	29,842	42%	15%	26%	2%	25%	47%
Substance abuse associated with childbirth	1,377	17%	1%	9%	0%	5%	78%
Total	61,315	41%	15%	27%	1%	25%	47%
All FFS MH and SA Service Users	597,082	61%	38%	33%	2%	44%	21%

For footnotes 1–4, see next page.

[1] Percentage of FFS beneficiaries in each diagnostic category who filled a prescription for each type of psychotropic drug during the year. Further information on the drugs included in each category can be found in Appendix B. The percentages within a row do not add to 100 percent because beneficiaries may use more than one type of psychotropic drug.

[2] The number of FFS mental health or substance abuse service users who are classified into each diagnostic category, regardless of psychotropic drug use. Each beneficiary was classified into a single diagnostic category according to the diagnosis that occurred most frequently in claims during the year.

[3] Beneficiaries are all individuals enrolled in Medicaid, including children in a Medicaid-expansion State Children's Health Insurance Program (M-SCHIP), for at least 1 month during the year. FFS beneficiaries are all beneficiaries who received services through the FFS system for at least 1 month in 2003.

[4] FFS mental health service users include FFS beneficiaries who, during the year, (1) had at least one claim in which a mental health disorder was the primary diagnosis or (2) received a clearly identifiable inpatient mental health service. FFS substance abuse service users include FFS beneficiaries who, during the year, had at least one claim in which a substance use disorder was the primary diagnosis. The specific diagnoses and services used to define these beneficiary groups are listed in Section II of Appendix B. If beneficiaries had at least one claim in which a mental disorder was the primary diagnosis and at least one claim in which a substance use disorder was the primary diagnosis, they are included in the category that represents the diagnosis most frequently listed during the year.

Note: The states included in this table are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming.

Table 7C. Percent of Medicaid FFS Mental Health or Substance Abuse Service Users Who Used Prescription Psychotropic Drugs, by Diagnostic Category and Drug Type, Ages 65 and Older, Chart Book States, Calendar Year 2003

Diagnostic Category	Total FFS Beneficiaries[2]	Percent Using Psychotropic Drug[1]					Percent with No Psychotropic Drug Use
		Antidepressants	Antipsychotics	Antianxiety Agents	Stimulants	More than One Psychotropic Drug Type	
FFS Mental Health Service Users[3,4]							
Schizophrenia	15,430	43%	86%	30%	0%	54%	9%
Major depression and affective psychoses	28,279	75%	48%	39%	1%	57%	13%
Other psychoses	16,902	46%	49%	31%	1%	42%	28%
Childhood psychoses	310	34%	65%	21%	0%	35%	21%
Neurotic and other depressive disorders	36,590	66%	29%	42%	1%	45%	20%
Personality disorders	759	55%	52%	36%	0%	49%	21%
Other mental disorders	4,746	38%	33%	27%	1%	30%	39%
Special symptoms or syndromes	4,080	45%	31%	36%	1%	36%	35%
Stress and adjustment reactions	6,099	59%	27%	37%	0%	40%	25%
Conduct disorders	1,074	55%	67%	38%	1%	56%	15%
Emotional disturbances	64	47%	38%	34%	0%	36%	22%
Hyperkinetic syndrome	74	43%	19%	28%	20%	38%	42%
Mental disorders associated with childbirth	2	50%	50%	0%	0%	50%	50%
Mental health beneficiary with no diagnosis	173	55%	65%	48%	0%	62%	25%
Total	114,582	60%	45%	37%	1%	47%	19%
FFS Substance Abuse Service Users[4]							
Alcoholic psychoses	1,019	42%	42%	33%	0%	38%	33%
Alcohol dependence or nondependent abuse	1,772	31%	17%	25%	0%	20%	51%
Drug psychoses	553	50%	30%	41%	1%	40%	31%
Drug dependence or nondependent abuse	358	47%	14%	39%	1%	32%	39%
Substance abuse associated with childbirth	3	33%	33%	0%	0%	33%	67%
Total	3,705	38%	26%	31%	0%	29%	42%
All FFS MH and SA Service Users	118,287	59%	44%	37%	1%	47%	20%

For footnotes 1–4, see next page.

[1] Percentage of FFS beneficiaries in each diagnostic category who filled a prescription for each type of psychotropic drug during the year. Further information on the drugs included in each category can be found in Appendix B. The percentages within a row do not add to 100 percent because beneficiaries may use more than one type of psychotropic drug.

[2] The number of FFS mental health or substance abuse service users who are classified into each diagnostic category, regardless of psychotropic drug use. Each beneficiary was classified into a single diagnostic category according to the diagnosis that occurred most frequently in claims during the year.

[3] Beneficiaries are all individuals enrolled in Medicaid, including children in a Medicaid-expansion State Children's Health Insurance Program (M-SCHIP), for at least 1 month during the year. FFS beneficiaries are all beneficiaries who received services through the FFS system for at least 1 month in 2003.

[4] FFS mental health service users include FFS beneficiaries who, during the year, (1) had at least one claim in which a mental health disorder was the primary diagnosis or (2) received a clearly identifiable inpatient mental health service. FFS substance abuse service users include FFS beneficiaries who, during the year, had at least one claim in which a substance use disorder was the primary diagnosis. The specific diagnoses and services used to define these beneficiary groups are listed in Section II of Appendix B. If beneficiaries had at least one claim in which a mental disorder was the primary diagnosis and at least one claim in which a substance use disorder was the primary diagnosis, they are included in the category that represents the diagnosis most frequently listed during the year.

Note: The states included in this table are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming.

Table 8. Serious Physical Conditions[1] Among Medicaid FFS Beneficiaries,[2] by Age, Chart Book States, Calendar Year 2003

Age	FFS Beneficiaries						Average FFS Expenditures per Month[3]			
	MH Service Users[4]		SA Service Users[5]		All Other FFS Beneficiaries[6]		Total	MH Service Users	SA Service Users	All Other FFS Beneficiaries
	Number	Percent[7]	Number	Percent[8]	Number	Percent[9]				
Beneficiaries with No Serious Physical Conditions	1,102,371	85%	73,109	84%	9,644,959	92%	282	751	680	212
Beneficiaries with One Serious Physical Condition	128,177	10%	9,521	11%	555,778	5%	1,507	1,999	1,601	1,382
Beneficiaries with Two Serious Physical Conditions	38,016	3%	2,861	3%	150,475	1%	2,204	2,739	2,627	2,052
Beneficiaries with Three or More Serious Physical Conditions	24,289	2%	1,845	2%	82,117	1%	3,445	4,032	4,717	3,233
Serious Physical Conditions Among Beneficiaries Aged 0-21										
Cardiovascular	497	3%	17	3%	2,782	2%	7,860	9,071	20,990	7,544
Central Nervous System	2,937	15%	72	11%	14,991	13%	3,320	3,496	4,429	3,279
Pulmonary	5,057	26%	233	35%	41,416	35%	3,148	4,158	4,649	3,002
Skeletal and Connective	144	1%	5	1%	698	1%	2,066	2,749	843	1,923
Gastrointestinal	3,286	17%	154	23%	19,752	17%	3,987	4,176	4,498	3,948
Renal	809	4%	37	6%	4,140	4%	3,814	4,350	11,946	3,630
Skin	204	1%	3	0%	935	1%	4,492	6,025	4,236	4,154
Developmental Disability	2,476	13%	18	3%	5,605	5%	3,566	3,559	3,723	3,568
Metabolic	3,151	16%	104	16%	13,506	11%	2,446	3,025	5,125	2,277
Infectious Disease	1,004	5%	41	6%	10,897	9%	3,271	5,635	12,566	2,975
Cancer	1,859	10%	68	10%	10,386	9%	2,059	2,980	3,339	1,870
Hematologic	2,171	11%	79	12%	15,952	14%	1,956	3,558	3,711	1,713
Total	19,283	100%	658	100%	117,908	100%	2,097	2,762	3,226	1,970
Serious Physical Conditions Among Beneficiaries Aged 22-64										
Cardiovascular	26,734	23%	2,774	23%	80,810	24%	2,328	3,003	3,096	2,055
Central Nervous System	9,826	9%	729	6%	28,731	9%	2,546	2,960	2,678	2,396
Pulmonary	17,074	15%	2,484	21%	43,669	13%	3,152	3,390	3,493	3,025
Skeletal and Connective	1,476	1%	267	2%	4,350	1%	2,385	3,297	2,737	2,034
Gastrointestinal	16,946	15%	4,049	34%	43,649	13%	2,352	2,688	2,322	2,207
Diabetes	28,441	25%	1,798	15%	83,713	25%	1,519	2,111	2,069	1,294
Renal	27,673	24%	1,949	16%	76,929	23%	2,350	2,866	3,030	2,133
Skin	4,011	4%	305	3%	9,643	3%	3,612	4,333	4,146	3,284
Developmental Disability	7,895	7%	45	0%	25,400	8%	5,426	4,990	3,753	5,565
Metabolic	10,237	9%	1,211	10%	21,679	6%	2,702	3,085	3,244	2,477
Infectious Disease	6,076	5%	747	6%	14,755	4%	4,243	4,735	4,962	3,973
Cancer	11,681	10%	1,232	10%	49,293	15%	2,300	2,402	2,828	2,255
Hematologic	4,144	4%	686	6%	13,425	4%	2,839	3,310	3,359	2,650
Total	114,411	100%	11,910	100%	337,350	100%	2,091	2,429	2,216	1,961
Serious Physical Conditions Among Beneficiaries Aged 65+										
Cardiovascular	27,395	48%	675	41%	144,801	43%	1,633	2,355	1,916	1,489
Central Nervous System	1,332	2%	43	3%	6,124	2%	2,047	2,551	1,880	1,936
Pulmonary	10,114	18%	339	20%	46,263	14%	1,921	2,557	2,096	1,771
Skeletal and Connective	407	1%	15	1%	1,740	1%	1,777	2,410	1,750	1,629
Gastrointestinal	5,299	9%	308	19%	25,409	8%	1,864	2,518	1,763	1,723
Diabetes	11,165	20%	233	14%	73,110	22%	1,306	2,133	1,944	1,177
Renal	17,897	32%	454	27%	96,590	29%	1,599	2,176	1,954	1,487
Skin	5,095	9%	86	5%	19,168	6%	2,378	2,786	2,108	2,264
Developmental Disability	463	1%	0	0%	2,020	1%	5,620	4,709	0	5,830
Metabolic	4,755	8%	186	11%	17,455	5%	1,973	2,621	2,302	1,786
Infectious Disease	5,071	9%	126	8%	18,304	5%	2,402	2,843	2,349	2,267
Cancer	7,376	13%	271	16%	53,055	16%	1,233	1,992	1,654	1,121
Hematologic	848	1%	32	2%	4,467	1%	1,551	2,379	1,961	1,389
Total	56,788	100%	1,659	100%	333,112	100%	1,493	2,213	1,741	1,364

For footnotes 1–9, see next page.

[1] Beneficiaries identified as having serious physical conditions had at least one claim during the year for which the primary diagnosis was one of the medium-cost, high-cost, or very high cost physical conditions in the Chronic Illness and Disability Payment System (CDPS). The diagnoses used to identify serious physical conditions in the CDPS differ in some categories for children and adults. Individuals may be classified in more than one category, and thus may appear in multiple rows. Each beneficiary is counted only once (de-duplicated) in the Total row. More information on the CDPS can be found in Appendix B.

[2] Beneficiaries are all individuals enrolled in Medicaid, including children in a Medicaid-expansion State Children's Health Insurance Program (M-SCHIP), for at least 1 month during the year. FFS beneficiaries are all beneficiaries who received services through the FFS system for at least 1 month in 2003.

[3] Expenditures are claims-based Medicaid payments for services received by the beneficiaries in the row, including both Federal and state share. FFS expenditures are expenditures for all services delivered through the FFS system, including treatment for the serious physical condition as well as services unrelated to that condition, during FFS months.

[4,5] FFS mental health service users include FFS beneficiaries who, during the year, (1) had at least one claim in which a mental health disorder was the primary diagnosis or (2) received a clearly identifiable inpatient mental health service. FFS substance abuse service users include FFS beneficiaries who, during the year, had at least one claim in which a substance use disorder was the primary diagnosis. The specific diagnoses and services used to define these beneficiary groups are listed in Section II of Appendix B. If beneficiaries had at least one claim in which a mental disorder was the primary diagnosis and at least one claim in which a substance use disorder was the primary diagnosis, they are included in the category that represents the diagnosis most frequently listed during the year.

[6] All other FFS beneficiaries not included in the mental health or substance abuse service user groups at left.

[7] Percent distribution of the serious physical conditions among FFS mental health service users in the specified age group who have at least one serious physical conditions. The percentages may sum to greater than 100 percent since individuals may be included in more than one row.

[8] Percent distribution of the serious physical conditions among FFS substance abuse service users in the specified age group who have at least one serious physical conditions. The percentages may sum to greater than 100 percent since individuals may be included in more than one row.

[9] Percent distribution of the serious physical conditions among all other FFS beneficiaries in the specified age group who have at least one serious physical conditions. The percentages may sum to greater than 100 percent since individuals may be included in more than one row.

Note: The states included in this table are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming.

Table 9A. Utilization and Expenditures by Service Type for Medicaid FFS Beneficiaries,[1] All Ages, Chart Book States, Calendar Year 2003

Service Type[5]	Any Utilization of Service Type						Average Annual Expenditures on Service Type Among Users[4]		
	All FFS Beneficiaries		FFS MH Service Users[2]		FFS SA Service Users[3]				
	Number	Percentage of All FFS Bneficiaries[6]	Number	Percentage of All FFS MH Service Users[7]	Number	Percentage of All FFS SA Service Users[8]	All FFS Beneficiaries	FFS MH Service Users	FFS SA Service Users
Inpatient Hospital	1,595,061	14%	235,921	18%	29,220	33%	5,015	7,156	9,268
Institutional Long-Term Care									
Inpatient psychiatric facility for individuals under 21	21,372	0%	20,967	2%	383	0%	16,824	16,931	9,479
Mental hospital for the aged	6,418	0%	5,913	0%	173	0%	13,139	11,516	6,195
Nursing facility	374,040	3%	94,768	7%	3,330	4%	20,385	21,781	17,890
Intermediate care facility for the mentally retarded	38,341	0%	10,670	1%	27	0%	71,378	55,404	66,255
Prescription Drugs									
Rx drugs	7,708,085	65%	1,171,956	91%	72,467	83%	1,046	2,339	1,598
Other Services									
Physician or other practitioner	7,832,280	66%	1,134,155	88%	73,567	84%	443	581	762
Clinic	2,455,735	21%	441,794	34%	26,503	30%	505	1,048	715
Outpatient hospital	3,942,545	33%	650,990	50%	55,827	64%	509	688	912
Lab and X-ray	6,033,229	51%	907,440	70%	68,159	78%	264	371	538
Dental	2,828,533	24%	450,478	35%	21,136	24%	318	344	414
Durable medical equipment	2,202,692	19%	389,390	30%	27,657	32%	426	547	380
Psychiatric services[9]	1,357,677	11%	823,597	64%	46,174	53%	1,040	1,474	1,457
Targeted case management	1,054,170	9%	204,754	16%	7,520	9%	574	1,299	1,004
Rehabilitation services	159,683	1%	97,611	8%	17,438	20%	2,419	2,617	2,591
PT, OT, speech, or hearing services	233,369	2%	61,847	5%	1,559	2%	737	734	485
Residential care	57,607	0%	26,775	2%	1,633	2%	23,773	27,834	9,160
Home health	105,914	1%	21,739	2%	1,900	2%	3,682	3,205	1,855
Hospice benefits	32,108	0%	5,316	0%	280	0%	8,551	8,757	7,792
Transportation services	1,262,649	11%	297,714	23%	23,417	27%	270	413	471
Nurse midwife services	40,204	0%	2,527	0%	505	1%	459	362	336
Nurse practitioner services	343,725	3%	59,746	5%	3,268	4%	102	111	122
Private duty nursing	17,459	0%	4,012	0%	277	0%	4,549	2,052	654
Religious nonmedical health care institutions	0	0%	0	0%	0	0%	0	0	0
Personal care services	140,979	1%	36,155	3%	1,975	2%	4,537	4,231	3,987
Adult day care	60,463	1%	25,008	2%	760	1%	5,183	5,359	3,948
Sterilizations	61,761	1%	7,556	1%	1,040	1%	1,156	971	1,100
Abortions	7,097	0%	689	0%	71	0%	417	360	300
Other services	1,121,163	9%	269,586	21%	15,822	18%	2,947	3,879	1,695

For footnotes 1–9, see next page.

[1] Beneficiaries are all individuals enrolled in Medicaid, including children in a Medicaid-expansion State Children's Health Insurance Program (M-SCHIP), for at least 1 month during the year. FFS beneficiaries are all beneficiaries who received services through the FFS system for at least 1 month in 2003.

[2,3] FFS mental health service users include FFS beneficiaries who, during the year, (1) had at least one claim in which a mental health disorder was the primary diagnosis or (2) received a clearly identifiable inpatient mental health service. FFS substance abuse service users include FFS beneficiaries who, during the year, had at least one claim in which a substance use disorder was the primary diagnosis. The specific diagnoses and services used to define these beneficiary groups are listed in Section II of Appendix B. If beneficiaries had at least one claim in which a mental disorder was the primary diagnosis and at least one claim in which a substance use disorder was the primary diagnosis, they are included in the category that represents the diagnosis most frequently listed during the year.

[4] Claims in the MAX files are classified into one of 31 TOS categories based on state local service or procedure codes. There may be variation between states in how similar claims are classified into TOS categories. Further information on the services included in each TOS can be found in the introduction.

[5] Claims in the MAX files are classified into one of 31 TOS categories. In most cases, this classification is done by the state, although for a few service types it is done during the MAX file creation process using local service or procedure codes. There may exist variation between states in how similar claims are classified into TOS categories. Further information on the services included in each service type can be found in Appendix B.

[6] Percentage of all FFS beneficiaries who had at least one claim during the year that was classified into the specified TOS category. The denominator for this statistic can be found in Table 1. Beneficiaries may have claims for many different service types during the year and in that case would be counted in multiple rows.

[7] Percentage of all FFS mental health service users who had at least one claim during the year that was classified into the specified TOS category. The denominator for this statistic can be found in Table 2. Beneficiaries may have claims for many different service types during the year and in that case would be counted in multiple rows.

[8] Percentage of all FFS substance abuse service users who had at least one claim during the year that was classified into the specified TOS category. The denominator for this statistic can be found in Table 2. Beneficiaries may have claims for many different service types during the year and in that case would be counted in multiple rows.

[9] The psychiatric TOS includes both mental health and substance abuse services. In some cases, treatments classified as a psychiatric service in the MAX may be received by beneficiaries who are not identified as mental health or substance abuse service users in the tables (for example, smoking cessation classes).

Note: The states included in this table are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming.

Table 9B. Utilization and Expenditures by Service Type for Medicaid FFS Beneficiaries,[1] Aged 0–21, Chart Book States, Calendar Year 2003

Service Type[5]	Any Utilization of Service Type						Average Annual Expenditures on Service Type Among Users[4]		
	All FFS Beneficiaries		FFS MH Service Users[2]		FFS SA Service Users[3]				
	Number	Percentage of All FFS Bneficiaries[6]	Number	Percentage of All FFS MH Service Users[7]	Number	Percentage of All FFS SA Service Users[8]	All FFS Beneficiaries	FFS MH Service Users	FFS SA Service Users
Inpatient Hospital	696,606	10%	55,901	9%	3,606	16%	4,565	8,729	7,719
Institutional Long-Term Care									
Inpatient psychiatric facility for individuals under 21	20,849	0%	20,485	3%	348	2%	17,170	17,254	10,326
Mental hospital for the aged	45	0%	45	0%	0	0%	8,410	8,410	0
Nursing facility	851	0%	246	0%	6	0%	33,912	18,055	28,162
Intermediate care facility for the mentally retarded	3,352	0%	1,372	0%	10	0%	63,311	55,533	60,693
Prescription Drugs									
Rx drugs	4,624,058	65%	566,684	88%	16,563	74%	397	1,092	599
Other Services									
Physician or other practitioner	4,761,522	67%	545,478	85%	17,035	76%	331	404	508
Clinic	1,683,321	24%	239,986	37%	6,283	28%	384	1,102	728
Outpatient hospital	2,307,462	32%	288,236	45%	11,294	51%	329	472	531
Lab and X-ray	3,449,521	49%	405,758	63%	15,813	71%	175	245	379
Dental	2,342,979	33%	325,510	51%	7,878	35%	311	337	423
Durable medical equipment	1,035,089	15%	147,949	23%	4,928	22%	303	366	241
Psychiatric services[9]	679,480	10%	426,998	66%	12,879	58%	1,104	1,546	1,924
Targeted case management	883,788	12%	150,710	23%	4,651	21%	490	1,348	893
Rehabilitation services	84,934	1%	43,235	7%	5,613	25%	2,271	2,142	5,206
PT, OT, speech, or hearing services	178,925	3%	42,983	7%	533	2%	882	942	1,088
Residential care	13,432	0%	9,746	2%	581	3%	23,473	26,646	12,177
Home health	27,211	0%	4,092	1%	239	1%	8,350	8,847	5,799
Hospice benefits	352	0%	31	0%	2	0%	11,265	13,207	15,843
Transportation services	575,918	8%	99,086	15%	3,368	15%	163	263	322
Nurse midwife services	15,405	0%	1,029	0%	173	1%	425	350	319
Nurse practitioner services	208,622	3%	26,337	4%	792	4%	96	102	123
Private duty nursing	4,189	0%	517	0%	28	0%	18,029	14,622	5,397
Religious nonmedical health care institutions	0	0%	0	0%	0	0%	0	0	0
Personal care services	10,225	0%	4,712	1%	28	0%	7,122	4,244	4,076
Adult day care	10,709	0%	7,841	1%	262	1%	5,147	4,780	4,123
Sterilizations	3,843	0%	882	0%	76	0%	830	513	477
Abortions	2,203	0%	224	0%	31	0%	404	359	298
Other services	485,727	7%	118,042	18%	3,323	15%	1,520	3,496	2,605

For footnotes 1–9, see next page.

[1] Beneficiaries are all individuals enrolled in Medicaid, including children in a Medicaid-expansion State Children's Health Insurance Program (M-SCHIP), for at least 1 month during the year. FFS beneficiaries are all beneficiaries who received services through the FFS system for at least 1 month in 2003.

[2,3] FFS mental health service users include FFS beneficiaries who, during the year, (1) had at least one claim in which a mental health disorder was the primary diagnosis or (2) received a clearly identifiable inpatient mental health service. FFS substance abuse service users include FFS beneficiaries who, during the year, had at least one claim in which a substance use disorder was the primary diagnosis. The specific diagnoses and services used to define these beneficiary groups are listed in Section II of Appendix B. If beneficiaries had at least one claim in which a mental disorder was the primary diagnosis and at least one claim in which a substance use disorder was the primary diagnosis, they are included in the category that represents the diagnosis most frequently listed during the year.

[4] Claims in the MAX files are classified into one of 31 TOS categories based on state local service or procedure codes. There may be variation between states in how similar claims are classified into TOS categories. Further information on the services included in each TOS can be found in the introduction.

[5] Claims in the MAX files are classified into one of 31 TOS categories. In most cases, this classification is done by the state, although for a few service types it is done during the MAX file creation process using local service or procedure codes. There may exist variation between states in how similar claims are classified into TOS categories. Further information on the services included in each service type can be found in Appendix B.

[6] Percentage of all FFS beneficiaries who had at least one claim during the year that was classified into the specified TOS category. The denominator for this statistic can be found in Table 1. Beneficiaries may have claims for many different service types during the year and in that case would be counted in multiple rows.

[7] Percentage of all FFS mental health service users who had at least one claim during the year that was classified into the specified TOS category. The denominator for this statistic can be found in Table 2. Beneficiaries may have claims for many different service types during the year and in that case would be counted in multiple rows.

[8] Percentage of all FFS substance abuse service users who had at least one claim during the year that was classified into the specified TOS category. The denominator for this statistic can be found in Table 2. Beneficiaries may have claims for many different service types during the year and in that case would be counted in multiple rows.

[9] The psychiatric TOS includes both mental health and substance abuse services. In some cases, treatments classified as a psychiatric service in the MAX may be received by beneficiaries who are not identified as mental health or substance abuse service users in the tables (for example, smoking cessation classes).

Note: The states included in this table are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming.

Table 9C. Utilization and Expenditures by Service Type for Medicaid FFS Beneficiaries,[1] Aged 22–64, Chart Book States, Calendar Year 2003

Service Type[5]	Any Utilization of Service Type						Average Annual Expenditures on Service Type Among Users[4]		
	All FFS Beneficiaries		FFS MH Service Users[2]		FFS SA Service Users[3]				
	Number	Percentage of All FFS Bneficiaries[6]	Number	Percentage of All FFS MH Service Users[7]	Number	Percentage of All FFS SA Service Users[8]	All FFS Beneficiaries	FFS MH Service Users	FFS SA Service Users
Inpatient Hospital	653,902	20%	137,997	26%	23,878	39%	6,553	7,958	9,935
Institutional Long-Term Care									
Inpatient psychiatric facility for individuals under 21	473	0%	432	0%	35	0%	3,273	3,486	1,058
Mental hospital for the aged	4,344	0%	4,207	1%	137	0%	9,311	9,504	3,405
Nursing facility	61,908	2%	30,985	6%	1,798	3%	20,794	21,120	15,060
Intermediate care facility for the mentally retarded	32,162	1%	8,690	2%	17	0%	72,604	55,747	69,526
Prescription Drugs									
Rx drugs	2,192,973	68%	497,900	93%	52,631	86%	1,772	3,366	1,840
Other Services									
Physician or other practitioner	2,235,501	69%	481,885	90%	53,068	87%	704	790	856
Clinic	652,345	20%	182,326	34%	19,570	32%	798	1,023	713
Outpatient hospital	1,337,387	41%	320,563	60%	42,690	70%	799	897	1,020
Lab and X-ray	1,984,345	61%	418,509	78%	49,619	81%	443	528	602
Dental	404,679	12%	111,248	21%	12,854	21%	370	379	411
Durable medical equipment	794,625	25%	193,822	36%	21,204	35%	575	694	409
Psychiatric services[9]	564,476	17%	350,302	65%	32,428	53%	1,083	1,458	1,294
Targeted case management	125,284	4%	44,680	8%	2,645	4%	993	1,155	1,178
Rehabilitation services	70,311	2%	51,010	10%	11,695	19%	2,590	2,995	1,354
PT, OT, speech, or hearing services	38,675	1%	15,468	3%	950	2%	283	272	177
Residential care	30,183	1%	14,140	3%	964	2%	29,410	31,066	7,449
Home health	48,016	1%	13,375	2%	1,501	2%	2,357	2,045	1,262
Hospice benefits	8,236	0%	1,346	0%	222	0%	9,346	10,947	8,247
Transportation services	434,358	13%	148,587	28%	18,410	30%	400	527	514
Nurse midwife services	24,675	1%	1,458	0%	332	1%	483	380	345
Nurse practitioner services	104,313	3%	26,495	5%	2,271	4%	125	122	127
Private duty nursing	8,686	0%	2,641	0%	219	0%	376	215	126
Religious nonmedical health care institutions	0	0%	0	0%	0	0%	0	0	0
Personal care services	62,193	2%	21,523	4%	1,594	3%	5,259	4,492	4,202
Adult day care	33,520	1%	14,626	3%	461	1%	6,480	5,986	3,957
Sterilizations	57,625	2%	6,640	1%	962	2%	1,182	1,033	1,151
Abortions	4,762	0%	439	0%	40	0%	422	364	302
Other services	365,025	11%	116,223	22%	11,368	19%	3,821	4,228	1,300

For footnotes 1–9, see next page.

[1] Beneficiaries are all individuals enrolled in Medicaid, including children in a Medicaid-expansion State Children's Health Insurance Program (M-SCHIP), for at least 1 month during the year. FFS beneficiaries are all beneficiaries who received services through the FFS system for at least 1 month in 2003.

[2,3] FFS mental health service users include FFS beneficiaries who, during the year, (1) had at least one claim in which a mental health disorder was the primary diagnosis or (2) received a clearly identifiable inpatient mental health service. FFS substance abuse service users include FFS beneficiaries who, during the year, had at least one claim in which a substance use disorder was the primary diagnosis. The specific diagnoses and services used to define these beneficiary groups are listed in Section II of Appendix B. If beneficiaries had at least one claim in which a mental disorder was the primary diagnosis and at least one claim in which a substance use disorder was the primary diagnosis, they are included in the category that represents the diagnosis most frequently listed during the year.

[4] Claims in the MAX files are classified into one of 31 TOS categories based on state local service or procedure codes. There may be variation between states in how similar claims are classified into TOS categories. Further information on the services included in each TOS can be found in the introduction.

[5] Claims in the MAX files are classified into one of 31 TOS categories. In most cases, this classification is done by the state, although for a few service types it is done during the MAX file creation process using local service or procedure codes. There may exist variation between states in how similar claims are classified into TOS categories. Further information on the services included in each service type can be found in Appendix B.

[6] Percentage of all FFS beneficiaries who had at least one claim during the year that was classified into the specified TOS category. The denominator for this statistic can be found in Table 1. Beneficiaries may have claims for many different service types during the year and in that case would be counted in multiple rows.

[7] Percentage of all FFS mental health service users who had at least one claim during the year that was classified into the specified TOS category. The denominator for this statistic can be found in Table 2. Beneficiaries may have claims for many different service types during the year and in that case would be counted in multiple rows.

[8] Percentage of all FFS substance abuse service users who had at least one claim during the year that was classified into the specified TOS category. The denominator for this statistic can be found in Table 2. Beneficiaries may have claims for many different service types during the year and in that case would be counted in multiple rows.

[9] The psychiatric TOS includes both mental health and substance abuse services. In some cases, treatments classified as a psychiatric service in the MAX may be received by beneficiaries who are not identified as mental health or substance abuse service users in the tables (for example, smoking cessation classes).

Note: The states included in this table are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming.

Table 9D. Utilization and Expenditures by Service Type for Medicaid FFS Beneficiaries,[1] Aged 65+, Chart Book States, Calendar Year 2003

Service Type[5]	Any Utilization of Service Type						Average Annual Expenditures on Service Type Among Users[4]		
	All FFS Beneficiaries		FFS MH Service Users[2]		FFS SA Service Users[3]				
	Number	Percentage of All FFS Bneficiaries[6]	Number	Percentage of All FFS MH Service Users[7]	Number	Percentage of All FFS SA Service Users[8]	All FFS Beneficiaries	FFS MH Service Users	FFS SA Service Users
Inpatient Hospital	244,553	17%	42,023	37%	1,736	47%	2,184	2,429	3,307
Institutional Long-Term Care									
Inpatient psychiatric facility for individuals under 21	50	0%	50	0%	0	0%	838	838	0
Mental hospital for the aged	2,029	0%	1,661	1%	36	1%	21,439	16,699	16,815
Nursing facility	311,281	21%	63,537	55%	1,526	41%	20,267	22,118	21,183
Intermediate care facility for the mentally retarded	2,827	0%	608	1%	0	0%	66,987	50,207	0
Prescription Drugs									
Rx drugs	891,054	60%	107,372	94%	3,273	88%	2,625	4,160	2,757
Other Services									
Physician or other practitioner	835,257	57%	106,792	93%	3,464	93%	391	539	567
Clinic	120,069	8%	19,482	17%	650	18%	619	622	648
Outpatient hospital	297,696	20%	42,191	37%	1,843	50%	610	572	743
Lab and X-ray	599,363	41%	83,173	73%	2,727	74%	188	197	288
Dental	80,875	5%	13,720	12%	404	11%	271	244	329
Durable medical equipment	372,978	25%	47,619	42%	1,525	41%	453	509	416
Psychiatric services[9]	113,721	8%	46,297	40%	867	23%	446	922	610
Targeted case management	45,098	3%	9,364	8%	224	6%	1,066	1,189	1,223
Rehabilitation services	4,438	0%	3,366	3%	130	4%	2,552	2,977	896
PT, OT, speech, or hearing services	15,769	1%	3,396	3%	76	2%	209	213	112
Residential care	13,992	1%	2,889	3%	88	2%	11,901	16,024	7,989
Home health	30,687	2%	4,272	4%	160	4%	1,616	1,432	1,535
Hospice benefits	23,520	2%	3,939	3%	56	2%	8,233	7,973	5,704
Transportation services	252,373	17%	50,041	44%	1,639	44%	291	373	290
Nurse midwife services	124	0%	40	0%	0	0%	39	42	0
Nurse practitioner services	30,790	2%	6,914	6%	205	6%	67	98	68
Private duty nursing	4,584	0%	854	1%	30	1%	138	125	80
Religious nonmedical health care institutions	0	0%	0	0%	0	0%	0	0	0
Personal care services	68,561	5%	9,920	9%	353	10%	3,497	3,659	3,007
Adult day care	16,234	1%	2,541	2%	37	1%	2,529	3,540	2,606
Sterilizations	293	0%	34	0%	2	0%	298	542	174
Abortions	132	0%	26	0%	0	0%	458	289	0
Other services	270,411	18%	35,321	31%	1,131	31%	4,330	4,010	2,984

For footnotes 1–9, see next page.

[1] Beneficiaries are all individuals enrolled in Medicaid, including children in a Medicaid-expansion State Children's Health Insurance Program (M-SCHIP), for at least 1 month during the year. FFS beneficiaries are all beneficiaries who received services through the FFS system for at least 1 month in 2003.

[2,3] FFS mental health service users include FFS beneficiaries who, during the year, (1) had at least one claim in which a mental health disorder was the primary diagnosis or (2) received a clearly identifiable inpatient mental health service. FFS substance abuse service users include FFS beneficiaries who, during the year, had at least one claim in which a substance use disorder was the primary diagnosis. The specific diagnoses and services used to define these beneficiary groups are listed in Section II of Appendix B. If beneficiaries had at least one claim in which a mental disorder was the primary diagnosis and at least one claim in which a substance use disorder was the primary diagnosis, they are included in the category that represents the diagnosis most frequently listed during the year.

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[6] Percentage of all FFS beneficiaries who had at least one claim during the year that was classified into the specified TOS category. The denominator for this statistic can be found in Table 1. Beneficiaries may have claims for many different service types during the year and in that case would be counted in multiple rows.

[7] Percentage of all FFS mental health service users who had at least one claim during the year that was classified into the specified TOS category. The denominator for this statistic can be found in Table 2. Beneficiaries may have claims for many different service types during the year and in that case would be counted in multiple rows.

[8] Percentage of all FFS substance abuse service users who had at least one claim during the year that was classified into the specified TOS category. The denominator for this statistic can be found in Table 2. Beneficiaries may have claims for many different service types during the year and in that case would be counted in multiple rows.

[9] The psychiatric TOS includes both mental health and substance abuse services. In some cases, treatments classified as a psychiatric service in the MAX may be received by beneficiaries who are not identified as mental health or substance abuse service users in the tables (for example, smoking cessation classes).

Note: The states included in this table are Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Montana, North Carolina, South Carolina, Texas, Vermont, and Wyoming.

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